



# 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

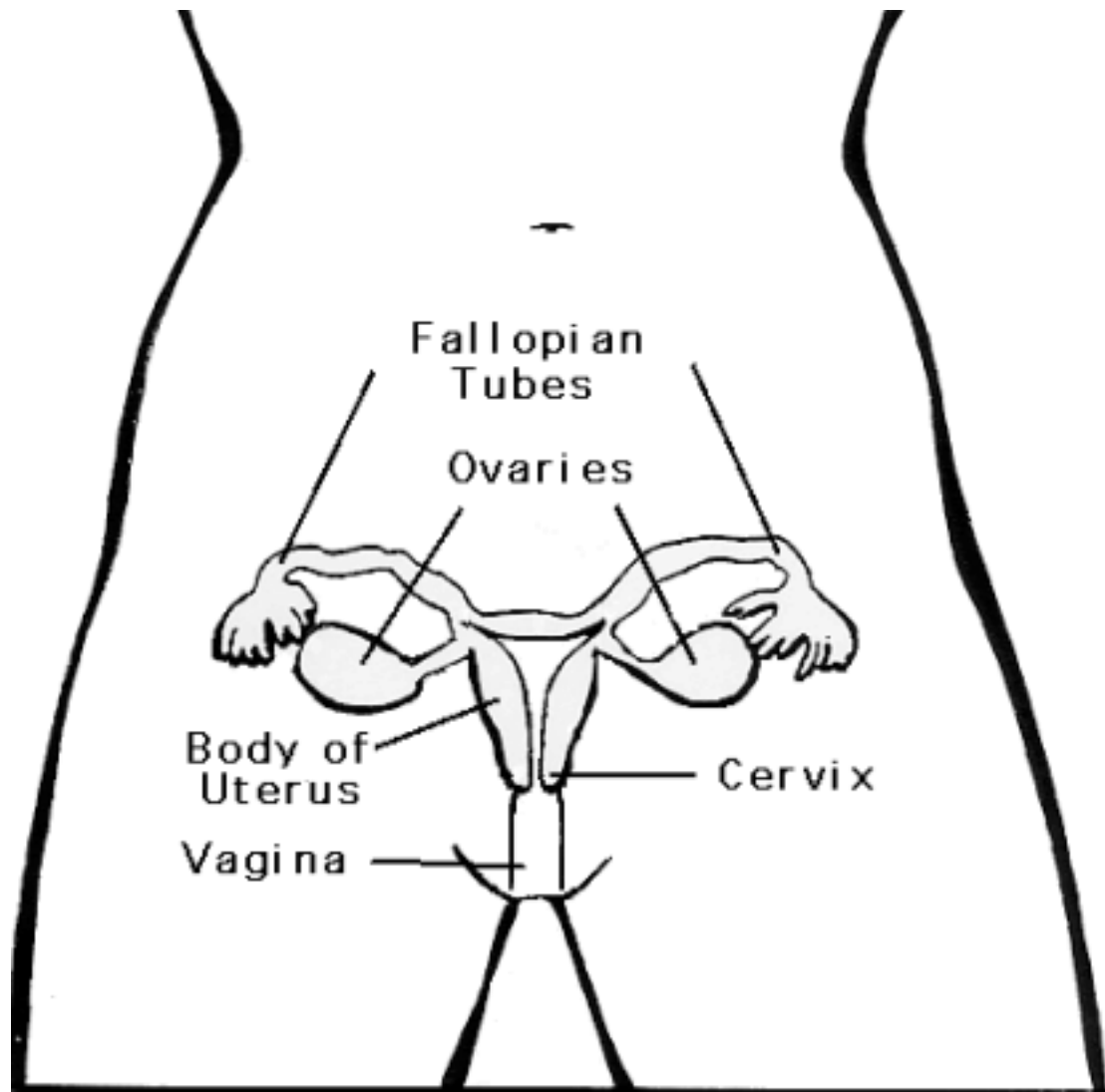
See the latest estimates for new cases of uterine sarcoma and deaths in the US and what research is currently being done.

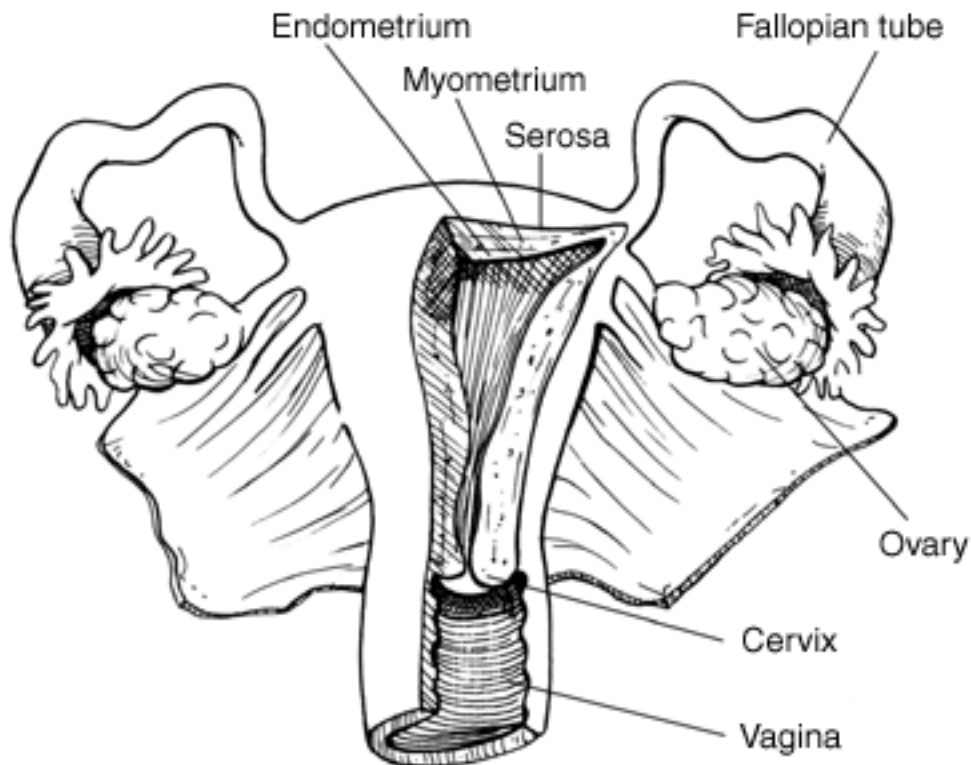
- [What Are the Key Statistics About Uterine Sarcoma?](#)
- [What's New in Uterine Sarcoma Research and Treatment?](#)

# 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?](#)

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





## About the uterus

The uterus is a hollow organ, about the size and shape of a medium-sized pear. It has two main parts:

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

The body of the uterus has 3 layers. The inner layer or lining is called the *endometrium*. The *serosa* is the layer of tissue coating the outside of the uterus. In the middle is a thick layer of muscle that is also 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 such as 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 cancers of the uterus are carcinomas. If a carcinoma starts in the cervix, it is called a *cervical carcinoma*. Carcinomas starting in the endometrium, the lining of the uterus, are called *endometrial carcinomas*. These cancers are discussed in [Cervical Cancer](#) and [Endometrial \(Uterine\) Cancer](#). This document is only about *uterine sarcomas*.

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

- **Endometrial stromal sarcomas** develop in the supporting connective tissue (*stroma*) of the endometrium. These cancers are rare, representing less than 1% (1 in 100) of all uterine cancers. These tumors are low grade -- the cancer cells do not look very abnormal and they tend to grow slowly. Patients with these tumors have a better outlook than those with other uterine sarcomas .
- **Undifferentiated sarcomas** used to be considered a type of endometrial stromal sarcoma, but since they are more aggressive and are treated differently from low-grade tumors, they are now considered separately. These cancers make up less than 1% of all uterine cancers and tend to have a poor outlook.
- **Uterine leiomyosarcomas** start in the muscular wall of the uterus known as the myometrium. These tumors make up about 2% of cancers that start in the uterus.

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. They can be classified with uterine sarcomas, but many doctors now believe they are more closely related to carcinomas. These cancers are also known as *malignant mixed mesodermal tumors* or *malignant mixed mullerian tumors*. Uterine carcinosarcomas are discussed in detail in [Endometrial \(Uterine\) Cancer](#).

## Benign uterine tumors

Several types of benign (non-cancerous) 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 require no treatment. Treatment may be needed, however, if they start causing problems--- such as 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*.

The rest of this document is about **uterine sarcomas**.

- [References](#)

[See all references for Uterine Sarcoma](#)

Last Medical Review: May 12, 2014 Last Revised: February 15, 2016

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## What Are the Key Statistics About Uterine Sarcoma?

The American Cancer Society's estimates for cancer of the uterine corpus (body of the uterus) in the United States for 2017 are:

- About 61,380 new cases of cancer of the uterine corpus will be diagnosed, but only about 4,910 of these cases will be uterine sarcomas.
- About 10,920 women in the United States will die from cancer of the uterine corpus.

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

- [References](#)

[See all references for Uterine Sarcoma](#)

Last Medical Review: May 12, 2014 Last Revised: January 6, 2017

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# What's New in Uterine Sarcoma Research and Treatment?

## Molecular pathology of uterine sarcoma

Recent research has improved our understanding of how changes in certain molecules can cause normal cells to become cancerous. For several years we have known that mutations (damage or defects) to DNA can alter important genes that regulate cell growth. If these genes are damaged, excess growth may result in cancer formation. Analysis of DNA from uterine sarcomas has revealed several changes in the genes that control cell growth.

Each human cell contains 23 pairs of chromosomes. Many endometrial stromal sarcomas (ESSs) have abnormalities in chromosomes 6, 7, or 17. Often, there is an abnormal “swapping” of DNA between chromosomes 7 and 17. Part of chromosome 7 goes to 17 and part of 17 goes to 7. This is known as a *translocation*. The swapping of DNA between the chromosomes leads to the formation of a new gene, called *JAZF1/JJAZ*. This gene may help the cells to become malignant. Finding it can confirm the diagnosis of ESS. A different translocation, called *YWHAE/FAM22* occurs in undifferentiated uterine sarcomas (high-grade stromal sarcomas). Cancers with the *YWHAE/FAM22* translocation tend to grow and spread more aggressively than those with the *JAZF1/JJAZ* translocation.

Scientists expect that discoveries such as these will eventually lead to new strategies for detection, prevention, and treatment.

## Clinical trials

New drugs, as well as new ways to give standard drugs are being tested. One drug, trabectedin (Yondelis<sup>®</sup>), was recently approved to treat leiomyosarcomas in the United States. Another drug, temozolomide, which is approved to treat brain tumors, also seems to help women with uterine leiomyosarcomas. Adjuvant [radiation](#) and [chemotherapy](#) continue to be evaluated for treatment of uterine sarcomas. New compounds are also being evaluated for [soft-tissue sarcomas](#) and may help women with uterine sarcomas. Some of these compounds act differently from traditional [chemotherapy](#) drugs and are called [targeted therapies](#).

- [References](#)

[See all references for Uterine Sarcoma](#)

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