TEST

CA-125 blood test

A CA-125 blood test measures a protein marker used mainly to monitor ovarian cancer and assess ovarian masses or symptoms.

WHAT IT MEASURES
Blood level of the CA-125 protein marker

SAMPLE
Blood

FASTING NEEDED?
No

HOW LONG IT TAKES
Usually less than 10 minutes

RESULTS IN
Often one to several days, varying by laboratory

USED FOR
Monitoring cancer and helping assess symptoms or an ovarian mass

MAIN LIMITATION
Benign conditions can raise it; some ovarian cancers do not

Overview

CA-125 stands for cancer antigen 125. It is a protein produced by some normal tissues and cancers and released into the blood.

The test measures CA-125 in a blood sample. It is used mainly to monitor ovarian, fallopian tube or primary peritoneal cancer. These closely related cancers may be managed in similar ways.

CA-125 may also help assess persistent symptoms or an ovarian mass found on a scan. However, it cannot by itself confirm or rule out cancer.

It is not a reliable screening test for ovarian cancer in people at average risk without symptoms. Benign conditions can raise CA-125, while some ovarian cancers produce little or none.

Why the test is ordered

Your healthcare professional may order CA-125 to:

The result is interpreted alongside your symptoms, examination, imaging and medical history. If cancer is suspected, examination of a tissue sample is usually needed for a definite diagnosis.

- Monitor ovarian, fallopian tube or primary peritoneal cancer
- Check how cancer is responding to treatment
- Look for changes after treatment
- Help assess persistent symptoms
- Add information when an ultrasound shows an ovarian or pelvic mass

Who should have the test

CA-125 is commonly used for people diagnosed with a cancer known to produce the marker. Repeated results can show whether the level is rising, falling or stable.

It may also be appropriate if you have an ovarian mass or ongoing symptoms such as bloating, pelvic discomfort, feeling full quickly or needing to urinate more often. These symptoms are common and often have other causes, so CA-125 is only one part of the assessment.

Routine screening is not recommended for most people without symptoms. CA-125 also has important limitations for people at higher risk because of an inherited gene change or strong family history. A specialist can discuss suitable risk assessment and monitoring options.

How to prepare

You do not usually need to fast. You can normally eat, drink water and take your usual medicines.

Tell the healthcare professional arranging the test if you:

Biotin can interfere with some laboratory methods. Do not stop any medicine or supplement unless the professional responsible for your care advises you to.

If other blood tests are being taken at the same appointment, follow their preparation instructions.

- Are pregnant or could be pregnant
- Are having a menstrual period

- Recently had surgery or a significant infection
- Have endometriosis, fibroids, liver disease or another relevant condition
- Are receiving cancer treatment
- Take high-dose biotin supplements

What happens during the test

A healthcare professional places a small needle into a vein, usually inside your elbow or on the back of your hand. Blood is collected into a tube and sent to a laboratory.

You may feel a brief scratch or sting. The blood draw usually takes less than 10 minutes, although the full appointment may take longer.

Pressure is applied afterward, and you can usually return to normal activities immediately.

Understanding your results

The result is usually reported in units per millilitre, written as U/mL. Your report should show the laboratory's reference range.

No single result means the same thing for everyone. Interpretation can vary by laboratory, age, pregnancy status, medicines and clinical context. Menopausal status is particularly relevant when assessing an ovarian mass.

A raised CA-125 does not mean you have cancer. Menstruation, pregnancy, endometriosis, fibroids, pelvic inflammation and other non-cancerous conditions can raise it.

A result within range does not completely rule out cancer. Some ovarian cancers release little CA-125, particularly at an earlier stage or in certain tumour types.

For monitoring, the pattern over time is often more useful than one measurement. A falling level may support that treatment is working, while a rising level may prompt further assessment. Small changes can reflect normal variation and should not be interpreted alone.

What affects the results

Important influences include:

Kidney function is not usually a major influence by itself, and a recent blood transfusion is not generally an important source of error.

Laboratories may use different testing systems. Using the same laboratory for monitoring can make trends easier to compare. Rarely, antibodies in the blood or high-dose biotin can interfere with particular methods.

- Menstruation: Levels may rise during a period, especially with endometriosis
- Pregnancy: Levels can be higher, particularly early in pregnancy
- Age and menopause: Baseline levels and interpretation may differ
- Endometriosis, fibroids or ovarian cysts: These benign conditions can increase CA-125
- Inflammation: Pelvic infection, pancreatitis or inflammation of the abdominal lining can raise it
- Fluid around organs: Fluid in the abdomen or around the lungs can increase CA-125
- Liver or heart disease: Levels may rise when these conditions cause fluid retention or inflammation
- Recent surgery: Healing and inflammation can temporarily affect the result
- Cancer treatment: Surgery, chemotherapy and other treatments can change CA-125

Accuracy and limitations

CA-125 can miss ovarian cancer because not every tumour releases the marker. A normal result is not proof that cancer is absent.

It can also be raised when no cancer is present. This is more likely before menopause because menstruation, endometriosis, fibroids and other benign conditions can increase the level. This limits its value for general population screening.

The test is most useful for monitoring a cancer that produced CA-125 at diagnosis. Even then, treatment decisions are not normally based on one result alone.

Ultrasound or other imaging is better for examining the ovaries and pelvic organs. If a mass needs a definite diagnosis, examining tissue removed during a biopsy or operation is more reliable than CA-125.

Risks and complications

The risks are those of an ordinary blood draw. You may develop a small bruise or feel briefly light-headed, but serious complications are uncommon.

What happens next

Your result will be considered with the reason for testing. A raised or changing result may lead to a repeat CA-125 test, an ultrasound, other imaging or specialist referral. A mildly raised result does not automatically require urgent investigation.

During or after cancer treatment, your care team will compare the result with earlier measurements and scans. Ask whether it represents a meaningful trend rather than focusing on one number.

Arrange routine medical follow-up if persistent bloating, pelvic or abdominal discomfort, early fullness, urinary changes or unexplained weight changes continue, even if CA-125 is within range.

Seek urgent medical help for sudden severe pelvic or abdominal pain, fainting, heavy bleeding, severe breathlessness or chest pain. These symptoms require assessment regardless of your CA-125 result.

Common questions

Can I drink coffee before a CA-125 test?

Yes. CA-125 does not normally require fasting, so plain or milky coffee is usually acceptable. Follow any different instructions for other tests taken at the same time.

Does the time of day matter?

Not usually. For repeated monitoring, similar testing conditions and the same laboratory may make comparison easier.

Can I exercise beforehand?

Ordinary activity is unlikely to meaningfully change CA-125. Follow any instructions given for other tests.

Can my period raise CA-125?

Yes, particularly if you have endometriosis. Tell the professional interpreting the result where you were in your menstrual cycle.

Does a high CA-125 mean ovarian cancer?

No. Many non-cancerous conditions can increase CA-125. It must be interpreted with symptoms, imaging, menopausal status and other findings.

Can a normal CA-125 rule out ovarian cancer?

No. Some ovarian cancers do not produce much CA-125. Further assessment may still be needed if symptoms or imaging findings require investigation.

Sources

- CA-125 Blood Test (Ovarian Cancer) , MedlinePlus, US National Library of Medicine
- Ovarian, Fallopian Tube, and Primary Peritoneal Cancers Screening-Health Professional Version , National Cancer Institute
- Ovarian cancer: recognition and initial management, Clinical Guideline CG122 , National Institute for Health and Care Excellence
- The Role of the Obstetrician-Gynecologist in the Early Detection of Epithelial Ovarian Cancer in Women at Average Risk , American College of Obstetricians and Gynecologists
- Tumor Markers in Common Use , National Cancer Institute