Ovarian Cancer
What you need to know
Your body and your ovaries

Your ovaries are part of your reproductive system. This system is located entirely in your pelvis and consists of your vagina, cervix, uterus (womb), endometrium (lining of the womb), fallopian tubes and ovaries.

You have two ovaries, one on each side of your body. They have two main functions. Firstly, they produce and store eggs for reproduction. Secondly, they produce the female sex hormones. These hormones helped develop your vagina, womb, fallopian tubes, breasts and body shape during puberty. They also regulate a woman’s menstrual cycle.

What is ovarian cancer?

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Not one disease, but many

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What is ovarian cancer?

Ovarian cancer is a disease that can disrupt the normal function of the ovaries. It occurs when abnormal cells within the ovary start to multiply, creating a tumour. But it’s important to note that not all tumours are cancerous.

Non-cancerous tumours are called benign tumours. This means they don’t usually spread to other parts of the body. They may need treatment but they’re rarely life threatening.

Malignant ovarian tumours, however, are cancerous. It’s important to catch cancers early because they can grow enough to engulf most of the ovary and can spread to other parts of the body too.
Ovarian cancer is not a single disease, and treatment for it will depend on the type of tumour a patient has.

There are three broad types of ovarian tumour. What makes them different is the part of the ovary they began growing on. If you’re diagnosed with ovarian cancer, your doctors will tell you what type of tumour you have.

The three types of ovarian tumour are:

- Epithelial ovarian tumours
- Germ cell ovarian tumours
- Sex-cord stromal ovarian tumours

**Epithelial ovarian tumours**

This type of tumour develops on the surface of the ovary. Some are benign, but some are malignant. Malignant epithelial ovarian tumours are by far the most common type of cancerous ovarian tumour, accounting for 90% of all cases.

There are five types of epithelial ovarian tumour:

- **Serous tumours**: These occur most often in women between the ages of 40 and 60. They are the most common type of epithelial tumour, representing up to 40% of cases. Sometimes they’re cancerous, sometimes they’re not: 50% are malignant (cancerous), 33% are benign (non-cancerous), and 17% are mildly cancerous, meaning the tumour grows very slowly.
- **Endometrioid tumours**: These occur primarily in women aged 50 to 70. Around 20% of epithelial tumours are endometrioid tumours and most are malignant. About 20% of endometrioid tumours occur in women who also have endometrial cancer and 5% are linked to endometriosis, a disorder of the lining of the womb.
- **Clear cell tumours**: These occur primarily in women aged 40 to 80. They make up 6% of epithelial tumours and are almost always malignant. About 20% of endometrioid tumours occur in women who also have endometrial cancer and 5% are linked to endometriosis, a disorder of the lining of the womb.
- **Mucinous tumours**: These tumours are most common in women aged 30 to 50 and make up roughly 10% of epithelial tumours. Most of the time they’re not cancerous: 75% of mucinous tumours are benign, 15% are malignant, and 10% are on the borderline.
- **Undifferentiated tumours**: These tumours do not fit neatly into any category and account for about 15% of epithelial tumours. They tend to be malignant.

**A note about primary peritoneal carcinoma**

Primary peritoneal carcinoma is a type of cancer closely related to epithelial ovarian cancer. It’s also sometimes referred to as extra-ovarian primary peritoneal carcinoma or serous surface papillary carcinoma.

This type of cancer is rare and develops from the cells that line the pelvis. It has the same symptoms as ovarian cancer and is diagnosed and treated in the same way.

**Germ cell ovarian tumours**

Germ cell tumours originate in the cells within the ovary that develop into eggs. These types of tumours account for 5-10% of ovarian cancer cases and they tend to occur in younger women (mostly in their 20s). Most germ cell tumours are non-cancerous and 90% of cases can be successfully treated.

**Sex-cord stromal ovarian tumours**

Sex cord stromal tumours begin in the connective cells that hold the ovaries together. They can affect all age groups. Most of these tumours are either not cancerous or are very slow growing and account for 5% of all ovarian cancer cases.
Stages of ovarian cancer

If you’re diagnosed with cancer, you’ll be told what stage it’s at. This will help your doctors understand if the cancer has spread and the best way to treat it. There are four stages of ovarian cancer:

**Stage 1**
This is where the cancer is confined to one or both ovaries. It is divided into three sub-stages:
- **Stage 1a:**
  - The cancer is contained inside one ovary
  - There is no ascites (fluid accumulation)
  - There is no tumour on the external surface of the ovary
  - The surface of the ovary is intact
- **Stage 1b:**
  - The cancer is contained inside both ovaries
  - There is no ascites (fluid accumulation)
  - There is no tumour on the external surface of the ovaries
  - The surface of the ovaries are intact
- **Stage 1c**
  Stage 1a or 1b and one or more of the following:
  - There is some cancer on the surface of at least one ovary
  - Cancer cells are found in fluid (ascites) taken from inside the abdomen during surgery
  - The ovary ruptures (bursts) before or during surgery

**Stage 2**
A stage 2 ovarian cancer occurs when the cancer is also found outside the ovary or ovaries, but has spread no further than the pelvic region (uterus, bladder, lower intestine). There are three sub-stages.
- **Stage 2a:**
  - The cancer has spread into the fallopian tubes, the womb or both
- **Stage 2b:**
  - The cancer has grown into other tissues in the pelvis, for example the bladder or rectum
- **Stage 2c**
  Stage 2a or 2b and one or more of the following:
  - There is some cancer on the surface of at least one ovary
  - Cancer cells are found in fluid (ascites) taken from inside the abdomen during surgery
  - The tumour bursts before or during surgery

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**Figure 3:** Stage 1A to 1C ovarian cancer (Copyright © CancerHelp UK)

**Figure 4:** Stage 2A to 2C ovarian cancer (Copyright © CancerHelp UK)
**Stage 3**

Stage 3 ovarian cancer involves one or both ovaries and has spread beyond the pelvis into the abdominal cavity (but not the liver) and/or to nearby lymph nodes. The three sub-sections are:

- **Stage 3a:**
  - Tumour found in one or both ovaries and the pelvic region
  - Cancer can be seen under the microscope in tissue taken from the lining of the abdomen
  - Lymph nodes test negative for cancer

- **Stage 3b:**
  - Tumour found in one or both ovaries and there are confirmed small tumour growths (less than 2cm in diameter) on the lining of the abdomen
  - Lymph nodes test negative for cancer

- **Stage 3c:**
  - Tumour found in one or both ovaries and there are tumour growths larger than 2cm on the lining of the abdomen
  - Lymph nodes may contain cancer

**Stage 4**

Stage 4 indicates that cancer cells have spread to other parts of the body such as the liver, lungs and brain.
How quickly does ovarian cancer spread?

Different types of tumours grow at different rates. So when someone is diagnosed with cancer, their doctors grade the tumour according to how quickly they expect it to develop.

They work out the tumour’s grade by comparing how much the tumour looks like normal tissue. Cancers that look similar to normal tissue grow slowly and are considered low grade. High-grade cancers do not look like normal tissue and can spread quickly.

Ovarian tumours can be divided into four grades:

- **Grade 0**
  Grade 0 tumours are also known as borderline tumours or tumours of low malignant potential. They are the least aggressive tumours and look very much like normal tissue cells. They’re unlikely to spread and are usually easy to cure.

- **Grade 1**
  Grade 1 tumours look very similar to normal tissue. They are referred to as low grade and tend to grow slowly.

- **Grade 2**
  Grade 2 tumours do not look like normal tissue. They grow moderately fast and are sometimes referred to as intermediate grade tumours.

- **Grade 3**
  Grade 3 tumours do not look like normal tissue. They grow quickly and in a disorganised way. They are the most aggressive type of cancer.

What’s my risk of developing ovarian cancer?

A number of things can affect your risk of developing ovarian cancer. The two main risk factors are having certain cancers in your family, and getting older.

**Your family history**

**Ovarian or breast cancer is in your family**

If two or more relatives from the same side of your family have had ovarian or breast cancer, you may have a higher risk of developing ovarian cancer yourself. This is because you might have inherited a faulty gene (known as the BRCA1 or BRCA2 mutation) that creates a greater chance of developing ovarian cancer.

You’re more likely to be carrying this faulty gene if you’re of Ashkenazi Jewish, Icelandic, Norwegian, Dutch, Pakistani or Polish descent.

**Ovarian, womb, colon, bowel or stomach cancer are in your family**

A rare condition called hereditary non-polyposis colorectal cancer (HNPPC), which runs in families, can slightly increase your risk of developing ovarian cancer. It can also increase your risk of developing bowel, womb, stomach, colon, pancreatic, biliary and bladder cancer. HNPPC is caused by inherited faulty genes (known as the MLH1, MSH3 and MSH6 mutations).

**Getting older**

Your risk of developing ovarian cancer increases as you get older and most ovarian cancer cases occur in women over the age of 50. However, some types of ovarian cancer do appear in much younger women.

In addition to age and family history, the following may slightly increase your risk of ovarian cancer:

- Obesity
- A long menstrual history - which can result from one or more of the following:
  - Starting your period before 12
  - Going through the menopause after 50
  - Having your first child after 30
  - Not having any children
  - Not breast feeding
- **Endometriosis** (a condition of the womb)
- Using oestrogen-only hormone replacement therapy (HRT)
- **Smoking**, which may increase your risk of developing mucinous ovarian cancer

Symptoms to look out for

If you’ve been getting any of the following symptoms regularly, you should talk to your doctor about getting tested for ovarian cancer:

- Persistent stomach pain
- Persistent bloating
- Difficulty eating or feeling full quickly
- Needing to wee more frequently

Sometimes other symptoms can also be associated with ovarian cancer. You may get them on their own or at the same time as those listed above. These symptoms include:

- Changes in bowel habits (e.g., diarrhoea or constipation)
- Extreme fatigue
- Back pain

Many of us get symptoms like these from time to time, and more often than not they’re down to other, non-serious conditions. However, the symptoms of ovarian cancer are distinct in that they are:

- Persistent (they don’t go away)
- Frequent (you get them for more than 12 days a month)
- Getting progressively worse
- New (they started in the last 12 months)
- Unusual (not normal for you)

If you’re getting any of the above symptoms on most days of the month it’s important to see your GP. Something else may be causing them, but it’s best to have them checked out.
Could my symptoms be caused by anything else?

Other conditions may produce symptoms similar to ovarian cancer or may cause you to worry you’re at risk of developing ovarian cancer. These conditions are IBS, ovarian cysts and polycystic ovary syndrome.

**IBS**

IBS or irritable bowel syndrome is the name given to a collection of unexplained symptoms relating to a disturbance of the colon or large intestine. The symptoms of IBS are very similar to ovarian cancer. This means that GPs often mistake ovarian cancer for IBS. Similarly, women with IBS often worry their symptoms are due to ovarian cancer.

You should know that:

- IBS usually develops for the first time in patients in their 20s and 30s.
- If you develop IBS symptoms for the first time and you are in your 50s, it is unlikely to be IBS.
- The symptoms of IBS come and go and are related to eating particular foods and stress.
- The symptoms of ovarian cancer stay with you constantly and are not affected by your diet or stress.

**Ovarian cysts**

Ovarian cysts are fluid-filled sacs that develop in the ovary. They can occur as part of a woman’s normal menstrual cycle during ovulation. Most women who have ovarian cysts don’t even know they’re there. But very occasionally a cyst may grow big enough to cause symptoms similar to ovarian cancer.

Ovarian cysts are diagnosed in the same way that ovarian cancer is – a CA125 blood test and a pelvic ultrasound.

Treatment of ovarian cysts depends on their size and the symptoms they produce. Ovarian cysts that are 3-5cm in size don’t require follow-up as they’ll usually disappear within three months. Cysts that are 5-7cm should be observed with a yearly ultrasound. Cysts larger than 7cm may need to be removed with surgery.

Ovarian cysts are less common after the menopause because ovulation no longer occurs. If ovarian cysts do occur after the menopause they may cause some concern.

Ovarian cysts are rarely cancerous, but your doctor may still want to carry out tests to rule out ovarian cancer.

**Polycystic ovary syndrome (PCOS)**

PCOS occurs when small, harmless cysts form on the surface of the ovary. The cysts in PCOS are sacs containing eggs that have not matured correctly due to a hormonal imbalance. This imbalance prevents the egg from being released each month, leading to infrequent ovulation.

Women with PCOS are sometimes worried they have a higher risk of developing ovarian cancer. However, research indicates there’s no link between PCOS and ovarian cancer.

PCOS is diagnosed through an ultrasound scan. It can’t be cured but treatment options are available.

What should I do if I’m worried about symptoms?

If you’ve noticed any of the symptoms of ovarian cancer, make an appointment to see your GP **straight away**.

While you’re waiting for your appointment, keep a symptoms diary recording how persistent and frequent your symptoms are. This will help your GP understand what might be causing them.

Try not to worry. The symptoms of ovarian cancer are similar to those of a number of non-serious conditions, but your GP will want to rule out ovarian cancer first.

When you visit your GP, they may arrange for you to have two tests:

- **CA125 blood test:** CA125 is a protein produced by some ovarian cancers. Raised levels of it in your blood may indicate ovarian cancer. However, there may be other reasons for a raised CA125 level, so it’s not a conclusive test.
- **Transvaginal ultrasound scan (TVU):** This is an ultrasound of your pelvic region, which can detect any abnormalities in your ovaries.

If these tests pick up signs of ovarian cancer, you’ll need further tests before a full diagnosis is confirmed.

**If both tests come back clear but your symptoms continue, become more frequent or get worse, please do return to your GP.**

How to talk to your GP about your concerns

1. Before your appointment, write down all your concerns and any questions you have so you don’t forget anything.
2. During your appointment, tell your GP you’re worried you may have ovarian cancer.
3. Using the symptoms diary, describe your symptoms in as much detail as possible. Talk about when you first noticed them, if they’ve got worse, how often you get them and how severe they are.
4. Has anyone in your family ever had ovarian or breast cancer? If so, be sure to mention this to your GP.
5. If your GP doesn’t suggest it, ask for a CA125 blood test.
6. Before you leave, ask your GP to clarify anything you’re unsure of. Make sure you fully understand what you’ve discussed during the appointment.
7. Write down any instructions or information so you’re able to understand and remember the next steps.
8. If you feel your GP hasn’t listened to your concerns, do talk to another one. Don’t stop until you feel appropriate action has been taken.
Where to find more information

If you have any questions or would like further information you can contact us:

by phone on 0300 456 4700,
email info@ovarian.org.uk,
or write to us at:
Ovarian Cancer Action
8-12 Camden High Street
London NW1 0JH

For additional support and advice you may also contact:

Macmillan Cancer Support
Macmillan helpline: 0808 808 00 00 (Monday to Friday, 9am – 8pm)
www.macmillan.org.uk

Maggie’s Cancer Caring Centres
Support line: 0300 123 1801
Email: enquiries@maggiescentres.org
www.maggiescentres.org

Ovacome
Support line: 0845 371 0554
Email: support@ovacome.org.uk
www.ovacome.org.uk

Sources


