Cleveland Clinic experts tailor treatment to their patients’ needs, taking into account the type of cancer, the age of the individual, the degree to which the cancer has spread and the patient’s general health. This guide provides an overview of gynecologic cancer care available at Cleveland Clinic’s main campus, and Fairview and Hillcrest hospitals.

CLEVELAND CLINIC OFFERS STATE-OF-THE-ART CANCER CARE

Through a multidisciplinary approach, Cleveland Clinic gynecologic oncologists explore all medical, surgical and radiation options to ensure that our cancer treatment program results in the best possible outcome for each patient.

While you have many treatment options, you should consider the experience of the program where you will receive your care. Cleveland Clinic is #1 in Ohio in both cancer care and in obstetrics and gynecology, according to U.S. News & World Report.

Our physicians have pioneered many treatment methods and have a large experience in treating gynecologic cancers.

Every year, hundreds of women with endometrial, cervical, ovarian and other cancers of the female reproductive system receive treatment from Cleveland Clinic gynecologic oncologists, who collaborate closely with gynecologic pathologists, medical and radiation oncologists, and radiologists to provide a careful blend of accurate diagnosis, surgical skill, leading-edge radiation therapy and advanced chemotherapy.

Membership in the Gynecologic Oncology Group and the Radiation Therapy Oncology Group provides patients access to investigational treatments through more than 40 ongoing clinical trials. Additional studies offer patients access to the latest treatments under investigation.

The Cleveland Clinic gynecologic oncology team understands the fear and uncertainty a diagnosis of cancer brings. Our specialized services and supportive care are here to help, providing access to support groups and home care arranged by clinical nurse specialists who also provide counseling.

For your convenience, we have several locations including Cleveland Clinic main campus, Fairview Hospital and Hillcrest Hospital.

Please use this guide as a resource as you examine your treatment options. Remember, it is your right as a patient to ask questions and to seek a second opinion.
WHAT IS GYNECOLOGIC CANCER?
Gynecologic cancers attack a woman’s reproductive organs, including the cervix, uterus, ovaries, fallopian tubes, vagina and vulva. Each year, approximately 82,000 women are diagnosed with cancer of the reproductive organs, including ovarian cancer and cervical cancer.

WHAT ARE COMMON SYMPTOMS OF GYNECOLOGIC CANCERS?
Women with the following symptoms should consult a gynecologic oncologist:
• A change in bowel or bladder habits
• A sore in the pelvic area that does not heal
• Unusual vaginal bleeding or discharge
• Thickening or lump that either causes pain or can be seen in the pelvic area
• Pain or pressure in the pelvic area

WHAT IS A GYNECOLOGIC ONCOLOGIST?
A gynecologic oncologist is a physician first trained in obstetrics and gynecology who has three to four additional years of training in gynecologic cancers. These gynecology oncology specialists combine knowledge of gynecology with expertise in detecting and treating cancers of the female reproductive system.

Cleveland Clinic gynecologic oncologists are among approximately 600 gynecologists in the United States who are board-certified in gynecologic oncology, as well as obstetrics and gynecology by the American Board of Obstetrics and Gynecology.

CLEVELAND CLINIC SERVICES

Did you know? Women who seek the care of a specially trained gynecology oncology specialist before any surgical or medical treatment increase their odds for total cure.

• Access to the latest techniques in the management of gynecologic cancers including the newest drug treatments and access to clinical trials through our membership in the Gynecologic Oncology Group and the Radiation Therapy Oncology Group, both sponsored by the National Cancer Institute.
• Minimally invasive surgery (robotic-assisted laparoscopic surgery) used in the management of some early cervical, uterine and ovarian cancers, including lymph node dissections and other staging procedures.
• Chemotherapy units conveniently located throughout the region staffed by specially trained nurses.
• The latest, most sophisticated radiation therapy equipment and the latest gynecology oncology treatments, such as interstitial therapy enabling custom-design delivery of radiation, intensity modulated radiation therapy and image guided radiation therapy.
• Color Doppler flow imaging: studies that identify blood flow changes associated with early ovarian cancer tumors.
• LEEP (Loop Electrosurgical Excision Procedure), which uses state-of-the-art technology to remove precancerous cells from the cervix more easily.
OVARIAN CANCER

Cancer of the ovary is one of the most prevalent gynecologic malignancies. When found in its earliest stages, ovarian cancer can be cured 90 to 95 percent of the time, but early ovarian cancer can be hard to detect. Many cases of ovarian cancer are found after the cancer has spread to other organs.

WHAT ARE THE SYMPTOMS OF OVARIAN CANCER?

There are no symptoms of early ovarian cancer, and signs can be subtle. Women typically seek medical care when they notice abdominal swelling due to the fluid that accumulates in the abdomen from ovarian cancer. Women may also notice urinary changes such as increased frequency or discomfort with urination. Many women with ovarian cancer also complain of abdominal bloating, gas, heartburn, or intolerance to certain foods prior to the diagnosis. When these symptoms occur, the tumor has often already spread outside of the ovary. Unfortunately, there is no reliable screening test for ovarian cancer.

HOW IS OVARIAN CANCER TREATED?

Most women suspected of having ovarian cancer are found to have a mass on examination, ultrasound or CT scan. Any woman with a new mass should then undergo a pre-operative workup, including a blood test for CA-125 and a CT scan if one was not done previously. The main treatments for ovarian cancer are surgery to remove the diseased tissue and chemotherapy (medicines given by pill or IV to kill the cancer).

Surgery

Surgery for ovarian cancer is complex, requiring specialized skill. In most cases, surgical treatment involves removal of the uterus, both ovaries, the fallopian tubes, nearby lymph nodes and the omentum, a fatty apron that is attached to the large intestines in the upper abdomen. The surgeon will remove as much of the tumor as possible, a process known as debulking. This procedure can be done in the traditional manner (through an incision in the abdomen), through the vagina, or laparoscopically (through a small incision, using a laparoscope).

In young women who still want to have children, only the diseased ovary may be removed. The remaining ovary is then watched closely for signs of cancer using imaging, labs and physical examination. If the tumor has spread inside the abdominal cavity, women sometimes require removal of part of the intestines, the spleen, or bladder to remove as much of the visible tumor as possible.

Chemotherapy

Following surgery, chemotherapy is used to treat cancer cells left behind, and microscopic disease that may be elsewhere in the body. Most women with ovarian cancer will have chemotherapy following surgery unless they have cancer only within the ovary and the cells do not look aggressive under the microscope (ie: a low grade tumor).

EGG FREEZING EXTENDS FERTILITY

Women facing life-saving but fertility-damaging treatments for cancer at Cleveland Clinic now have the option to rapidly freeze eggs, preserving their quality for future use much the way men bank sperm. Egg freezing is a spin-off of in-vitro fertilization (IVF). Before starting chemotherapy, patients are given fertility shots to increase production of eggs. The eggs are retrieved just as if the woman was undergoing IVF. However, if the woman has no partner, the eggs are frozen rather than being fertilized.

The Cleveland Clinic Beachwood Fertility Center has demonstrated that the procedure works. They have successfully used frozen eggs to achieve pregnancy and now offer the option to cancer patients.

The ability to perform comprehensive staging and removal of the largest bulk of tumor has been shown to be best performed by a gynecologic oncologist, a surgeon specially trained to treat gynecologic cancers.
OVARIAN CANCER (CONTINUED)

Typically two to three drugs are given in combination at set intervals. The most common approach is to give carboplatinum and paclitaxel intravenously every three weeks for six to eight treatments. More recently, attention has been given to delivering chemotherapy directly into the peritoneal cavity where the tumor resides (intraperitoneal chemotherapy). Although this approach has significantly more toxicity, it may provide women with a better survival rate or longer time to recurrence. More research regarding this mode of chemotherapy is under way both locally and nationally. Both routes (intravenous and intraperitoneal) are available to Cleveland Clinic patients.

CERVICAL CANCER

Cancer of the uterine cervix – also called cervical cancer – is the second most common cancer among women worldwide. Despite the dramatic decrease in cervical cancer in the United States, the American Cancer Society estimates that more than 10,000 cases are still diagnosed every year, resulting in more than 3,500 deaths here.

WHAT ARE THE SYMPTOMS OF CERVICAL CANCER?

The most common symptom is vaginal bleeding (following intercourse or between menses) and vaginal discharge. However, precancerous changes of the cervix (abnormal pap smears, dysplasia, precancer) usually do not cause pain or any symptoms. Therefore, it is very important that all women be screened by a pelvic exam and a Pap test since precancerous changes are usually asymptomatic.

HOW IS CERVICAL CANCER TREATED?

Surgery

Hysterectomy (removal of the uterus and cervix) is the treatment choice for early stage cervical cancer that has not yet invaded blood vessels.

Surgery can be performed up to stage IIA, with results comparable to radiation therapy. Surgery has the advantage of sparing the ovaries from radiation, preserving ovarian function in premenopausal women. A radical hysterectomy (complete surgical removal of the uterus, upper vagina, parametrium with pelvic lymph nodes) is the usual treatment.

For young women who wish to preserve their fertility potential, radical trachelectomy (surgical removal of the cervix, upper vagina and surrounding tissues, and pelvic lymph nodes) can be performed in place of a radical hysterectomy. The body of the uterus and the ovaries are not removed. This procedure is usually reserved for women with small lesions that haven’t spread.

HYPERTHERMIA THERAPY

Hyperthermia is a non-invasive method of increasing tumor temperature to make the cells more sensitive to radiation. By adding hyperthermia to radiation therapy, radiation oncologists can increase tumor control while minimizing damage to healthy tissue. For many cancer patients who experience recurrence, the prognosis is bleak. A second full course of radiation therapy usually is not possible due to the high risk of damage to healthy tissue.

Hyperthermia can, in some cases, allow radiation to be delivered a second time with greater effect on cancer cells, without creating greater complications than radiation alone. While hyperthermia can be used in combination with other therapies to treat primary tumors, the ability to increase the effectiveness of radiation on re-treatment offers new hope for patients with recurrent cancers.

Hyperthermia is used to treat tumors located within a few centimeters of the surface of the body, such as melanoma or recurrent breast cancer. Hyperthermia also can be delivered through a probe, which is useful in treating tumors of the female reproductive system, prostate, breast, head and neck, and a variety of other superficial lesions.
CERVICAL CANCER (CONTINUED)

Chemoradiation
In recent years, cisplatin-based chemotherapy given along with radiation (Chemoradiation) has emerged as the new standard of care for treating locally advanced cervical cancer (stage Ib and above). This combination has improved response rates and survival compared to prior therapy with radiation alone. Radiation treatments are given as five weeks of daily external radiation treatments that target the tumor and lymph nodes of the pelvis and sometimes the lymph nodes in the lower abdomen. During radiation, chemotherapy is typically given one day a week as outpatient therapy. This is followed by a few treatments with internal radiation therapy (brachytherapy) that is inserted directly into the uterus and cervix.

UTERINE CANCER

Uterine cancer affects over 40,000 women in the United States each year and occurs in approximately two percent of women during their lifetime. Approximately 7,000 of these women will die each year from this disease. The two basic classes of uterine cancers are endometrial cancer and uterine sarcomas.

Endometrial cancer, or cancer of the endometrium, is the most common cancer of the female reproductive system in the United States. It develops in the inner lining of the uterus (womb). The exact cause of endometrial cancer is unknown, but prolonged exposure to estrogen is known to increase the risk of this type of cancer. Estrogen increases the growth of the lining of the uterus while progestins block this growth. It is the balance between these two hormones that is important in the risk of endometrial cancer.

Uterine sarcoma is a very rare kind of cancer that forms in the uterine muscles or in tissues that support the uterus. Outcomes vary depending on the type. However, as a group, uterine sarcomas tend to be more aggressive with a higher likelihood of early spread and recurrence than typically seen for endometrial cancers.

WHAT ARE THE SYMPTOMS OF UTERINE CANCER?
The symptoms of uterine cancer include vaginal bleeding between normal periods in pre-menopausal women; vaginal bleeding or spotting in post-menopausal women; lower abdominal pain or pelvic cramping; thin white or clear discharge in post-menopausal women; and extremely long, heavy or frequent vaginal bleeding episodes in women over 40. That is why it is important to have any abnormal vaginal bleeding evaluated by a physician.

ROBOTS IMPROVE TREATMENT
Cleveland Clinic gynecologic oncologists strive to provide the best care for patients while using minimally invasive procedures when possible. The advent of robotic-assisted laparoscopy has prompted an increase in minimally invasive procedures in the gynecologic subspecialties. Cleveland Clinic gynecologic oncologists have among the most experience in the country with robotic-assisted surgeries.

What is robotic-assisted surgery?
This type of surgery uses a computer-enhanced surgical system that:
- Offers a 3-D view of the surgical field, including depth, magnification and high resolution;
- Utilizes instruments that are designed to mimic the movements of the human hands, wrists and finger, allowing an extensive range of motion and more precision;
- Provides master controls that allow the surgeon to manipulate the instruments, translating the surgeon's natural hand and wrist movements into corresponding, precise movements.

Robotic assistance decreases blood loss, complications and hospital stays, and speeds recovery.
UTERINE CANCER (CONTINUED)

HOW IS UTERINE CANCER TREATED?

Surgery
Like ovarian cancer, surgery for uterine cancer is complex. In most cases, surgical treatment involves removal of the uterus, both ovaries, the fallopian tubes, nearby lymph nodes and the omentum, a fatty apron that is attached to the large intestines in the upper abdomen. The surgeon will remove as much of the tumor as possible, a process known as debulking. This procedure can be done in the traditional manner (through an incision in the abdomen), through the vagina, or laparoscopically (through a small incision, using a laparoscope).

Depending on the stage of the disease and the overall medical condition of the patient, radiation therapy, hormone therapy and chemotherapy also may be effective.

Radiation Therapy
High energy x-ray beams similar in nature to a CT scan or chest x-ray are used to kill cancer cells and prevent them from multiplying, while minimizing damage to healthy cells. Radiation works by damaging the DNA, or backbone, of the cancer cells. The radiation may be delivered by special equipment that can send radiation from outside of the body into the pelvis (teletherapy or external beam radiation therapy) or from a device placed into the uterus or vagina that can deliver radiation directly into the tumor (brachytherapy or internal radiation). Radiation therapy as the primary mode of therapy (without surgery) is reserved for those patients who have multiple medical problems and are not considered fit enough to undergo abdominal surgery.

Some patients will be found to have intermediate or high-risk for recurrence following pathologic review of their surgical specimens. Your physician may offer you internal vaginal radiation to decrease the chance of a recurrence at the top of the vagina. Alternatively, you may be offered targeted external beam radiation therapy via 3D-conformal, intensity modulated radiation therapy or image guided radiation therapy to decrease the risk of recurrence in the pelvis or at the top of the vagina.

Chemotherapy
Chemotherapy is sometimes used for the treatment of endometrial cancers and is given to kill or slow the growth of cancer cells. Patients offered chemotherapy usually include those with spread of cancer to the lymph nodes, spread outside of the pelvis, clear cell or papillary serous types of endometrial cancer, or patients with recurrence of their cancer. A wide variety of chemotherapy regimens can be used in this setting and may be given in addition to or in place of radiation therapy.

Hormonal Therapy
Occasionally patients with advanced stage disease or early spread of tumor will be treated with hormonal therapy. Most commonly this is done with progestins, a female hormone that helps block growth of the endometrial cells. Drugs that block the binding or production of estrogen can also be used alone or in combination with progesterone. Tumors of lower grade tend to respond better to hormonal therapy than high-grade tumors. However, excellent responses have been seen in patients with all grades of endometrial cancer.
Contacting Cleveland Clinic

STILL HAVE QUESTIONS ABOUT GYNECOLOGIC CANCER?
If after reviewing this guide, you have additional questions, specially-trained cancer nurses in the Ob/Gyn & Women’s Health Institute can help. They have a wealth of information and can answer your questions about cancer. Please call 216.636.9400 or toll-free 800.223.2273, ext. 69400.

READY TO SCHEDULE AN APPOINTMENT WITH A SPECIALIST?
If you would like to set up a consultation with a Cleveland Clinic specialist, please call 216.444.6601.

NEED A SECOND OPINION, BUT CANNOT TRAVEL TO CLEVELAND?
Our MyConsult service offers secure online second opinions for patients who cannot travel to Cleveland. Through this service, patients enter detailed health information and mail pertinent test results to us. Then, Cleveland Clinic experts render an opinion that includes treatment options or alternatives and recommendations regarding future therapeutic considerations. To learn more about MyConsult, please visit clevelandclinic.org/myconsult.

LOCATIONS
Cleveland Clinic Main Campus
9500 Euclid Ave.
Cleveland, OH 44195
Gynecologic Oncology: 216.444.6601

Fairview Hospital
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Cleveland, OH 44111
Gynecologic Oncology: 216.476.7540

Hillcrest Hospital
6780 Mayfield Road
Mayfield Heights, OH 44124
Gynecologic Oncology: 440.312.5560

For more information about our staff including complete profiles, visit clevelandclinic.org/staff
The Ob/Gyn & Women’s Health Institute is one of 26 institutes at Cleveland Clinic that group multiple specialties together to provide collaborative, patient-centered care. The institute is designed to meet the unique and changing medical needs of women from adolescence to mature adulthood. Our team offers coordinated and supportive care for the problems that affect women’s lives, from breast cancer to infertility, incontinence, pelvic floor disorders and more. Cleveland Clinic is a nonprofit, multispecialty academic medical center. Founded in 1921, it is dedicated to providing quality specialized care and includes an outpatient clinic, a hospital with more than 1,000 staffed beds, an education institute and a research institute.

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