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Ovarian Cancer Early Detection, Diagnosis, and Staging

Know the signs and symptoms of ovarian cancer. Find out how ovarian cancer is tested for, diagnosed, and staged.

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 Ovarian Cancer Be Found Early?](#)
- [Signs and Symptoms of Ovarian Cancer](#)
- [Tests for Ovarian Cancer](#)

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.

- [Ovarian Cancer Stages](#)
- [Survival Rates for Ovarian Cancer](#)

Questions to Ask About Ovarian Cancer

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 Ovarian Cancer?](#)

Can Ovarian Cancer Be Found Early?

there hasn't been much success so far. The 2 tests used most often (in addition to a complete pelvic exam) to screen for ovarian cancer are *transvaginal ultrasound* (TVUS) and the *CA-125* blood test.

- **TVUS (transvaginal ultrasound)** is a test that uses sound waves to look at the uterus, fallopian tubes, and ovaries by putting an ultrasound wand into the vagina. It can help find a mass (tumor) in the ovary, but it can't actually tell if a mass is cancer or benign. When it is used for screening, most of the masses found are not cancer. The **CA-125 blood test** measures the amount of a protein called CA-125 in the blood. Many women with ovarian cancer have high levels of CA-125. This test can be useful as a tumor marker to help guide treatment in women known to have

syndrome, BRCA gene mutations or a strong family history of breast and ovarian cancer. Still, even in these women, it has not been proven that using these tests for screening lowers their chances of dying from ovarian cancer.

Screening tests for germ cell tumors/stromal tumors

There are no recommended screening tests for germ cell tumors or stromal tumors. Some germ cell cancers release certain protein markers such as human chorionic gonadotropin (HCG) and alpha-fetoprotein (AFP) into the blood. After these tumors have been treated by [surgery](#)² and [chemotherapy](#)³, blood tests for these markers can be used to see if treatment is working and to determine if the cancer is coming back.

Hyperlinks

1. www.cancer.org/cancer/types/ovarian-cancer/causes-risks-prevention/what-causes.html
2. www.cancer.org/cancer/types/ovarian-cancer/treating/surgery.html
3. www.cancer.org/cancer/types/ovarian-cancer/treating/chemotherapy.html

References

American Cancer Society. *Cancer Facts and Figures 2018*. Atlanta, GA: American Cancer Society; 2018.

Bever TB, Brown PH, Maresso KC and Hawk ET. Ch 23 - Cancer Prevention and Early Detection. In: Abeloff MD, Armitage JO, Lichter AS, Niederhuber JE, Kastan MB, McKenna WG, eds. *Clinical Oncology*. 5th ed. Philadelphia, PA: Elsevier; 2014: 322.

Brawley OW, Parnes HL. Ch 34 – Cancer Screening. In: DeVita VT, Hellman S, Rosenberg SA, eds. *Cancer: Principles and Practice of Oncology*. 10th ed. Philadelphia, PA: Lippincott Williams & Wilkins; 2015.

Buyss SS, Partridge E, Black A, et al. Effect of screening on ovarian cancer mortality: the Prostate, Lung, Colorectal and Ovarian (PLCO) Cancer Screening Trial. *JAMA*. 2005;293:1149-1156.

Wolters Kluwer Health.

Jonathan S. Berek, Michael L. Friedlander, Neville F. Hacker (2015) Chapter 11: Epithelial Ovarian, Fallopian Tube, and Peritoneal Cancer. In Jonathan Berek (Author), *Berek & Hacker's Gynecologic Oncology* (6th ed.). Philadelphia: Wolters Kluwer Health.

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Signs and Symptoms of Ovarian Cancer

Ovarian cancer may cause several signs and symptoms. Women are more likely to have symptoms if the disease has spread, but even early-stage ovarian cancer can cause them. The most common symptoms include:

- Bloating
- Pelvic or abdominal (belly) pain
- Trouble eating or feeling full quickly
- Urinary symptoms such as urgency (always feeling like you have to go) or frequency (having to go often)

These symptoms are also commonly caused by benign (non-cancerous) diseases and by cancers of other organs. When they are caused by ovarian cancer, they tend to be *persistent* and a *change from normal* for example, they occur more often or are more severe. These symptoms are more likely to be caused by other conditions, and most of them occur just about as often in women who don't have ovarian cancer. But if you have these symptoms more than 12 times a month, see your doctor so the problem can be found and treated if necessary.

Others symptoms of ovarian cancer can include:

- Fatigue (extreme tiredness)
- Upset stomach
- Back pain
- Pain during sex
- Constipation
- Changes in a woman's period, such as heavier bleeding than normal or irregular

bleeding

- Abdominal (belly) swelling with weight loss

References

Cannistra SA, Gershenson DM, Recht A. Ch 76 - Ovarian cancer, fallopian tube carcinoma, and peritoneal carcinoma. In: DeVita VT, Hellman S, Rosenberg SA, eds. *Cancer: Principles and Practice of Oncology*. 10th ed. Philadelphia, PA: Lippincott Williams & Wilkins; 2015.

Goff, B. A., Mandel, L. S., Drescher, C. W., Urban, N., Gough, S., Schurman, K. M., Patras, J., Mahony, B. S. and Andersen, M. R. (2007), Development of an ovarian cancer symptom index. *Cancer*, 109: 221-227.

Morgan M, Boyd J, Drapkin R, Seiden MV. Ch 89 – Cancers Arising in the Ovary. In: Abeloff MD, Armitage JO, Lichter AS, Niederhuber JE, Kastan MB, McKenna WG, eds. *Clinical Oncology*. 5th ed. Philadelphia, PA: Elsevier; 2014: 1592.

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Tests for Ovarian Cancer

- [Medical history and physical exam](#)
- [Consultation with a specialist](#)
- [Imaging tests](#)
- [Other tests](#)
- [Genetic counseling and testing if you have ovarian cancer](#)
- [Lab tests for gene or protein changes](#)

If your doctor finds something suspicious during a pelvic exam, or if you have [symptoms](#) that might be due to ovarian cancer, your doctor will recommend exams and tests to find the cause.

Medical history and physical exam

Your doctor will ask about your medical history to learn about possible [risk factors](#)¹,

The [CT scan](#)³ is an x-ray test that makes detailed cross-sectional images of your body. The test can help tell if ovarian cancer has spread to other organs.

CT scans do not show small ovarian tumors well, but they can see larger tumors, and may be able to see if the tumor is growing into nearby structures. A CT scan may also find enlarged lymph nodes, signs of cancer spread to liver or other organs, or signs that an ovarian tumor is affecting your kidneys or bladder.

CT scans are not usually used to biopsy an ovarian tumor (see biopsy in the section "Other tests"), but they can be used to biopsy a suspected metastasis (area of spread). For this procedure, called a *CT-guided needle biopsy*, the patient stays on the CT scanning table, while a radiologist moves a biopsy needle toward the mass. CT scans are repeated until the doctors are confident that the needle is in the mass. A fine needle biopsy sample (tiny fragment of tissue) or a core needle biopsy sample (a thin cylinder of tissue about ½ inch long and less than 1/8 inch in diameter) is removed and examined in the lab.

Barium enema x-ray

A barium enema is a test to see if the cancer has invaded the colon (large intestine) or rectum. This test is rarely used for women with ovarian cancer. [Colonoscopy](#)⁴ may be done instead.

Magnetic resonance imaging (MRI) scans

[MRI scans](#)⁵ also create cross-section pictures of your insides. But MRI uses strong magnets to make the images – not x-rays. A contrast material called gadolinium may be injected into a vein before the scan to see details better.

MRI scans are not used often to look for ovarian cancer, but they are particularly helpful to examine the brain and spinal cord where cancer could spread.

Chest x-ray

An [x-ray](#)⁶ might be done to determine whether ovarian cancer has spread (metastasized) to the lungs. This spread may cause one or more tumors in the lungs and more often causes fluid to collect around the lungs. This fluid, called a *pleural effusion*, can be seen with chest x-rays as well as other types of scans.

Positron emission tomography (PET) scan

Biopsy

The only way to determine for certain if a growth is cancer is to remove a piece of it and

Genetic counseling and testing if you have ovarian cancer

If you have been diagnosed with an epithelial ovarian cancer, your doctor will likely recommend that you get genetic counseling and genetic testing for certain [inherited gene changes](#)¹⁰, even if you do not have a family history of cancer. The most common mutations found are in the *BRCA1* and *BRCA2* genes, but some ovarian cancers are [linked to mutations](#)¹¹ in other genes, such as *ATM*, *BRIP1*, *RAD51C/RAD51D*, *MSH2*, *MLH1*, *MSH6*, or *PMS6*. changes

1. www.cancer.org/cancer/types/ovarian-cancer/causes-risks-prevention/risk-factors.html
 2. www.cancer.org/cancer/diagnosis-staging/tests/imaging-tests/ultrasound-for-cancer.html
 3. www.cancer.org/cancer/diagnosis-staging/tests/imaging-tests/ct-scan-for-cancer.html
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Ovarian Cancer Stages

- [How is the stage determined?](#)

After a woman is diagnosed with ovarian cancer, 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 how much cancer is in the body. It helps determine how serious the cancer is and how best to treat it. Doctors also use a cancer's stage when talking about survival statistics.

Ovarian cancer 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. 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.

One of the goals of surgery for ovarian cancer is to take tissue samples for diagnosis and staging. To stage the cancer, samples of tissues are taken from different parts of the pelvis and abdomen and examined in the lab.

How is the stage determined?

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

They both use 3 factors to stage (classify) this cancer :

- The extent (size) of the **tumor (T)**: Has the cancer spread outside the ovary or fallopian tube? Has the cancer reached nearby pelvic organs like the uterus or bladder?
- The spread to nearby lymph **nodes (N)**: Has the cancer spread to the lymph nodes in the pelvis or around the aorta (the main artery that runs from the heart down along the back of the abdomen and pelvis)? Also called para-aortic lymph nodes.
- The spread (**metastasis**) to distant sites (**M**): Has the cancer spread to fluid around the lungs (malignant pleural effusion) or to distant organs such as the liver or bones?

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. This is also known as **surgical staging**. 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 Staging¹](#).

The system described below is the most recent AJCC system effective January 2018. It is the staging system for ovarian cancer, fallopian tube cancer, and primary peritoneal cancer.

Cancer staging can be complex, so ask your doctor to explain it to you in a way you understand. ca9.59 | S 0 G 0.75 w 0 0 0 13g (ca234.34 m 13g (ca9.59 | S 0 G 0.75 w 4.34 m 13g (ca8

	NO MO		<p>following are present:</p> <ul style="list-style-type: none"> • The tissue (capsule) surrounding the tumor broke during surgery, which could allow cancer cells to leak into the abdomen and pelvis (called surgical spill). This is stage IC1.

			The cancer might or might not have spread to retroperitoneal lymph nodes (N0 or N1), but it has not spread to distant sites (M0).
IIIB	T3b N0 or N1 M0	IIIB	<p>There is cancer in one or both ovaries or fallopian tubes, or there is primary peritoneal cancer and it has spread or grown into organs outside the pelvis. The deposits of cancer are large enough for the surgeon to see, but are no bigger than 2 cm (about 3/4 inch) across. (T3b).</p> <p>It may or may not have spread to the retroperitoneal lymph nodes (N0 or N1), but it has not spread to the inside of the liver or spleen or to distant sites (M0).</p>
IIIC	T3c N0 or N1 M0	IIIC	<p>The cancer is in one or both ovaries or fallopian tubes, or there is primary peritoneal cancer and it has spread or grown into organs outside the pelvis. The deposits of cancer are larger than 2 cm (about 3/4 inch) across and may be on the outside (the capsuleeN1), but it has not spread to distant sites (M0).</p>

Hyperlinks

1. www.cancer.org/cancer/diagnosis-staging/staging.html

References

American Joint Committee on Cancer. Ovary, Fallopian Tube, and Primary Peritoneal carcinoma. In: *AJCC Cancer Staging Manual*. 8th ed. New York, NY: Springer; 2017:681-690.

Prat J; FIGO Committee on Gynecologic Oncology. Staging classification for cancer of the ovary, fallopian tube, and peritoneum. *Int J Gynecol Obstet*. 2014;124(1):1-5.

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Survival Rates for Ovarian Cancer

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. Ask your doctor how these numbers might apply to you.

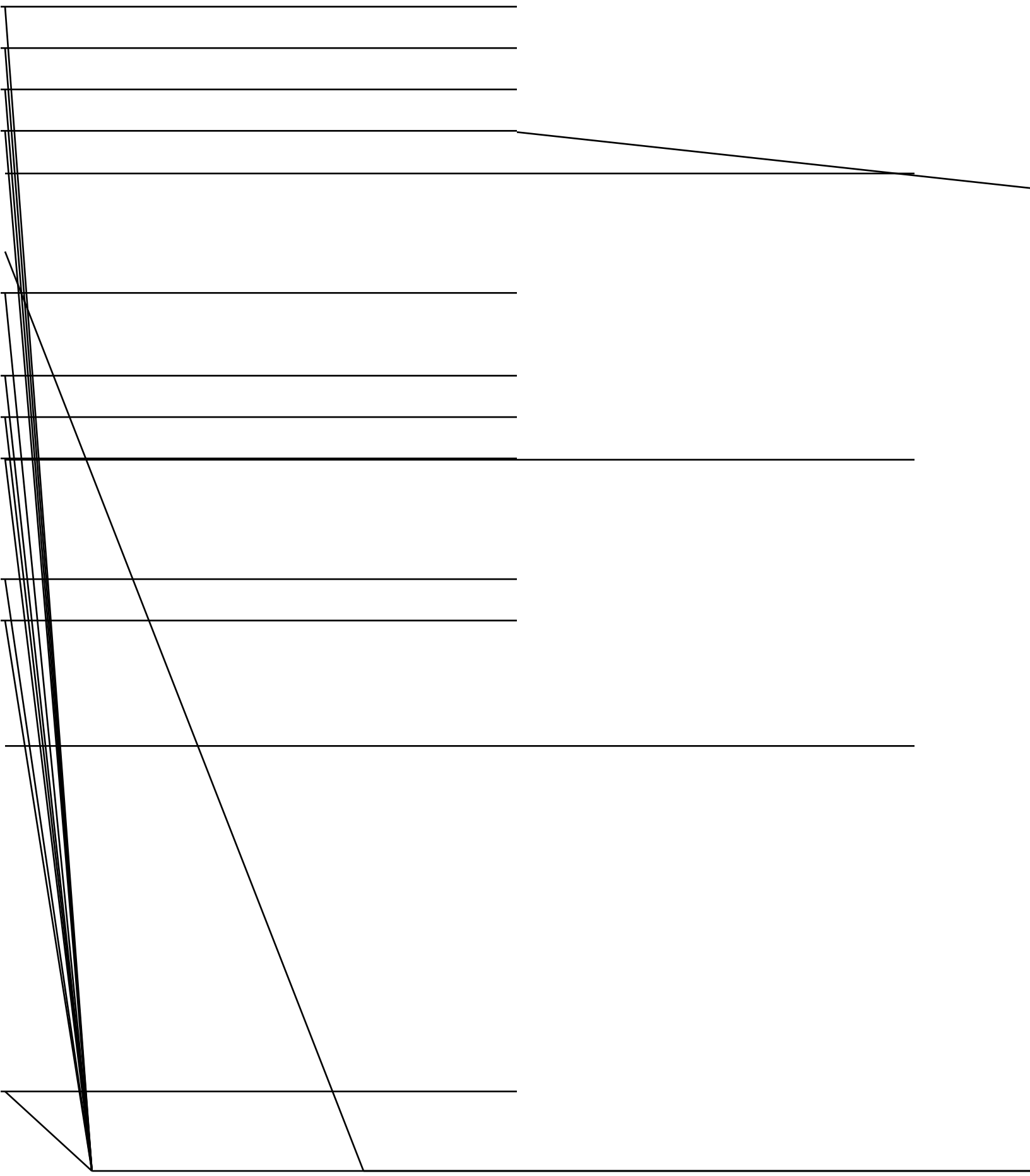
What is a 5-year relative survival rate?

A **relative survival rate** compares people with the same type and stage of cancer to people in the overall population. For example, if the **5-year relative survival rate** for a specific stage of ovarian cancer is 80%, it means that people who have that cancer are,

on average, about 80% 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 Surveillance, Epidemiology, and End Results (SEER) database, maintained by the National Cancer



overall health, and how well the cancer responds to treatment, can also affect your outlook.

- **People now being diagnosed with ovarian (or fallopian tube) cancer 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.

Hyperlinks

1. www.cancer.org/cancer/types/ovarian-cancer/about/what-is-ovarian-cancer.html

References

SEER*Explorer: An interactive website for SEER cancer statistics [Internet]. Surveillance Research Program, National Cancer Institute. Accessed at <https://seer.cancer.gov/explorer/> on February 23, 2023.

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What Should You Ask Your Doctor About Ovarian Cancer?

- [When you're told you have ovarian cancer](#)
- [When deciding on a treatment plan](#)
- [During treatment](#)
- [After treatment](#)

It is important for you to have honest, open discussions with your cancer care team. They want to answer all of your questions, so that you can make informed treatment and life decisions. Here are some questions to consider:

When you're told you have ovarian cancer

- What type of ovarian cancer do I have?
- Has my cancer spread beyond the ovaries?
- What is the cancer's [stage](#) (extent), and what does that mean?
- Will I need other [tests](#) before we can decide on treatment?
- Do I need to see any other doctors or health professionals?
- If I'm concerned about the costs and insurance coverage for my diagnosis and treatment, who can help me?
- Will I be able to have children after my treatment?
- Should I think about [genetic testing](#)¹? What are my testing options? Should I take a home-based genetic test? What would the pros and cons of testing be?

When deciding on a treatment plan

- What are my [treatment options](#)²?
- What do you recommend and why?
- How much experience do you have treating this type of cancer?
- Should I get a second opinion? How do I do that? Can you recommend someone?
- What would the goal of the treatment be?
- How quickly do we need to decide on treatment?
- What should I do to be ready for treatment?
- How long will treatment last? What will it be like? Where will it be done?
- What risks or side effects are there to the treatments you suggest?
- Are there things I can do to reduce these side effects?
- How might treatment affect my daily activities? Can I still work full time?
- What are the chances the cancer will recur (come back) with these treatment plans?
- What will we do if the treatment doesn't work or if the cancer recurs?
- What if I have [transportation problems](#)³ getting to and from treatment?

During treatment

Once treatment begins, you'll need to know what to expect and what to look for. Not all of these questions may apply to you, but asking the ones that do may be helpful.

- How will we know if the treatment is working?
- Is there anything I can do to help manage side effects?
- What symptoms or side effects should I tell you about right away?
- How can I reach you on nights, holidays, or weekends?
- Do I need to change what I eat during treatment?
- Are there any limits on what I can do?
- Can I exercise during treatment? If so, what kind should I do, and how often?
- Can you suggest a mental health professional I can see if I start to feel overwhelmed, depressed, or distressed?
- What if I need social support during treatment because my family lives far away?

After treatment

- Do I need a special diet after treatment?
- Are there any limits on what I can do?
- What other symptoms should I watch for?
- What kind of exercise should I do now?
- What type of follow-up will I need after treatment?
- How often will I need to have follow-up exams and imaging tests?
- Will I need any blood tests?
- How will we know if the cancer has come back? What should I watch for?
- What will my options be if the cancer comes back?

Along with these sample questions, be sure to write down some of your own. For instance, you might want more information about recovery times. You may also want to ask about [clinical trials](#)⁴ for which you may qualify.

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