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About Uterine Sarcoma

Overview and Types

If you have been diagnosed with uterine sarcoma or are worried about it, you likely have a lot of questions. Learning some basics is a good place to start.

- [What Is Uterine Sarcoma?](#)

Research and Statistics

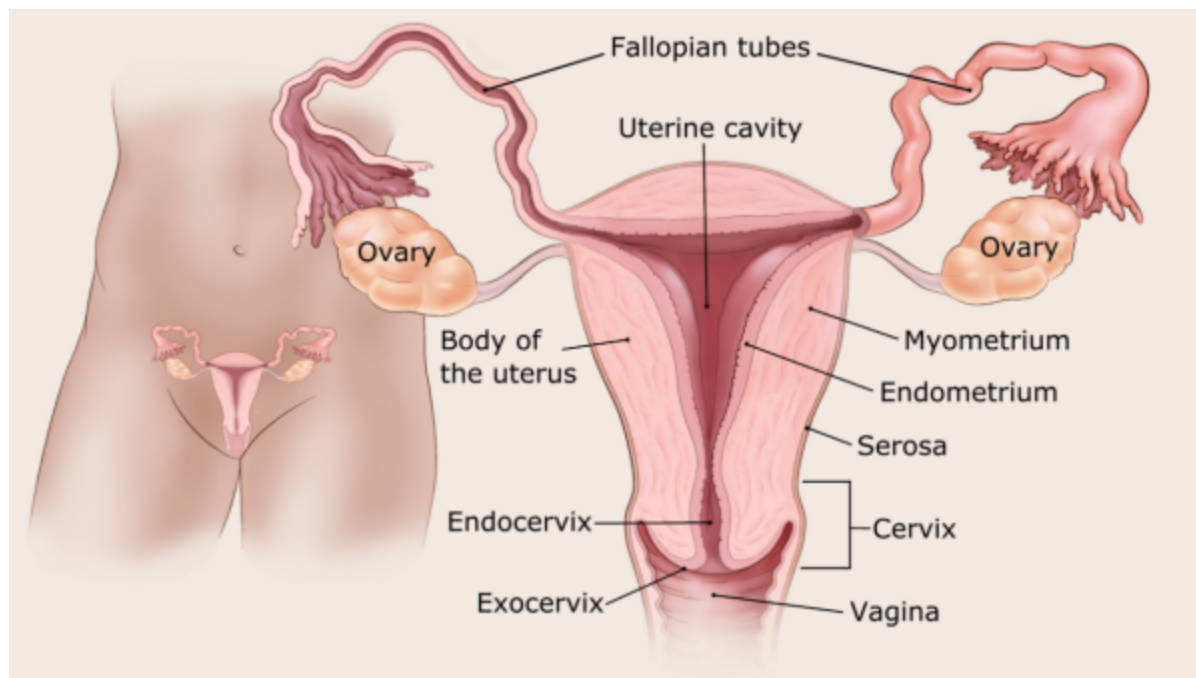
See the latest estimates for new cases of uterine sarcoma and deaths in the US and what research is currently being done.

- [Key Statistics for Uterine Sarcoma](#)
 - [What's New in Uterine Sarcoma Research?](#)
-

What Is Uterine Sarcoma?

Cancer starts when cells in the body begin to grow out of control. Cells in nearly any part of the body can become cancer, and can spread to other areas of the body. To learn more about how cancers start and spread, see [What Is Cancer?](#)¹

Uterine sarcoma is a rare cancer that starts in the muscle and supporting tissues of the uterus (womb).



About the uterus

The uterus is a hollow organ, usually about the size and shape of a medium-sized pear:

- The lower end of the uterus, which extends into the vagina, is the **cervix**.
- The upper part of the uterus is the body, also known as the **corpus**.

The body of the uterus has 3 layers.

- The inner layer or lining is the **endometrium**.
- The **serosa** is the layer of tissue coating the outside of the uterus.
- In the middle is a thick layer of muscle known as the **myometrium**. This muscle layer is needed to push a baby out during childbirth.

Cancers of the uterus and endometrium

Sarcomas are cancers that start from tissues like muscle, fat, bone, and fibrous tissue (the material that forms tendons and ligaments). Cancers that start in epithelial cells, the cells that line or cover most organs, are called **carcinomas**.

More than 95% of uterine cancers are carcinomas. If a carcinoma starts in the cervix, it is a **cervical carcinoma**. Carcinomas starting in the endometrium, the lining of the

uterus, are **endometrial carcinomas**. These types of cancer are covered in [Cervical Cancer](#)² and [Endometrial \(Uterine\) Cancer](#)³.

Another type of cancer that starts in the uterus is called **carcinosarcoma**. These cancers start in the endometrium and have features of both sarcomas and carcinomas. These cancers are also known as malignant mixed mesodermal tumors or malignant mixed mullerian tumors. Uterine carcinosarcomas are covered in [Endometrial \(Uterine\) Cancer](#)⁴.

Types of uterine sarcoma

Most uterine sarcomas are put into categories, based on the type of cell they start in:

Uterine leiomyosarcoma(LMS)

These tumors start in the muscular wall of the uterus (the **myometrium**). They are by far the most common type. These tumors can grow and spread quickly.

Endometrial stromal sarcoma (ESS)

ESS tumors start in the supporting connective tissue (**stroma**) of the lining of the uterus (the **endometrium**). These cancers are rare.

If the tumor is low grade, the cancer cells do not look very different from normal cells and the tumor tends to grow slowly. Women with low-grade ESS have a better outlook (prognosis) than women with other kinds of uterine sarcomas.

High-grade ESS means the cancer cells look very different from normal cells, and the tumor is growing quickly. This type of ESS is most often found when the tumor is already large and/or has spread. These tumors are hard to treat.

Undifferentiated sarcoma

These cancers may start in the endometrium or the myometrium. They grow and spread quickly and tend to have a poor outlook.

Benign uterine tumors

Several types of benign (not cancer) tumors can also develop in the connective tissues of the uterus. These tumors, such as leiomyomas, adenofibromas, and adenomyomas

are also known as types of **fibroid tumors**. Most of the time, these tumors don't need to be treated. But treatment may be needed if they start causing problems, like pelvic pain, heavy bleeding, frequent urination, or constipation. In some cases, the tumor is removed, leaving the rest of the uterus in place. This surgery is called a **myomectomy**. Some treatments destroy these benign tumors without surgery, by blocking the blood vessels that feed them, by killing the tumor cells with electric current, or by freezing them with liquid nitrogen. Another option is to remove the entire uterus. This surgery is called a **hysterectomy**.

Hyperlinks

1. www.cancer.org/cancer/cancer-basics/what-is-cancer.html
2. www.cancer.org/cancer/cervical-cancer.html
3. www.cancer.org/cancer/endometrial-cancer.html
4. www.cancer.org/cancer/endometrial-cancer.html

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Last Medical Review: October 12, 2017 Last Revised: November 13, 2017

Key Statistics for Uterine Sarcoma

The American Cancer Society's estimates for cancer of the uterine corpus (body of the uterus) in the United States for 2019 are:

- About 61,880 new cases of cancer of the uterine corpus will be diagnosed. More than 90% of cases occur in the endometrium (lining of the uterus).
- About 12,160 women in the United States will die from cancer of the uterine corpus.

Visit the American Cancer Society's [Cancer Statistics Center](#)¹ for more key statistics.

Hyperlinks

1. <https://cancerstatisticscenter.cancer.org/>

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American Cancer Society. *Cancer Facts & Figures 2019*. Atlanta, Ga: American Cancer Society; 2019.

See all references for Uterine Sarcoma (www.cancer.org/cancer/uterine-sarcoma/references.html)

Last Medical Review: October 12, 2017 Last Revised: January 9, 2019

What's New in Uterine Sarcoma Research?

Recent research has improved our understanding of how changes in certain molecules can cause normal cells to become cancer. We know that mutations (damage or defects) in DNA can alter important [genes](#)¹ that control cell growth. And if these genes are damaged, uncontrolled growth may lead to cancer. Research on DNA from uterine sarcomas has found many changes in the genes that control cell growth. Specific

proteins that are made by genes linked to uterine sarcoma have also been found. Doctors are looking at how they might be useful and are looking for more of them. Researchers expect that discoveries like these will lead to new ways to find, prevent, and treat uterine sarcomas.

[Imaging tests](#)² to more accurately diagnose uterine sarcomas is an active area of research. Treatment options greatly depend on whether a uterine tumor is cancer or isn't, for instance, it could be a leiomyoma or a fibroid. Knowing this would help know if surgery is needed, and, if so, would allow doctors to use the best type of surgery to remove the tumor. Efforts to improve imaging tests for these rare tumors have also led researchers to look at how these tests might be used to learn more about the tumor, such as whether chemo will be needed after surgery and likely outcomes. [PET scans](#)³ using different tracers are being studied, so are contrast-enhanced [MRIs](#)⁴. And researchers are trying to find other factors that, used along with imaging tests, may help point to a uterine sarcoma, such as certain blood tests (LDH level), tumor size, and body weight.

New combinations of [chemotherapy](#)⁵ drugs, new drugs, and better ways to give chemo are active areas of research. [Surgery](#)⁶ is the standard treatment, but chemo with or without radiation treatments after surgery may help keep cancer from [coming back](#)⁷.

[Hormone therapy](#)⁸ may help to treat and control some uterine sarcomas. Researchers are trying to find out if drugs that control estrogen might help help delay or even prevent these cancers from coming back after surgery. They are also looking at whether the ovaries need to be removed as part of treatment in all women with uterine sarcoma, or is it's safe to leave them, especially in young women with leiomyosarcoma or stage I cancers.

Doctors are also studying [targeted therapies](#)⁹ and [immunotherapies](#)¹⁰ as treatments for uterine sarcoma. These drugs don't work the same as chemotherapy drugs and may help when chemo doesn't work or uterine sarcoma comes back after treatment.

Hyperlinks

1. www.cancer.org/cancer/cancer-causes/genetics/genes-and-cancer.html
2. www.cancer.org/treatment/understanding-your-diagnosis/tests.html
3. www.cancer.org/treatment/understanding-your-diagnosis/tests/nuclear-medicine-scans-for-cancer.html
4. www.cancer.org/treatment/understanding-your-diagnosis/tests/mri-for-cancer.html
5. www.cancer.org/cancer/uterine-sarcoma/treating/chemotherapy.html
6. www.cancer.org/cancer/uterine-sarcoma/treating/surgery.html

7. www.cancer.org/treatment/survivorship-during-and-after-treatment/understanding-recurrence.html
8. www.cancer.org/cancer/uterine-sarcoma/treating/hormone-therapy.html
9. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/targeted-therapy.html
10. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/immunotherapy.html

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Uterine Sarcoma Causes, Risk Factors, and Prevention

Risk Factors

A risk factor is anything that affects your chance of getting a disease such as cancer. Learn more about the risk factors for uterine sarcoma.

- [Risk Factors for Uterine Sarcoma](#)
- [What Causes Uterine Sarcoma?](#)

Prevention

Most cases of uterine sarcoma cannot be prevented. Although pelvic radiation increases the risk of developing a uterine sarcoma, the benefit of pelvic radiation in treating other cancers far outweighs the risk of developing a rare cancer such as uterine sarcoma many years later.

- [Can Uterine Sarcoma Be Prevented?](#)
-

Risk Factors for Uterine Sarcoma

A risk factor is anything that affects your chance of getting a disease such as cancer. Different cancers have different risk factors. For example, exposing skin to strong sunlight is a risk factor for skin cancer. Smoking is a risk factor for many cancers.

There are different kinds of risk factors. Some, such as your age or race, can't be changed. Others may be related to personal choices such as smoking, drinking, or diet. Some factors influence risk more than others. But risk factors don't tell us everything. Having a risk factor, or even several, does not mean that a person will get the disease. Also, not having any risk factors doesn't mean that you won't get the disease.

These factors are known to change a woman's risk of developing a uterine sarcoma.

Pelvic radiation therapy

High-energy (ionizing) [radiation](#)¹ used to treat some cancers can damage cells' DNA, sometimes increasing the risk of [developing a second type of cancer](#)². If you've had pelvic radiation, your risk for developing uterine sarcoma is increased. These cancers usually are diagnosed 5 to 25 years after you've been exposed to the radiation.

Race

Uterine sarcomas are about twice as common in African-American women as they are in white or Asian women. The reason for this is unknown.

RB gene changes

Women who have had a type of eye cancer called [retinoblastoma](#)³ that was caused by being born with an abnormal copy of the *RB* gene have an increased risk of uterine leiomyosarcomas.

Remember, that these factors increase the risk for developing some uterine sarcomas, but they may not always cause the disease.

Hyperlinks

1. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/radiation.html
2. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/second-cancers-in-adults.html
3. www.cancer.org/cancer/retinoblastoma.html

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See all references for Uterine Sarcoma (www.cancer.org/cancer/uterine-sarcoma/references.html)

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What Causes Uterine Sarcoma?

Doctors don't know exactly what causes most uterine sarcomas, but certain [risk factors](#) have been identified. Research is helping to learn more about this rare disease.

For instance, scientists have learned about changes in the DNA of certain [genes](#)¹ when normal uterine cells develop into sarcomas. You can learn more about research being done in [What's New in Uterine Sarcoma Research and Treatment?](#)²

Hyperlinks

1. www.cancer.org/cancer/cancer-causes/genetics/genes-and-cancer.html
2. www.cancer.org/cancer/uterine-sarcoma/about/new-research.html

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Uterine Sarcoma Early Detection, Diagnosis, and Staging

Detection and Diagnosis

Catching cancer early often allows for more treatment options. Some early cancers may have signs and symptoms that can be noticed, but that is not always the case.

- [Can Uterine Sarcoma Be Found Early?](#)
- [Signs and Symptoms of Uterine Sarcomas](#)
- [How Is Uterine Sarcoma Diagnosed?](#)

Stages and Outlook (Prognosis)

After a cancer diagnosis, staging provides important information about the extent of cancer in the body and anticipated response to treatment.

- [Uterine Sarcoma Stages](#)
- [Survival Rates for Uterine Sarcoma](#)

Questions to Ask About Uterine Sarcoma

Here are some questions you can ask your cancer care team to help you better understand your cancer diagnosis and treatment options.

- [What Should You Ask Your Doctor About Uterine Sarcoma?](#)
-

Can Uterine Sarcoma Be Found Early?

In some cases, knowing the [signs and symptoms](#) of uterine sarcoma and seeing a health care professional right away can help find it at an early stage (when it's small and hasn't spread). But many uterine sarcomas reach an advanced stage before signs and symptoms are present. The signs and symptoms for the main types of uterine sarcoma are different. (See [How Is Uterine Sarcoma Diagnosed?](#))

Screening tests

Screening refers to testing to find a disease such as cancer in people who don't have symptoms of the disease. At this time, there are no tests or exams to detect uterine sarcomas in women without symptoms (asymptomatic women). The Pap test, which screens for cervical cancer, can sometimes find early uterine sarcomas, but it's not a good test for this type of cancer.

Still, the Pap test is very good at finding early carcinomas of the cervix (the lower part of the uterus). For information on finding cervical cancer early, see [Cervical Cancer Screening Guidelines](#)¹.

Hyperlinks

1. www.cancer.org/cancer/cervical-cancer/prevention-and-early-detection/cervical-cancer-screening-guidelines.html

References

See all references for Uterine Sarcoma (www.cancer.org/cancer/uterine-sarcoma/references.html)

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Signs and Symptoms of Uterine

Sarcomas

In most cases, the possibility of uterine sarcoma is suggested by certain symptoms. These symptoms don't always mean that a woman has uterine sarcoma. In fact, they are more often caused by something else, such as non-cancerous changes in the uterus (like fibroids), pre-cancerous overgrowth of the endometrium, or [endometrial carcinoma](#)¹. Still, if you're having these problems, see a doctor to find the cause and get any needed treatment.

Abnormal bleeding or spotting

About 85% of patients diagnosed with uterine sarcomas have irregular vaginal bleeding (between periods) or bleeding after menopause. This symptom is more often caused by something other than cancer, but it's important to have any irregular bleeding checked right away.

If you've gone through menopause, any vaginal bleeding or spotting is abnormal, and it should be reported to your health care professional right away.

Vaginal discharge

About 10% of women with uterine sarcomas have a vaginal discharge that does not have any visible blood. A discharge is most often a sign of infection or another non-cancer condition, but it also can be a sign of cancer. Any abnormal discharge should be checked by a health care professional.

Pelvic pain and/or a mass

When they're first diagnosed, about 10% of women with uterine sarcomas have pelvic pain and/or a mass (tumor) that can be felt. You or your doctor may be able to feel the mass in your uterus, or you might have a feeling of fullness in your belly and/or pelvis.

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References

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How Is Uterine Sarcoma Diagnosed?

Many uterine sarcomas are diagnosed during or after surgery for what's thought to be benign fibroid tumors.

Some are diagnosed because of symptoms. If you have symptoms of uterine cancer, the first step is to see your doctor.

Consultation, medical history, and physical exam

Your doctor will ask you about your personal and family medical history, examine you, and might order some tests. You also will be asked about any symptoms, risk factors, and other health problems. A general physical and a pelvic exam will be done. An ultrasound may be used to look at the inside of your uterus.

If your doctor suspects cancer, you may be referred to a gynecologist or a doctor specializing in cancers of the female reproductive system (called a gynecologic oncologist).

Sampling and testing endometrial tissue

To find the cause of abnormal uterine bleeding, a small piece of tissue (a sample) will be taken from the lining of the uterus and looked at with a microscope. The tissue can be removed by endometrial biopsy or by dilation and curettage (D&C). Often a hysteroscopy is done with the D&C..

These procedures let the doctor see if the bleeding is caused by a endometrial overgrowth that's not cancer (hyperplasia), [endometrial carcinoma](#)¹, uterine sarcoma, or some other problem. The tests will find many endometrial stromal sarcomas and undifferentiated sarcomas, but less than half of leiomyosarcomas (abbreviated LMSs). These tests don't find all LMSs because these cancers start in the muscle layer of the wall of the uterus. To be found by an endometrial biopsy or D&C, they need to have spread from the middle (muscle) layer to the inner lining of the uterus. In most cases, the only way to diagnose a LMS by removing it with surgery.

Endometrial biopsy

In this procedure, a very thin, flexible tube is put into the uterus through the cervix. Then, using suction, a small amount of the uterine lining (endometrium) is taken out through the tube. Suctioning takes about a minute or less. The discomfort is a lot like severe menstrual cramps and can be helped by taking a nonsteroidal anti-inflammatory drug like ibuprofen an hour before the biopsy. This procedure is usually done in the doctor's office.

Hysteroscopy

This procedure allows doctors to look inside the uterus. A tiny telescope is put into the uterus through the cervix. To get a better view, the uterus is then expanded by filling it with salt water (saline). This lets the doctor see and take out anything abnormal, such as a cancer or a polyp. This procedure is usually done with the patient awake, using local anesthesia (numbing medicine). But if a polyp or mass has to be removed, general or regional anesthesia is sometimes used. (General anesthesia means you are given drugs that put you into a deep sleep and keep you from feeling pain. Regional anesthesia is a nerve block that numbs a larger area of the body).

Dilation and curettage

If the results of the endometrial biopsy are not clear (meaning they can't tell for sure if cancer is present), a procedure called **dilation and curettage (D&C)** must be done. A D&C is usually done in the outpatient surgery area of a clinic or hospital. It's done while the woman is under general or regional anesthesia or conscious sedation (medicine is given into a vein to make her drowsy). It takes about an hour. In a D&C, the cervix is

dilated (opened) and a special surgical tool is used to scrape the endometrial tissue from inside the uterus. A hysteroscopy may be done as well. Some women have mild to moderate cramping and discomfort after this procedure.

Testing endometrial tissue

Any tissue samples taken out are looked at under a microscope to see if cancer is present. If cancer is found, the lab report will say if it's a carcinoma or sarcoma, what [type²](#) it is, and its grade.

A tumor's grade is based on how much it looks like normal tissue under the microscope. If the tumor looks a lot like normal tissue, it's called low grade. If it doesn't at all look like normal tissue, it's high grade. The rate at which the cancer cells appear to be growing is another important factor in grading a uterine sarcoma. High-grade sarcomas tend to grow and spread faster than low-grade sarcomas.

The tissue may also be tested to see if the cancer cells have [estrogen receptors and progesterone receptors³](#). These hormone receptors are found on many endometrial stromal sarcomas. Cancers with estrogen receptors on the cells are more likely to grow in response to estrogen, while those with progesterone receptors often have their growth decreased by progesterone. These cancers may stop growing (or even shrink) when treated with certain hormone drugs. Checking for these receptors helps predict which patients will benefit from treatment with [these drugs⁴](#).

Cystoscopy and proctoscopy

If a woman has signs or symptoms that suggest uterine sarcoma has spread to the bladder or rectum, the inside of these organs can be looked at through a lighted tube. These exams are called **cystoscopy** and **proctoscopy**, respectively. They are rarely done in the diagnosis and work-up of patients with uterine sarcoma.

Imaging tests

Transvaginal ultrasound

[Ultrasound⁵](#) tests use sound waves to take pictures of parts of the body. For a transvaginal ultrasound, a probe that gives off sound waves is put into the vagina. The sound waves are used to create images of the uterus and other pelvic organs. These images can often show if there's a tumor and if it affects the myometrium (muscular layer of the uterus).

For an ultrahysterosonogram or saline infusion sonogram, salt water (saline) is put into the uterus through a small tube before the transvaginal sonogram. This allows the doctor to see changes in the uterine lining more clearly.

Computed tomography

The [CT scan](#)⁶ is an x-ray test that produces detailed cross-sectional images of your body. Instead of taking one picture, like a standard x-ray, a CT scanner takes many pictures as it rotates around you. A computer then combines these pictures into an image of a slice of your body.

CT scans are rarely used to diagnose uterine cancer, but they may be helpful in seeing if the cancer has spread to other organs.

CT-guided needle biopsy: CT scans can also be used to guide a biopsy needle precisely into a suspected tumor. For this procedure, the patient remains on the CT scanning table while the doctor moves a biopsy needle through the skin and toward the tumor. CT scans are repeated until the needle is within the tumor. A fine needle biopsy sample or a larger core needle biopsy sample is then removed to be looked at with a microscope. This isn't done to biopsy tumors in the uterus, but might be used to biopsy areas that look like metastasis (cancer spread).

Magnetic resonance imaging

[MRI scans](#)⁷ use radio waves and strong magnets instead of x-rays. The energy from the radio waves is absorbed and then released in a pattern formed by the type of tissue and by certain diseases. A computer translates the pattern of radio waves given off by the tissues into a very detailed image of parts of the body. MRI scans can help tell if a uterine tumor looks like cancer, but a biopsy is still needed to tell for sure.

MRI scans are also very helpful in looking for cancer that has spread to the brain and spinal cord.

Positron emission tomography scan

In a [PET scan](#)⁸, radioactive glucose (sugar) is injected into the patient's vein. Because many cancers use glucose much faster than normal tissues, the radioactivity tends to collect in the cancer. A scanner can then spot the radioactive deposits. This test can be helpful for spotting small collections of cancer cells that have spread beyond the uterus (metastasized).

Chest x-ray

A regular (plain) [x-ray](#)⁹ of the chest may be done to see if a uterine sarcoma has spread to the lungs and as part of the testing before surgery.

Hyperlinks

1. www.cancer.org/cancer/endometrial-cancer.html
2. www.cancer.org/cancer/uterine-sarcoma/about/what-is-uterine-sarcoma.html
3. www.cancer.org/cancer/breast-cancer/understanding-a-breast-cancer-diagnosis/breast-cancer-hormone-receptor-status.html
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Uterine Sarcoma Stages

After a woman is diagnosed with uterine sarcoma, doctors will try to figure out if it has spread, and if so, how far. This process is called *staging*. The stage of a cancer describes the amount of cancer in the body. It helps determine how serious the cancer is and [how best to treat it](#)¹. Doctors also use a cancer's stage when talking about survival statistics.

Uterine sarcoma stages range from stage I (1) through IV (4). As a rule, the lower the number, the less the cancer has spread. A higher number, such as stage IV, means cancer has spread more. And within a stage, an earlier letter means a lower stage. Although each person's cancer experience is unique, cancers with similar stages tend to have a similar outlook and are often treated in much the same way.

How is the stage determined?

The 2 systems used for staging uterine sarcoma, the **FIGO (International Federation of Gynecology and Obstetrics) system** and the **American Joint Committee on Cancer TNM staging system** are basically the same.

They both stage (classify) this cancer based on 3 factors:

- The extent (size) of the tumor (**T**): How large is the cancer? Has the cancer grown out of the uterus into the pelvis or organs such as the bladder or rectum?
- The spread to nearby lymph nodes (**N**): Has the cancer spread to nearby lymph nodes?
- The spread (metastasis) to distant sites (**M**): Has the cancer spread to distant lymph nodes or organs?

Numbers or letters after T, N, and M provide more details about each of these factors. Higher numbers mean the cancer is more advanced. Once a person's T, N, and M categories have been determined, this information is combined in a process called *stage grouping* to assign an overall stage.

The staging system in the table below uses the *pathologic stage* (also called the *surgical stage*). It is determined by examining tissue removed during [an operation](#)². Sometimes, if surgery is not possible right away, the cancer will be given a *clinical stage* instead. This is based on the results of a [physical exam, biopsy, and imaging tests](#) done *before* surgery. For more information see [Cancer Staging](#)³.

The system described below is the most recent AJCC system. It went into effect January 2018. It is specific for staging two types of uterine sarcomas: leiomyosarcoma and endometrial stromal sarcoma.

Uterine sarcoma staging can be complex, so ask your doctor to explain it to you in a way you understand.

Stage	Stage grouping	FIGO Stage	Stage description*
I	T1 N0 M0	I	The cancer is growing in the uterus, but has not started growing outside the uterus. It has not spread to nearby lymph nodes (N0) or to distant sites (M0).
IA	T1a N0 M0	IA	The cancer is only in the uterus and is no larger than 5 cm across (about 2 inches) (T1a). It has not spread to nearby lymph nodes (N0) or to distant sites (M0).
IB	T1b N0 M0	IB	The cancer is only in the uterus and is larger than 5 cm across (about 2 inches). (T1b). It has not spread to nearby lymph nodes (N0) or to distant sites (M0).
II	T2 N0 M0	II	The cancer is growing outside the uterus but is not growing outside of the pelvis (T2). It has not spread to nearby lymph nodes (N0) or to distant sites (M0).
IIIA	T3a N0 M0	IIIA	The cancer is growing into tissues of the abdomen in one place only (T3a). It has not spread to nearby lymph nodes (N0) or to distant sites (M0).

IIIB	T3b N0 M0	IIIB	The cancer is growing into tissues of the abdomen in 2 or more places (T3b). It has not spread to nearby lymph nodes (N0) or to distant sites (M0).
IIIC	T1-T3 N1 M0	IIIC	The cancer is growing in the body of the uterus and it might have spread into tissues of the abdomen, but is not growing into the bladder or rectum (T1 to T3). The cancer has spread to nearby lymph nodes (N1), but not to distant sites (M0).
IVA	T4 Any N M0	IVA	The cancer has spread to the rectum or urinary bladder (T4). It might or might not have spread to nearby lymph nodes (Any N) but has not spread to distant sites (M0).
IVB	Any T Any N M1	IVB	The cancer has spread to distant sites such as the lungs, bones, or liver (M1). The cancer in the uterus can be any size and may or may not have grown into tissues in the pelvis and/or abdomen (including the bladder or rectum) (any T) and it might or might not have spread to nearby lymph nodes (Any N).

* The following additional categories are not listed on the table above:

- **TX:** Main tumor cannot be assessed due to lack of information.
- **T0:** No evidence of a primary tumor.
- **NX:** Regional lymph nodes cannot be assessed due to lack of information.

Hyperlinks

1. www.cancer.org/cancer/uterine-sarcoma/treating/by-stage.html
2. www.cancer.org/cancer/uterine-sarcoma/treating/surgery.html
3. www.cancer.org/treatment/understanding-your-diagnosis/staging.html

References

See all references for Uterine Sarcoma (www.cancer.org/cancer/uterine-sarcoma/references.html)

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Survival Rates for Uterine Sarcoma

Survival rates can give you an idea of what percentage of people with the same type and stage of cancer are still alive a certain amount of time (usually 5 years) after they were diagnosed. They can't tell you how long you will live, but they may help give you a better understanding of how likely it is that your treatment will be successful.

Keep in mind that survival rates are estimates and are often based on previous outcomes of large numbers of people who had a specific cancer, but they can't predict what will happen in any particular person's case. These statistics can be confusing and may lead you to have more questions. Talk with your doctor about how these numbers may apply to you, as he or she is familiar with your situation.

What is a 5-year relative survival rate?

A **relative survival rate** compares people with the same type and stage of uterine sarcoma to people in the overall population. For example, if the **5-year relative survival rate** for a specific stage of uterine sarcoma is 90%, it means that people who have that cancer are, on average, about 90% as likely as people who don't have that cancer to live for at least 5 years after being diagnosed.

Where do these numbers come from?

The American Cancer Society relies on information from the SEER* database, maintained by the National Cancer Institute (NCI), to provide survival statistics for different types of cancer.

The SEER database tracks 5-year relative survival rates for uterine sarcoma in the United States, based on how far the cancer has spread. The SEER database, however, does not group cancers by [FIGO or AJCC TNM stages](#) (stage 1, stage 2, stage 3, etc.). Instead, it groups cancers into localized, regional, and distant stages:

- **Localized:** There is no sign that the cancer has spread outside of the uterus. This includes stage I cancers.

- **Regional:** The cancer has spread outside the uterus to nearby structures or lymph nodes. This includes stages II, III and IVA cancers.
- **Distant:** The cancer has spread to distant parts of the body such as the lungs, liver, or bones. For uterine sarcoma, this includes stage IVB cancers.

5-year relative survival rates for uterine sarcoma

(Based on people diagnosed with uterine sarcoma between 2008 and 2014.)

Leiomyosarcoma

SEER Stage	5-Year Relative Survival Rate
Localized	64%
Regional	35%
Distant	13%
All SEER stages combined	41%

Undifferentiated sarcoma

SEER Stage	5-Year Relative Survival Rate
Localized	68%
Regional	48%
Distant	20%
All SEER stages combined	46%

Endometrial stromal sarcoma

SEER Stage	5-Year Relative Survival Rate
Localized	98%
Regional	91%
Distant	67%
All SEER stages combined	93%

Understanding the numbers

- **These numbers apply only to the stage of the cancer when it is first diagnosed.** They do not apply later on if the cancer grows, spreads, or comes back after treatment.
- **These numbers don't take everything into account.** Survival rates are grouped based on how far the cancer has spread, but your age, overall health, [tumor grade](#), [tumor type](#)¹, how well the cancer responds to treatment, and other factors can also affect your outlook.
- **People now being diagnosed with uterine sarcoma may have a better outlook than these numbers show.** Treatments improve over time, and these numbers are based on people who were diagnosed and treated at least five years earlier.

*SEER= Surveillance, Epidemiology, and End Results

Hyperlinks

1. www.cancer.org/cancer/uterine-sarcoma/about/what-is-uterine-sarcoma.html
2. https://seer.cancer.gov/csr/1975_2015/

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Noone AM, Howlader N, Krapcho M, Miller D, Brest A, Yu M, Ruhl J, Tatalovich Z, Mariotto A, Lewis DR, Chen HS, Feuer EJ, Cronin KA (eds). SEER Cancer Statistics

Review, 1975-2015, National Cancer Institute. Bethesda, MD, https://seer.cancer.gov/csr/1975_2015/ (seer.cancer.gov/csr/1975_2015/)², based on November 2017 SEER data submission, posted to the SEER web site, April 2018.

See all references for Uterine Sarcoma (www.cancer.org/cancer/uterine-sarcoma/references.html)

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What Should You Ask Your Doctor About Uterine Sarcoma?

It is important for you to have honest, open discussions with your cancer care team. The following are some questions to consider:

- What [type](#)¹ and grade of uterine sarcoma do I have?
- Has the cancer spread beyond my uterus?
- What is the [stage](#) of my cancer and what does that mean for me?
- What [treatments](#)² are appropriate for me? What do you recommend? Why?
- Can I be evaluated by a gynecologic oncologist?
- Am I eligible for a [clinical trial](#)³?
- What should I do to be ready for treatment?
- Should I get a [second opinion](#)⁴?
- What risks or side effects should I expect?
- What are the chances my cancer will [come back](#)⁵ with the treatment options we have discussed?
- Should I follow a special diet?
- Will I be able to have children after my treatment?
- What is my prognosis, based on what you know about my cancer?
- When will I be able to return to daily activities?
- How will this affect my sex life?
- Does this cancer prevent me from considering estrogen replacement therapy?

In addition to these sample questions, be sure to write down some of your own. For

instance, you may need specific information about anticipated recovery times so that you can plan your work schedule.

Hyperlinks

1. www.cancer.org/cancer/uterine-sarcoma/about/what-is-uterine-sarcoma.html
2. www.cancer.org/cancer/uterine-sarcoma/treating.html
3. www.cancer.org/treatment/treatments-and-side-effects/clinical-trials.html
4. www.cancer.org/treatment/finding-and-paying-for-treatment/choosing-your-treatment-team/seeking-a-second-opinion.html
5. www.cancer.org/treatment/survivorship-during-and-after-treatment/understanding-recurrence.html

References

See all references for Uterine Sarcoma (www.cancer.org/cancer/uterine-sarcoma/references.html)

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Treating Uterine Sarcoma

If you've been diagnosed with uterine sarcoma, your cancer care team will discuss your treatment options with you. It's important to weigh the benefits of each treatment option against the possible risks and side effects.

How is uterine sarcoma treated?

These are the basic types of treatment for women with uterine sarcoma:

- [Surgery for Uterine Sarcomas](#)
- [Radiation Therapy for Uterine Sarcomas](#)
- [Chemotherapy for Uterine Sarcomas](#)
- [Hormone Therapy for Uterine Sarcomas](#)
- [Targeted Therapy for Uterine Sarcomas](#)

Common treatment approaches

A combination of treatments may be used to treat uterine sarcoma. The choice of treatment depends largely on the [type](#)¹ and [stage](#) of your cancer. Other factors might include your age, your overall health, whether you plan to have children, and your personal preferences.

Most women with uterine sarcoma have surgery to remove the cancer. Radiation, chemotherapy, and hormone therapy are sometimes used to help lower the risk of the cancer coming back after surgery. These treatments may also be used for cancers that cannot be removed with surgery or when a woman can't have surgery because she has other health problems.

- [Treatment for Uterine Sarcoma, by Type and Stage](#)

Who treats uterine sarcoma?

Depending on your situation, you may have different types of doctors on your treatment team:

- A **gynecologist**: a doctor who specializes in diseases of the female reproductive tract
- A **gynecologic oncologist**: a doctor who specializes in the treatment of cancers of the female reproductive system (including surgery and chemotherapy)
- A **radiation oncologist**: a doctor who uses radiation to treat cancer
- A **medical oncologist**: a doctor who uses chemotherapy and other medicines to treat cancer

Many other specialists may be involved in your care as well, including nurse practitioners, nurses, psychologists, social workers, rehabilitation specialists, and other health professionals.

- [Health Professionals Associated With Cancer Care²](#)

Making treatment decisions

It's important to discuss all of your treatment options as well as their possible side effects with your family and your treatment team to make the choice that best fits your needs. If there's anything you don't understand, ask to have it explained.

If time permits, it is often a good idea to seek a second opinion. A second opinion can give you more information and help you feel more confident about the treatment plan you choose.

- [What Should You Ask Your Doctor About Uterine Sarcoma?³](#)
- [Seeking a Second Opinion⁴](#)

Thinking about taking part in a clinical trial

Clinical trials are carefully controlled research studies that are done to get a closer look at promising new treatments or procedures. Clinical trials are one way to get state-of-the-art cancer treatment. In some cases they may be the only way to get access to newer treatments. They are also the best way for doctors to learn better methods to treat cancer. Still, they're not right for everyone.

If you would like to learn more about clinical trials that might be right for you, start by asking your doctor if your clinic or hospital conducts clinical trials.

- [Clinical Trials⁵](#)

Considering complementary and alternative methods

You may hear about alternative or complementary methods that your doctor hasn't mentioned to treat your cancer or relieve symptoms. These methods can include vitamins, herbs, and special diets, or other methods such as acupuncture or massage, to name a few.

Complementary methods refer to treatments that are used along with your regular medical care. Alternative treatments are used instead of a doctor's medical treatment. Although some of these methods might be helpful in relieving symptoms or helping you feel better, many have not been proven to work. Some might even be harmful.

Be sure to talk to your cancer care team about any method you are thinking about using. They can help you learn what is known (or not known) about the method, which can help you make an informed decision.

- [Complementary and Alternative Medicine⁶](#)

Help getting through cancer treatment

Your cancer care team will be your first source of information and support, but there are other resources for help when you need it. Hospital- or clinic-based support services are an important part of your care. These might include nursing or social work services, financial aid, nutritional advice, rehab, or spiritual help.

The American Cancer Society also has programs and services – including rides to treatment, lodging, and more – to help you get through treatment. Call our National Cancer Information Center at 1-800-227-2345 and speak with one of our trained specialists.

- [Find Support Programs and Services in Your Area⁷](#)

Choosing to stop treatment or choosing no treatment at all

For some people, when treatments have been tried and are no longer controlling the

cancer, it could be time to weigh the benefits and risks of continuing to try new treatments. Whether or not you continue treatment, there are still things you can do to help maintain or improve your quality of life.

Some people, especially if the cancer is advanced, might not want to be treated at all. There are many reasons you might decide not to get cancer treatment, but it's important to talk to your doctors and you make that decision. Remember that even if you choose not to treat the cancer, you can still get supportive care to help with pain or other symptoms.

- [If Cancer Treatments Stop Working](#)⁸
- [Palliative or Supportive Care](#)⁹

The treatment information given here is not official policy of the American Cancer Society and is not intended as medical advice to replace the expertise and judgment of your cancer care team. It is intended to help you and your family make informed decisions, together with your doctor. Your doctor may have reasons for suggesting a treatment plan different from these general treatment options. Don't hesitate to ask him or her questions about your treatment options.

Surgery for Uterine Sarcomas

Surgery is the main treatment for [uterine sarcoma](#)¹. The goal of surgery is to remove all of the cancer as one piece. This usually means removing the entire uterus (hysterectomy). In some cases the fallopian tubes, ovaries, and part of the vagina may also need to be removed. Some lymph nodes or other tissue may be taken out as well to see if the cancer has spread outside the uterus. What's done depends on the [type](#)² and grade of the cancer and how far it has spread. (See [How Is Uterine Sarcoma Staged?](#)³) The patient's overall health and age are also important factors.

In some cases, [tests done before surgery](#)⁴ let the doctor plan the operation in detail ahead of time. These tests include imaging studies, like ultrasound, as well as a pelvic exam, endometrial biopsy, and/or D&C. In other cases, the surgeon has to decide what needs to be done based on what's found during surgery. For example, sometimes there's no way to know for certain that a tumor is cancer until it's removed during surgery.

Simple hysterectomy

This surgery removes the whole uterus (the body of the uterus and the cervix). This also is sometimes called a **total hysterectomy**. In a simple hysterectomy, the loose connective tissue around the uterus (called the parametrium), the tissue connecting the uterus and sacrum (the uterosacral ligaments), and the vagina remain intact. Removing the ovaries and fallopian tubes is not really part of a hysterectomy -- officially it's a separate procedure known as a **bilateral salpingo-oophorectomy (BSO)**. The BSO is often done along with a hysterectomy in the same operation (see below).

If the uterus is removed through an incision (cut) in the front of the abdomen (belly), the surgery is called an **abdominal hysterectomy**. When the uterus is removed through the vagina, it's called a **vaginal hysterectomy**.

If [lymph nodes](#)⁵ need to be removed and tested, this can be done through the same incision as the abdominal hysterectomy. If a hysterectomy is done through the vagina, lymph nodes can be removed using a laparoscope. A laparoscope is a thin lighted tube with a video camera at the end. It can be put into the body through a small incision and lets the doctor see inside the body without making a big incision. The doctor can use long, thin tools that are put in through other small incisions to operate. A laparoscope is sometimes used to help remove the uterus when the doctor is doing a vaginal hysterectomy. This is called a **laparoscopic assisted vaginal hysterectomy**. The uterus can also be removed through the abdomen with a laparoscope, sometimes with a robotic approach, in which the surgeon sits at a control panel in the operating room and moves robotic arms to operate. Laparoscopic procedures have shorter recovery times than regular abdominal hysterectomies, but often the surgery takes longer. Talk with your surgeon about how the surgery will be done and why it's the best plan for you.

Either general or regional anesthesia is used for the procedure. This means that the patient is in a deep sleep or is sedated and numb from the waist down.

For an abdominal hysterectomy the hospital stay is usually 3 to 5 days. Complete recovery takes about 4 to 6 weeks. A laparoscopic procedure and vaginal hysterectomy usually mean a hospital stay of 1 to 2 days and 2 to 3 weeks recovery.

After a hysterectomy, a woman cannot become pregnant and give birth to children. Surgical complications are rare but could include excessive bleeding, wound infection, and damage to the urinary or intestinal systems.

Radical hysterectomy

This operation removes the entire uterus as well as the tissues next to the uterus and cervix (parametrium and uterosacral ligaments) and the upper part (about 1 inch) of the vagina (near the cervix). This operation is not often used for uterine sarcomas.

Radical hysterectomy is most often done through an abdominal surgical incision, but it can also be done through the vagina or laparoscopically, with or without a robotic approach (in which the surgeon sits at a control panel in the operating room and moves robotic arms to operate). Most patients having a radical hysterectomy also have some lymph nodes removed, either through the abdominal incision or laparoscopically. Radical hysterectomy can be done using either general or regional anesthesia.

Because more tissue is removed by a radical hysterectomy than with a simple hysterectomy, the hospital stay may be longer.

This surgery leaves the woman unable to become pregnant and give birth to children.

Complications are much like, but more common than those associated with a simple hysterectomy, and could include excessive bleeding, wound infection, and damage to the urinary or intestinal systems. If some of the nerves of the bladder are damaged, a catheter will be needed to empty the bladder for some time after surgery. This usually gets better and the catheter can be taken out later.

Bilateral salpingo-oophorectomy

This operation removes both fallopian tubes and both ovaries. In treating uterine sarcomas, this operation is usually done at the same time the uterus is removed. If both of your ovaries are removed, you will go into menopause if you have not done so already.

Symptoms of menopause include hot flashes, night sweats, and vaginal dryness. These symptoms are caused by a lack of estrogen and may be improved with estrogen therapy. Estrogen therapy also lowers a woman's risk of osteoporosis (weakening and thinning of the bones). But estrogen can cause some types of uterine sarcoma to grow, so many doctors are concerned that it could increase the chance of the cancer coming back. Most experts in this field consider estrogen therapy too risky for most women who have had uterine sarcoma. Some doctors prescribe it only when the [stage](#)⁶ and grade of the cancer indicate a very low risk of the cancer coming back. A woman who has had uterine sarcoma should discuss the risks and benefits of estrogen therapy with her doctor before making a decision. Other treatments can be used to help relieve symptoms of menopause and prevent osteoporosis that do not affect the risk of the cancer coming back.

Lymph node surgery

Sometimes it looks like the cancer may have spread outside the uterus or nearby lymph nodes look swollen on imaging tests. In this case, your surgeon may do a **lymph node dissection** or **lymph node sampling**, which removes lymph nodes in the pelvis and around the aorta (the main artery that runs from the heart down along the back of the abdomen and pelvis). These lymph nodes are then checked under a microscope to see if they have cancer cells. If cancer is found in the lymph nodes, it means that the cancer has already spread outside of the uterus. This isn't good and means the woman has a poor prognosis (outlook).

This operation is done through the same surgical incision in the abdomen as the simple abdominal hysterectomy or radical abdominal hysterectomy. If a vaginal hysterectomy has been done, the lymph nodes can be removed with laparoscopic surgery.

Removing lymph nodes in the pelvis can lead to a build-up of fluid in the legs, called **lymphedema**. This is more likely if radiation is given after surgery. You can find out more about this in [Lymphedema](#).⁷

Other procedures that may be done during surgery

- **Omentectomy:** The omentum is a layer of fatty tissue that covers the abdominal contents like an apron. Cancer sometimes spreads to this tissue. When this tissue is removed, it's called an **omentectomy**. The omentum is sometimes removed at the same time the hysterectomy is done if cancer has spread there, or as a part of [staging](#).⁸
- **Peritoneal biopsies:** The tissue lining the pelvis and abdomen is called the peritoneum. Peritoneal biopsies remove small pieces of this lining to check for cancer cells.
- **Pelvic washings:** In this procedure, the surgeon "washes" the abdominal and pelvic cavities with salt water (saline) and then sends the fluid to the lab to see if it contains cancer cells.
- **Tumor debulking:** If cancer has spread throughout the abdomen, the surgeon may attempt to remove as much of the tumor as possible. This is called **debulking**. For some types of cancer, debulking can help other treatments (like radiation or chemotherapy) work better. Its role in treating uterine sarcoma isn't clear.

Sexual impact of surgery

If you are premenopausal, removing your uterus stops menstrual bleeding (periods). If your ovaries are also removed, you will go into menopause. This can lead to vaginal dryness and pain during sex. These symptoms can be improved with estrogen treatment, but this hormone isn't safe for all women with uterine sarcoma. Other medicines may be helpful for those women.

While physical and emotional changes can affect the desire for sex, these surgical procedures do not prevent a woman from feeling sexual pleasure. A woman does not need ovaries or a uterus to have sex or reach orgasm. Surgery can actually improve a woman's sex life if the cancer had caused problems with pain or bleeding during sex. See [Sex and the Woman With Cancer](#)⁹ for more on this.

Hyperlinks

1. www.cancer.org/cancer/uterine-sarcoma/about/what-is-uterine-sarcoma.html
2. www.cancer.org/cancer/uterine-sarcoma/about/what-is-uterine-sarcoma.html
3. www.cancer.org/cancer/uterine-sarcoma/detection-diagnosis-staging/staging.html
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Radiation Therapy for Uterine Sarcomas

Radiation therapy uses high-energy radiation (such as x-rays) to kill cancer cells. Two types of radiation treatments may be used for [uterine sarcoma](#)¹:

- External beam radiation therapy
- Internal radiation therapy or brachytherapy.

Sometimes both brachytherapy and external beam radiation therapy are used. How much of the pelvis needs to be exposed to radiation therapy and the type(s) of radiation used depend on the extent of the disease.

Radiation may be used to treat uterine sarcoma in these ways:

- When the tumor can be seen growing through the cervix, radiation therapy might be used before surgery to make it easier to remove all the cancer.
- After surgery it may help lower the chance of the cancer coming back in the pelvis. This is called **adjuvant radiation**. It may be done for cancers that are high grade or when cancer cells are found in the lymph nodes. In these cases, the entire pelvis may be treated with external beam radiation therapy. Sometimes the radiation field will also include an area of the abdomen (belly) called the **para-aortic field**. This is the area around the aorta (the main artery).
- It may be the main treatment in a woman who can't have surgery because of other health problems.
- It may be used to treat problems caused by tumor growth, but is not intended to treat the cancer. For instance, radiation can be used to shrink a tumor that's causing pain and swelling by pressing on nerves and blood vessels. This is called [supportive or palliative care](#)².

External beam radiation therapy

[External beam radiation](#)³ therapy is the more common type of treatment in which a large machine directs the radiation into the body. The treatments are a lot like getting an x-ray.

This therapy is usually given 5 days a week for 4 or 5 weeks. The actual radiation treatment takes less than 30 minutes.

The skin covering the area over the tumor is carefully marked with permanent ink or tiny tattoos. These marks are used to send the radiation to the right area. A special mold of the pelvis and lower back is custom-made to be sure the woman is in the exact same position for each treatment.

Brachytherapy

[Brachytherapy](#)⁴ places radioactive materials close to the tumor. Women treated with this type of radiation are not radioactive after the implant is removed.

In cases where less than the upper 2/3 of the vagina needs to be treated, the radioactive material is put in through the vagina. This is called **vaginal brachytherapy**.

Treatment is done in the radiation suite of the hospital or treatment center. About 6 to 8

weeks after the hysterectomy, the surgeon or radiation oncologist puts a special cylinder (applicator) into the woman's vagina. The length of the cylinder (and the amount of the vagina treated) can vary, but the upper part of the vagina is always treated. Pellets of radioactive material are then put into the applicator. Nearby structures, like the bladder and rectum, get less radiation exposure.

There are 2 types of brachytherapy: low-dose rate (LDR) and high-dose rate (HDR).

In LDR brachytherapy, the radiation pellets are usually left in for 1 to 4 days at a time. The patient needs to stay very still to keep the applicator from moving during treatment, so she's usually kept in the hospital on strict bed rest. More than one treatment may be needed.

In HDR brachytherapy, the radiation is more intense. It's given the same way as LDR, but a higher dose of radiation is given over hours instead of days. Because the applicator is in for a shorter period of time, the patient can usually go home the same day. For uterine cancers, HDR brachytherapy is often given daily or weekly for a total of about 3 doses .

Side effects of radiation therapy

Short-term side effects

Short-term or temporary [side effects](#)⁵ of radiation therapy include:

- Extreme tiredness (fatigue)
- Nausea and vomiting
- Loose stools or diarrhea
- Skin changes
- Low blood counts

Skin changes are also common, with the skin in the treated area looking and feeling sunburned. As the radiation passes through the skin to its intended target, it may damage the skin cells. This can cause irritation that ranges from temporary and mild redness to permanent discoloration. The skin may release fluid, which can lead to infection, so care must be taken to clean and protect the area exposed to radiation.

This same kind of damage can happen inside the vagina with brachytherapy. As long as a woman is not bleeding heavily, she can continue to have sex during radiation therapy.

But the outer genitals and vagina may become sore and tender to touch, and many women choose to stop having sex for a while to let the area heal.

Side effects tend to be worse when chemotherapy is given along with radiation.

Almost all side effects can be treated with medicines and go away over time after treatment ends. If you're having any side effects from radiation, discuss them with your cancer care team. There are things you can do to get relief from these symptoms or prevent them.

Long-term side effects of radiation

Radiation can also cause some side effects that can last a long time.

Radiation can irritate the bladder and may cause problems with urination. Bladder irritation, called **radiation cystitis**, can cause discomfort and an urge to urinate frequently.

Radiation therapy might also cause scar tissue to form in the vagina. If the scar tissue makes the vagina shorter or more narrow it's called **vaginal stenosis**. This can make vaginal sex painful. A woman can help prevent this problem by stretching the walls of her vagina several times a week. This can be done by having sex 3 to 4 times a week or by using a vaginal dilator (a plastic or rubber tube used much like a tampon to stretch out the vagina). Still, vaginal dryness and pain with sex can be long-term problems after radiation. We have more information on how [radiation can impact your sex life](#)⁶.

Pelvic radiation can damage the ovaries, resulting in premature menopause. But most women being treated for uterine sarcoma have already gone through menopause, either naturally or as a result of surgery to treat the cancer.

Radiation to the pelvis can impair fluid drainage from the legs, leading to leg swelling. This is called [lymphedema](#)⁷. It's more common in women who had lymph nodes removed during surgery.

Pelvic radiation can also weaken bones, leading to fractures of the hips or pelvic bones. It's important that women who have had pelvic radiation contact their doctor right away if they have pelvic pain. Such pain might be caused by a fracture, recurrent cancer, or other serious conditions.

For more information, visit the [radiation therapy section](#)⁸ of our website.

Hyperlinks

1. www.cancer.org/cancer/uterine-sarcoma/about/what-is-uterine-sarcoma.html
2. www.cancer.org/treatment/treatments-and-side-effects/palliative-care.html
3. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/radiation/external-beam-radiation-therapy.html
4. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/radiation/internal-radiation-therapy-brachytherapy.html
5. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects.html
6. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/fertility-and-sexual-side-effects/sexuality-for-women-with-cancer/pelvic-radiation.html
7. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/lymphedema.html
8. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/radiation.html

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Chemotherapy for Uterine Sarcomas

Chemotherapy (chemo) is the use of drugs to treat cancer. The drugs can be swallowed as pills or they can be injected by needle into a vein or muscle. Chemo is systemic therapy. This means that the drug enters the bloodstream and circulates throughout the body to reach and destroy cancer cells. This makes chemo a useful treatment for cancer that has spread beyond the uterus. When chemo is given to shrink the cancer before surgery, it's called **neoadjuvant** treatment. If it's given after the cancer has been removed with surgery, it's called **adjuvant** therapy. Here are some ways chemo may be used for [uterine sarcoma](#)¹:

- Adjuvant chemo is often used to help keep the cancer from coming back later.
- Chemo can also be used as the main therapy to treat the cancer if a woman is unable to have surgery.
- Sometimes chemo is used to control uterine sarcoma that has spread to other parts of the body or came back after surgery. In this case, the goal may be to [ease symptoms](#)² and try to keep the tumor from growing.

Chemo may not work for certain [types of uterine sarcoma](#)³. Better results seem to be seen with earlier [stages](#)⁴ of this cancer, and [types](#)⁵ that are more likely to come back after surgery. And some types of uterine sarcoma have been found to respond better to certain drugs and drug combinations. The role of chemo, as well as the best chemo drugs to use are not clear. Still, there are a lot of [clinical trials](#)⁶ looking at this, and some studies have shown that chemo can help some women live longer after surgery.

Some of the drugs commonly used to treat uterine sarcomas include:

- Dacarbazine (DTIC)
- Docetaxel (Taxotere[®])
- Doxorubicin (Adriamycin[®])
- Liposomal doxorubicin (Doxil[®])
- Epirubicin (Ellence[®])
- Gemcitabine (Gemzar[®])
- Ifosfamide (Ifex[®])
- Paclitaxel (Taxol[®])
- Temozolomide (Temodar[®])
- Trabectedin (Yondelis[®])
- Vinorelbine (Navelbine[®])

In most cases, more than one drug is used. For example, gemcitabine and docetaxel are often used together to treat leiomyosarcoma.

These drugs kill cancer cells but can also damage some normal cells. This is what causes many [side effects](#)⁷. Side effects of chemo depend on the specific drugs, the amount taken, and the length of time you are treated. Some common side effects include:

- Nausea and vomiting
- Loss of appetite
- Hair loss
- Low blood counts

Chemo can damage the blood-producing cells of the bone marrow, leading to low blood cell counts. This can cause:

- An increased chance of serious [infection](#)⁸ (from a shortage of white blood cells)
- Problems with bleeding or bruising (from a shortage of blood platelets)
- Feeling tired or short of breath (due to low red blood cell counts)

It's important to let your cancer care team know about any problems you have while on chemo, because many side effects can be prevented or treated. For instance, there are many good medicines to prevent or reduce nausea and vomiting. Most side effects of chemo go away over time when the treatment is over.

Some side effects from chemotherapy can last a long time. For example, the drug doxorubicin can damage the heart muscle over time. The chance of heart damage goes up as the total dose of the drug goes up, so doctors limit how much doxorubicin can be given. Cisplatin can cause kidney damage. Giving large amounts of fluid before and after chemo can help protect the kidneys. Both cisplatin and paclitaxel can cause [nerve damage](#)⁹ (called **neuropathy**). This can cause numbness, tingling, or even pain in the hands and feet.

For more information, see [Chemotherapy](#)¹⁰.

Hyperlinks

1. www.cancer.org/cancer/uterine-sarcoma/about/what-is-uterine-sarcoma.html
2. www.cancer.org/treatment/treatments-and-side-effects/palliative-care.html

3. www.cancer.org/cancer/uterine-sarcoma/about/what-is-uterine-sarcoma.html
4. www.cancer.org/cancer/uterine-sarcoma/detection-diagnosis-staging/staging.html
5. www.cancer.org/cancer/uterine-sarcoma/about/what-is-uterine-sarcoma.html
6. www.cancer.org/treatment/treatments-and-side-effects/clinical-trials.html
7. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects.html
8. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/infections.html
9. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/peripheral-neuropathy.html
10. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/chemotherapy.html

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Hormone Therapy for Uterine Sarcomas

Hormone therapy is the use of hormones or hormone-blocking drugs to fight cancer. Part of [diagnosing uterine sarcoma](#)¹ includes lab tests that check the cancer cells to see if they have receptors where hormones can attach. If they do, they may respond to hormone treatment. Hormone therapy is mainly used to treat women with endometrial stromal sarcomas (ESS) and is rarely used for the other [types of uterine sarcomas](#)².

Progestins

Progestins are drugs that act like the hormone progesterone. The progestins used most often to treat uterine sarcomas are megestrol (Megace[®]) and medroxyprogesterone (Provera[®]). Both of these drugs are pills you take every day.

Side effects can include increased blood sugar levels in patients with diabetes. Hot flashes, night sweats, and weight gain (from fluid retention and an increased appetite) also occur. Rarely, serious blood clots are seen in patients taking progestins.

Gonadotropin-releasing hormone agonists

Gonadotropin-releasing hormone (GNRH) agonists keep the ovaries from making estrogen. These drugs are used to lower estrogen levels in women who are premenopausal. (Before menopause, almost all a woman's estrogen is made by the ovaries.) Examples of GNRH agonists include goserelin (Zoladex[®]) and leuprolide (Lupron[®]). These drugs are given as a shot every 1 to 3 months.

Side effects can include any of the symptoms of menopause, such as hot flashes and vaginal dryness. If they are taken for a long time, these drugs can weaken bones, sometimes leading to osteoporosis.

Aromatase inhibitors

After the ovaries are removed, or aren't working (after menopause), estrogen is still made in fat tissue. This becomes the body's main source of estrogen. Drugs called **aromatase inhibitors** can stop this estrogen from being made. Examples of aromatase inhibitors include letrozole (Femara[®]), anastrozole (Arimidex[®]), and exemestane (Aromasin[®]). These drugs are most often used to treat breast cancer, but they also might be helpful in treating endometrial stromal sarcoma. Because they don't affect estrogen made by the ovaries, they are only useful in women whose ovaries have been removed or no longer work (like after menopause).

Side effects can include any of the symptoms of menopause, such as hot flashes and vaginal dryness, as well as joint/muscle pain. If they are taken for a long time (years), these drugs can weaken bones, sometimes leading to osteoporosis.

Hyperlinks

1. www.cancer.org/cancer/uterine-sarcoma/detection-diagnosis-staging/how-diagnosed.html
2. www.cancer.org/cancer/uterine-sarcoma/about/what-is-uterine-sarcoma.html

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National Comprehensive Cancer Network. NCCN Clinical Practice Guidelines in Oncology. Uterine Neoplasms. Version 1.2018 -- October 13, 2017.

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Targeted Therapy for Uterine Sarcomas

Targeted therapy is treatment with drugs that are made to target changes in the cancer cells. Some people group them with chemotherapy, but they aren't the same. Targeted therapies leave most healthy cells alone. They often cause fewer and different side effects than chemo. They are very new in the treatment of certain [types of uterine sarcoma](#)¹. Only a few of these drugs are in use at this time, but many more are being studied.

Panzopinab (Votrient) is a targeted therapy that may be used to treat leiomyosarcoma that has spread or come back after treatment.

Olaratumab (Lartruvo), given along with the chemo drug doxorubicin, is a treatment option for [soft tissue sarcomas](#)². It may be used to treat uterine sarcomas that are not responding to other treatments.

[Side effects](#)³ include things like high blood pressure, headache, and skin changes.

Targeted therapy is used to treat many types of cancer, but it's still new in the treatment of uterine sarcoma. As doctors learn more about these cancer cells it could become an important part of treatment.

See [Targeted Therapy](#)⁴ to learn more about this cancer treatment.

Hyperlinks

1. www.cancer.org/cancer/uterine-sarcoma/about/what-is-uterine-sarcoma.html
2. www.cancer.org/cancer/soft-tissue-sarcoma.html

3. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/targeted-therapy/side-effects.html
4. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/targeted-therapy.html

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Treatment for Uterine Sarcoma, by Type and Stage

Surgery to remove the uterus, sometimes along with the fallopian tubes and ovaries and to check the lymph nodes, is the main treatment for all uterine sarcomas. Sometimes this is followed by treatment with **radiation**, **chemotherapy** (chemo), or **hormone therapy**. **Targeted therapy** may also be used in advanced cancers.

Treatments given after the cancer has been completely removed with surgery are called **adjuvant treatments**. Adjuvant therapy is used to help keep the cancer from coming back. This approach has helped patients with certain cancers like colon and breast cancer live longer. So far, though, the value of adjuvant treatments for uterine sarcoma isn't clear.

Women who can't have surgery because they have other health problems are treated with radiation, chemo, or hormone therapy. Often some combination of these treatments is used.

Because uterine sarcoma is rare, it's been hard to study it well. Most experts agree that treatment in a [clinical trial](#)¹ should be considered for any type or stage of uterine sarcoma. This way women can get the best treatment available now and may also get the treatments that are thought to be even better.

Leiomyosarcoma and undifferentiated sarcoma

Stages I and II

Most women have **surgery** to remove the uterus (hysterectomy), as well as the fallopian tubes and ovaries (bilateral salpingo-oophorectomy). Pelvic and para-aortic lymph node dissection or laparoscopic lymph node sampling may be done if swollen nodes are seen on imaging tests. During surgery, organs near the uterus and the thin membrane that lines the pelvic and abdominal cavities (called the peritoneum) are closely checked to see if the cancer has spread beyond the uterus.

Very rarely, young women with low-grade leiomyosarcomas (LMS) that have not spread beyond the uterus may be able to have just the tumor removed, leaving the uterus, fallopian tubes, and ovaries in place. This is not standard treatment, little is known about long-term outcomes, and it's not often offered. Still, it may be a choice for some women who want to be able to have children after cancer treatment. This option has risks, so women thinking about this surgery need to talk about the pros and cons with their treatment team before making a decision. It may also be possible to leave a young woman's ovaries in place (but remove the uterus and fallopian tubes), since it isn't clear that this will lead to worse outcomes. Again, this is not a standard treatment, and you should discuss the risks and benefits with your doctor. In either case, close follow-up is

important, and more surgery may be needed if the cancer comes back.

Women with stage I cancers may not need more treatment and are watched closely after surgery. In other cases, treatment with [radiation](#), with or without [chemo](#), may be needed after surgery if there's a high chance of the cancer coming back in the pelvis. This is called **adjuvant treatment**. The goal of surgery is to take out all of the cancer, but the surgeon can only remove what can be seen. Tiny clumps of cancer cells that are too small to be seen can be left behind. Treatments given after surgery are meant to kill those cancer cells so that they don't get the chance to grow into larger tumors. For LMS of the uterus, adjuvant radiation may lower the chance of the cancer growing back in the pelvis (called **local recurrence**), but it doesn't seem to help women live longer.

Since the cancer can still come back in the lungs or other distant organs, some experts recommend giving chemo after surgery (**adjuvant chemotherapy**) for stage II cancers. Chemo is sometimes recommended for stage I LMS as well, but it's less clear that it's really helpful. So far, results from studies of adjuvant chemo have been promising in early stage LMS, but long-term follow-up is still needed to see if this treatment really helps women live longer. Studies of adjuvant therapy are in progress.

Stage III

[Surgery](#) is done to remove all of the cancer. This includes removing the uterus (a hysterectomy), removing both fallopian tubes and ovaries (bilateral salpingo-oophorectomy), and lymph node dissection or sampling. If the tumor has spread to the vagina, part (or even all) of the vagina will need to be removed as well.

After surgery, treatment with [radiation](#) (with or without [chemo](#)) may be offered to lower the chance that the cancer will come back.

Women who are too sick (from other medical problems) to have surgery may be treated with radiation and/or chemo.

Stage IV

This is divided into stage IVA and stage IVb.

Stage IVA cancers have spread to nearby organs and tissues, such as the bladder or rectum, and maybe to nearby lymph nodes. These cancers might be able to be completely removed with [surgery](#), and this is usually done if possible. If the cancer cannot be removed completely, [radiation](#) may be given, either alone or with [chemo](#).

Stage IVB cancers have spread outside the pelvis, most often to the lungs, liver, or bone. There's no standard treatment for these cancers. [Chemo](#) may be able to shrink the tumors for a time, but is not thought to be able to cure the cancer. [Radiation therapy](#), given along with chemo, may also be an option.

These cancers might also be treated with [targeted therapy](#) when other treatments don't work. They're often given along with chemo.

Endometrial stromal sarcoma

Stages I and II

Early stage endometrial stromal sarcoma is treated with [surgery](#): hysterectomy and bilateral salpingo-oophorectomy. (This means removal of the uterus, both fallopian tubes, and both ovaries.) Some young women may be given the option of keeping their ovaries, but this is not the standard treatment. Pelvic lymph nodes may be removed if they look swollen on imaging tests.

After surgery, most women don't need more treatment. These women are watched closely for signs that the cancer has returned. Others may be treated with [hormone therapy](#) and sometimes [radiation](#) to the pelvis. These can lower the chances of the cancer coming back, but they have not been shown to help patients live longer. This type of uterine sarcoma does not respond well to chemo, and it's not often used at these early stages.

Women who are too sick (from other medical conditions) to have surgery may be treated with radiation and/or hormone therapy.

Stage III

[Surgery](#) is done to remove all of the cancer. This includes removing the uterus (a hysterectomy), as well as removing both fallopian tubes and ovaries (bilateral salpingo-oophorectomy). Lymph nodes may be checked if they look swollen. If the tumor has spread to the vagina, part (or even all) of the vagina will need to be removed too.

Women with endometrial stromal sarcomas might get [radiation](#), [hormone therapy](#), or both after surgery. Chemo may be used if other treatments don't work.

Women who are too sick (from other medical conditions) to have surgery may be treated with radiation, [chemo](#), and/or hormone therapy.

Stage IV

This stage is divided into stage IVA and stage IVB.

Stage IVA cancers have spread to nearby organs and tissues, such as the bladder or rectum. These cancers may be able to be completely removed with surgery, and this is usually done if possible. If the cancer cannot be removed completely, radiation may be given, either alone or with chemo. [Hormone therapy](#) is also an option.

Stage IVB cancers have spread outside of the pelvis, most often to the lungs, liver, or bone. Hormone therapy can help for a time. [Chemo](#) and [radiation](#) are also options to help ease symptoms.

Recurrent uterine sarcoma

If a cancer comes back after treatment, it's called **recurrent cancer**. If it comes back in the same place as it was before, it's called a **local recurrence**. For uterine sarcoma, the cancer growing back as a tumor in the pelvis would be a local recurrence. If it comes back in another part of the body, like the liver or lungs, it's called a **distant recurrence**.

Uterine sarcoma often comes back in the first few years after treatment.

Treatment options for recurrent uterine sarcoma are the same as those for stage IV. If the cancer can be removed, [surgery](#) may be done. If not already given, [radiation](#) may be used to reduce the size of the tumor and relieve the symptoms of large pelvic tumors. Easing symptoms caused by cancer is called [palliative or supportive care](#)².

Sarcoma often comes back in the lungs. If there are only 1 or 2 small tumors, these may be able to be removed with surgery. [Chemo](#) and/or radiation are options after surgery. They may also be used for distant recurrence that can't be taken out with surgery.

Women with recurrent uterine sarcomas might want to take part in [clinical trials](#)³ (scientific studies of promising treatments) testing new chemo or other treatments.

Hyperlinks

1. www.cancer.org/treatment/treatments-and-side-effects/clinical-trials.html
2. www.cancer.org/treatment/treatments-and-side-effects/palliative-care.html
3. www.cancer.org/treatment/treatments-and-side-effects/clinical-trials.html

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After Uterine Sarcoma Treatment

Living as a Cancer Survivor

For many people, cancer treatment often raises questions about next steps as a survivor.

- [Living as a Uterine Sarcoma Survivor](#)

Cancer Concerns After Treatment

Treatment may remove or destroy the cancer, but it is very common to have questions about cancer coming back or treatment no longer working.

- [Second Cancers After Uterine Sarcoma](#)

Living as a Uterine Sarcoma Survivor

For some women with uterine sarcomas, [treatment](#)¹ can remove or destroy the tumor. The end of treatment can be both stressful and exciting. You may be relieved to finish treatment, but yet it's hard not to worry about cancer [coming back](#)². (When a tumor comes back after treatment, it is called **recurrence**.) This is a very common concern if you've had cancer.

For other women, the cancer might never go away completely. Some people may get regular [chemotherapy](#)³ or other treatments to try and help keep the cancer in check.

Learning to live with cancer that does not go away can be difficult and very stressful. It has its own type of uncertainty. [Managing Cancer as a Chronic Illness](#)⁴ has more on this. Life after cancer means returning to some familiar things and also making some new choices.

Follow-up care

When treatment ends, your doctors will still want to watch you closely. It's very important to go to all of your follow-up appointments. During these visits, your doctors will ask questions about any problems you may have and may do [exams and lab tests](#)⁵ or [x-rays and scans](#)⁶ to look for signs of cancer or treatment side effects. Almost any cancer treatment can have side effects. Some may last for a few weeks to months, but others can last the rest of your life. This is the time for you to talk to your cancer care team about any changes or problems you notice and any questions or concerns you have.

Ask your doctor for a survivorship care plan

Talk with your doctor about developing your [survivorship care plan](#)⁷. This plan might include:

- A suggested schedule for follow-up exams and tests
- A schedule for other tests you might need in the future, such as early detection (screening) tests for other types of cancer, or tests to look for long-term health effects from your cancer or its treatment
- A list of possible late- or long-term side effects from your treatment, including what to watch for and when you should contact your doctor
- Diet and physical activity suggestions
- Reminders to keep your appointments with your primary care provider (PCP), who will monitor your general health care

Keeping health insurance and copies of your medical records

Even after treatment, it's very important to keep [health insurance](#)⁸. Tests and doctor visits cost a lot, and even though no one wants to think of their cancer coming back, this could happen.

At some point after your cancer treatment, you might find yourself seeing a new doctor who doesn't know about your medical history. It's important to keep copies of your

medical records to give your new doctor the details of your diagnosis and treatment. Learn more in [Keeping Copies of Important Medical Records](#)⁹.

Can I lower my risk of uterine sarcoma progressing or coming back?

If you have (or have had) uterine sarcoma, you probably want to know if there are things you can do that might lower your risk of the cancer growing or coming back, such as exercising, eating a certain type of diet, or taking nutritional supplements. Unfortunately, it's not yet clear if there are things you can do that will help.

Adopting healthy behaviors such as [not smoking](#)¹⁰, [eating well](#)¹¹, [getting regular physical activity](#)¹², and [staying at a healthy weight](#)¹³ might help, but no one knows for sure. We do know that these types of changes can have positive effects on your health that can extend beyond your risk of uterine sarcoma or other cancers.

About dietary supplements

So far, no [dietary supplements](#)¹⁴ (including vitamins, minerals, and herbal products) have been shown to clearly help lower the risk of uterine sarcoma progressing or coming back. This doesn't mean that no supplements will help, but it's important to know that none have been proven to do so.

Dietary supplements are not regulated like medicines in the United States – they don't have to be proven effective (or even safe) before being sold, although there are limits on what they're allowed to claim they can do. If you're thinking about taking any type of nutritional supplement, talk to your health care team. They can help you decide which ones you can use safely while avoiding those that might be harmful.

If the cancer comes back

If the cancer does recur at some point, your treatment options will depend on where the cancer is, what treatments you've had before, and your health. For more information on how recurrent cancer is treated, see [Treatment for Uterine Sarcoma, by Type and Stage](#).¹⁵

For more general information, see [Understanding Recurrence](#)¹⁶.

Could I get a second cancer after treatment?

People who've had uterine sarcoma can still get other cancers. In fact, some cancer

treatments can put people at higher risk for getting some other types of cancer later. Learn more in [Second Cancers in Adults](#)¹⁷.

Getting emotional support

Some amount of feeling depressed, anxious, or worried is normal when cancer is a part of your life. Some people are affected more than others. But everyone can benefit from help and support from other people, whether friends and family, religious groups, support groups, professional counselors, or others. Learn more in [Coping With Cancer](#).¹⁸

Hyperlinks

1. www.cancer.org/cancer/uterine-sarcoma/treating.html
2. www.cancer.org/treatment/survivorship-during-and-after-treatment/understanding-recurrence.html
3. www.cancer.org/cancer/uterine-sarcoma/treating/chemotherapy.html
4. www.cancer.org/treatment/survivorship-during-and-after-treatment/when-cancer-doesnt-go-away.html
5. www.cancer.org/treatment/understanding-your-diagnosis/tests.html
6. www.cancer.org/treatment/understanding-your-diagnosis/tests/imaging-radiology-tests-for-cancer.html
7. www.cancer.org/treatment/survivorship-during-and-after-treatment/survivorship-care-plans.html
8. www.cancer.org/treatment/finding-and-paying-for-treatment/understanding-health-insurance.html
9. www.cancer.org/treatment/survivorship-during-and-after-treatment/be-healthy-after-treatment/keeping-copies-of-important-medical-records.html
10. www.cancer.org/healthy/stay-away-from-tobacco.html
11. www.cancer.org/healthy/eat-healthy-get-active/eat-healthy.html
12. www.cancer.org/healthy/eat-healthy-get-active/get-active.html
13. www.cancer.org/healthy/eat-healthy-get-active/take-control-your-weight.html
14. www.cancer.org/treatment/treatments-and-side-effects/complementary-and-alternative-medicine/dietary-supplements.html
15. www.cancer.org/cancer/uterine-sarcoma/treating/by-stage.html
16. www.cancer.org/treatment/survivorship-during-and-after-treatment/understanding-recurrence.html
17. [4](http://www.cancer.org/treatment/treatments-and-side-effects/physical-side-</div><div data-bbox=)

[effects/second-cancers-in-adults.html](#)

18. www.cancer.org/treatment/treatments-and-side-effects/emotional-side-effects.html

References

See all references for Uterine Sarcoma (www.cancer.org/cancer/uterine-sarcoma/references.html)

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Second Cancers After Uterine Sarcoma

Cancer survivors can be affected by a number of health problems, but often their greatest concern is facing cancer again. If a cancer comes back after treatment it is called a “recurrence.” But some cancer survivors may develop a new, unrelated cancer later. This is called a “second cancer.” No matter what type of cancer you have had, it is still possible to get another (new) cancer, even after surviving the first.

Unfortunately, being treated for cancer doesn’t mean you can’t get another cancer. People who have had cancer can still get the same types of cancers that other people get. In fact, certain types of cancer and cancer treatments can be linked to a higher risk of certain second cancers.

Survivors of uterine sarcoma can get any type of second cancer, but they have an increased risk of:

- [Breast cancer](#)¹
- [Colon cancer](#)²
- [Rectal cancer](#)³
- [Small intestine cancer](#)⁴
- [Bladder cancer](#)⁵
- [Vaginal cancer](#)⁶
- [Soft tissue cancer](#)⁷

- [Acute leukemia](#)⁸

Colon and breast cancers are the second cancers most often seen.

The increased risks of acute myeloid leukemia (AML) and cancers of the rectum, bladder, and soft tissue seem to be linked to treatment with radiation.

Follow-up after treatment

After completing treatment for uterine sarcoma, you should see your doctor regularly. He or she will examine you to look for signs the cancer has come back. Experts do not recommend additional testing to look for second cancers in patients without symptoms. Let your doctor know about any new symptoms or problems, because they could be caused by the cancer coming back or by a new disease or second cancer.

Survivors of uterine sarcoma should follow the [American Cancer Society guidelines for the early detection of cancer](#)⁹ and [stay away from tobacco products](#)¹⁰. Smoking increases the risk of many cancers.

To help maintain good health, survivors should also:

- Achieve and maintain a [healthy weight](#)¹¹
- Adopt a [physically active lifestyle](#)¹²
- Consume a [healthy diet](#)¹³, with an emphasis on plant foods
- Limit consumption of [alcohol](#)¹⁴ to no more than 1 drink per day

These steps may also lower the risk of some cancers.

See [Second Cancers in Adults](#)¹⁵ for more information about causes of second cancers.

Hyperlinks

1. www.cancer.org/cancer/breast-cancer.html
2. www.cancer.org/cancer/colon-rectal-cancer.html
3. www.cancer.org/cancer/colon-rectal-cancer.html
4. www.cancer.org/cancer/small-intestine-cancer.html
5. www.cancer.org/cancer/bladder-cancer.html
6. www.cancer.org/cancer/vaginal-cancer.html
7. www.cancer.org/cancer/soft-tissue-sarcoma.html

8. www.cancer.org/cancer/leukemia.html
9. www.cancer.org/healthy/find-cancer-early/cancer-screening-guidelines.html
10. www.cancer.org/healthy/stay-away-from-tobacco.html
11. www.cancer.org/cancer/cancer-causes/diet-physical-activity/body-weight-and-cancer-risk.html
12. www.cancer.org/cancer/cancer-causes/diet-physical-activity.html
13. www.cancer.org/cancer/cancer-causes/diet-physical-activity.html
14. www.cancer.org/cancer/cancer-causes/diet-physical-activity/alcohol-use-and-cancer.html
15. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/second-cancers-in-adults.html

References

See all references for Uterine Sarcoma (www.cancer.org/cancer/uterine-sarcoma/references.html)

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