CONDITION

Ovarian cancer

Ovarian cancer is cancer that begins in an ovary or closely related reproductive tissue.

WHAT IT IS
Cancer arising in an ovary or closely related tissues

BODY SYSTEM
Female reproductive system

MAIN SYMPTOMS
Persistent bloating, pelvic pain, early fullness, urinary changes

WHAT CAUSES IT
Usually unknown; sometimes inherited gene changes

HOW IT IS DIAGNOSED
Tissue examination, usually after surgery or biopsy

MAIN TREATMENT
Surgery and cancer medicines, guided by type and stage

CAN IT BE CURED?
Sometimes - especially when found early

IS IT AN EMERGENCY?
Sometimes - severe pain, vomiting, breathlessness, or collapse

LONG-TERM OUTLOOK
Early cancer may be cured; advanced cancer often returns

Overview

Ovarian cancer is a condition in which abnormal cells grow without normal control in or near an ovary. The ovaries produce eggs and hormones. They sit on either side of the uterus.

Most ovarian cancers are epithelial cancers, meaning they involve the cells covering an ovary or related tissues. Many high-grade serous cancers, the most common epithelial type, are now thought to begin in a fallopian tube. Primary peritoneal cancer begins in the abdominal lining but behaves similarly. These cancers are often assessed and treated together.

Less common types begin in egg-producing cells, called germ cells, or hormone-producing cells, called stromal cells. These types can affect younger people and may need different treatment.

Ovarian cancer matters because early symptoms can be mild or mistaken for digestive or

bladder problems. There is no reliable screening test for people at average risk who do not have symptoms. The outlook is generally better when cancer is found before it has spread, but treatment can also control advanced cancer and relieve symptoms.

Symptoms

Symptoms are more concerning when they are new, happen often, and do not settle. They do not have to be severe.

Common symptoms include:

Some people have indigestion, nausea, pain during sex, or bleeding after menopause. A growing abdomen may sometimes be caused by ascites, which is a collection of fluid inside the abdomen.

These symptoms are much more often caused by non-cancerous conditions. However, symptoms that are frequent, worsening, or different from what is normal for you should be assessed. Ovarian cancer cannot be identified from symptoms alone.

- Persistent abdominal bloating or an increase in abdominal size
- Pelvic, lower abdominal, or back pain
- Feeling full unusually quickly or having difficulty eating
- Needing to urinate more urgently or more often
- Changes in bowel habits, including constipation
- Unexplained tiredness or weight loss

Causes and risk factors

Ovarian cancer begins when genetic changes allow cells to grow and survive abnormally. It is usually not possible to identify why this happened in one person.

Risk increases with age, particularly after menopause. Other factors linked with a higher risk include:

Most people diagnosed with ovarian cancer do not have a known inherited gene change. Having a risk factor does not mean you will develop the condition.

Pregnancy, breastfeeding, and previous use of combined hormonal contraception are associated with a lower ovarian cancer risk. This does not mean that any of them should be used specifically to prevent cancer without considering their other effects.

- An inherited harmful change in genes such as BRCA1 or BRCA2
- Lynch syndrome, an inherited condition affecting DNA repair
- A close family history of ovarian, fallopian tube, breast, pancreatic, or prostate cancer
- Endometriosis, particularly for some less common ovarian cancer types
- Never having been pregnant
- Some forms of menopausal hormone therapy, depending on the hormones used and treatment duration

Diagnosis

Assessment usually starts with a discussion of your symptoms, medical history, and family history. A clinician may examine your abdomen and pelvis.

A blood test may measure CA-125, a protein that can be raised in ovarian cancer. CA-125 is not a stand-alone cancer test. It can be normal when cancer is present and raised by non-cancerous conditions such as endometriosis, fibroids, menstruation, or infection.

A pelvic ultrasound is often the first scan. A transvaginal ultrasound uses a small ultrasound probe inside the vagina to provide detailed images of the ovaries. CT scans may then help show the size and location of a suspected cancer and whether it has spread.

Cancer is confirmed by examining tissue under a microscope. Tissue may be obtained during surgery or, in some situations, through a needle biopsy before drug treatment begins.

If cancer is found, it is assigned a stage. Stage I is limited to the ovaries or fallopian tubes, while stage IV has spread to distant organs. The exact cell type and grade, meaning how abnormal the cells look, also affect treatment.

Genetic testing is commonly offered for epithelial ovarian cancer. This may include a blood or saliva test for inherited changes and testing of the tumour itself. Results can influence treatment and may provide useful information for biological relatives.

Treatment and management

Treatment is planned according to the cancer type, stage, genetic features, previous treatments, overall health, and your priorities. Care is usually coordinated by a team experienced in gynaecological cancers.

Surgery aims to remove the cancer and determine how far it has spread. Depending on the

findings, this may involve the ovaries, fallopian tubes, uterus, nearby fatty tissue, and visible areas of cancer elsewhere in the abdomen. Some people have chemotherapy before surgery to shrink the cancer. Others have surgery first.

Chemotherapy uses medicines that travel through the body to damage cancer cells. Platinum-based chemotherapy is commonly used for epithelial ovarian cancer. Treatment is given in cycles, with rest periods between them.

Targeted medicines act on particular features that help cancer cells survive. They include PARP inhibitors for some cancers with BRCA changes or related problems repairing DNA. Medicines that affect tumour blood vessels may also be used. These treatments are not suitable for everyone and can have important side effects.

Selected early-stage germ cell, stromal, or epithelial cancers may be treated with fertility-preserving surgery. This usually means keeping the uterus and one unaffected ovary. It is only appropriate in specific circumstances.

Treatment can also focus on symptoms. Ascites may be drained, pain can be treated, and support is available for nausea, nutrition, fatigue, menopause symptoms, emotional health, and sexual wellbeing. Palliative care provides symptom and quality-of-life support at any stage and can be given alongside cancer treatment.

Complications

Ovarian cancer can spread across the lining of the abdomen or to lymph nodes and other organs. This can cause ascites, pain, reduced appetite, breathlessness, or pressure on the bladder and bowel.

A tumour can sometimes narrow or block the bowel. Signs include worsening cramping pain, repeated vomiting, abdominal swelling, and being unable to pass stool or gas. This needs urgent assessment.

Cancer and some treatments increase the risk of blood clots. Chemotherapy can also lower blood cell counts, increasing the risk of infection, bleeding, or anaemia. Other possible treatment effects include nerve pain or numbness, fatigue, early menopause, infertility, and changes in bowel or bladder function.

Ovarian cancer may return after treatment, especially when it was advanced at diagnosis. A recurrence may be treated with further cancer medicines, surgery in selected cases, radiotherapy for specific symptoms, or supportive care.

Prevention

Ovarian cancer cannot always be prevented. There is no lifestyle change that guarantees protection, and most cases occur without a clearly preventable cause.

People with a strong family history may benefit from genetic counselling. This involves reviewing the family history, discussing the limits and possible effects of testing, and deciding whether a genetic test is appropriate.

For people with certain inherited gene changes, surgery to remove both fallopian tubes and ovaries can greatly reduce risk. It does not remove all risk because a similar cancer can still begin in the abdominal lining. The operation also causes permanent infertility and, before natural menopause, immediate menopause. Its timing requires specialist discussion.

Removing the fallopian tubes during another planned pelvic operation may reduce risk for some people, but it does not eliminate it.

Routine screening with CA-125 blood tests or transvaginal ultrasound has not been shown to reduce deaths in average-risk people without symptoms. These tests can produce false alarms and lead to unnecessary procedures. People with inherited risk need individual specialist advice rather than general-population screening.

Living with it and what to expect

The course of ovarian cancer differs between people. Early-stage cancer can sometimes be removed and cured. Advanced cancer is often treatable, but it commonly returns and may require several periods of treatment over months or years.

Follow-up after treatment may include appointments to discuss symptoms and side effects, physical examinations, blood tests, and scans when appropriate. The schedule is based on the cancer type, treatment, and local practice. A rising CA-125 result does not always mean treatment must begin immediately; it is interpreted alongside symptoms, scans, and your treatment goals.

Recovery from surgery and chemotherapy is gradual. Fatigue, changes in appetite, numbness in the hands or feet, and reduced stamina can continue after treatment ends. Some effects improve over time, while others may persist.

Treatment can affect fertility, hormone levels, body image, relationships, work, and finances. Menopause support, fertility advice, physiotherapy, nutrition services, counselling, and cancer support groups may help. Many people continue everyday activities during or after treatment, although routines may need to change around symptoms and treatment cycles.

If cancer cannot be cured, treatment may still slow its growth and preserve quality of life. Decisions can be revisited as the cancer, available treatments, and your priorities change.

When to get medical help

Arrange a routine medical appointment if bloating, pelvic or abdominal pain, early fullness, or urinary changes are new, happen repeatedly, or continue for several weeks. Mention any family history of ovarian, breast, pancreatic, prostate, or bowel cancer.

Contact your cancer team promptly if you are receiving treatment and develop new symptoms, worsening pain, difficulty eating, increasing abdominal swelling, unusual bleeding, or treatment side effects that are difficult to manage.

Seek urgent medical care for:

Sudden breathing difficulty, chest pain, or collapse may indicate a blood clot or another emergency. Call emergency services rather than waiting for a routine appointment.

- Severe or rapidly worsening abdominal pain
- Repeated vomiting or inability to pass stool or gas
- Fever or feeling acutely unwell during chemotherapy
- New swelling, warmth, or pain in one leg
- Sudden shortness of breath, chest pain, fainting, or coughing blood
- Heavy bleeding, confusion, or collapse

Common questions

Can ovarian cancer be cured?

Sometimes. Cure is more likely when the cancer is found early and can be completely removed. Advanced ovarian cancer often returns, but treatment may control it for meaningful periods.

What does ovarian cancer pain feel like?

It may feel like pressure, aching, cramping, or persistent discomfort in the pelvis, abdomen, or back. Pain alone cannot identify ovarian cancer, and many other conditions cause similar symptoms.

Can a blood test detect ovarian cancer?

No blood test can confirm or rule it out by itself. CA-125 can support an assessment, but

benign conditions can raise it and some ovarian cancers do not produce a high result.

Can an ultrasound confirm ovarian cancer?

An ultrasound can find an ovarian mass and show features that may be concerning. It cannot usually confirm cancer. Confirmation requires examination of tissue removed during surgery or biopsy.

Is ovarian cancer hereditary?

Most cases are not known to be inherited. However, inherited changes such as BRCA1, BRCA2, or Lynch syndrome genes cause an important minority of cases. Genetic testing may affect both treatment and family risk assessment.

Can ovarian cancer symptoms feel like IBS?

Yes. Bloating, abdominal discomfort, and bowel changes can resemble irritable bowel syndrome. New, frequent, or persistent symptoms-especially after menopause-should be assessed rather than assumed to be IBS.

Sources

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