Screening for ovarian cancer

Ovacome is a national charity providing advice and support to women with ovarian cancer. We give information about symptoms, diagnosis, treatment, research and screening. Ovacome also runs a telephone support line and works to raise awareness and give a voice to all those affected by ovarian cancer.

This fact sheet is for women who want to know what screening is available, how effective it is and what research is being carried out.

What is screening?
Screening is used to try to detect disease before it produces symptoms. In the UK there are currently screening programmes for breast cancer, cervical and bowel cancer. Before a screening test is made available on the NHS it has to be proved to be accurate and safe. There are ongoing studies to find a screening test for ovarian cancer.

Why is it important to have screening for ovarian cancer?
The early stages of ovarian cancer (stage 1 - cancer in one or both the ovaries) can usually be successfully treated. Unfortunately, most ovarian cancers are not found at this early stage for a number of reasons.

First of all, ovarian cancer appears more commonly after the menopause (when your periods have stopped.) The ovaries are not active at this time, so if they behave abnormally, it is not easy to notice. Second, the ovaries are deep in the pelvis and are difficult to examine. Finally, even when you have symptoms, they are usually vague and not specific and could be due to a number of other causes.

For these reasons, by the time most women with ovarian cancer develop symptoms and their cancer is found, it has spread outside the ovaries to the pelvis (stage 2), abdomen (stage 3) or the chest and liver (stage 4). This makes it far more difficult to treat successfully.

This information suggests that an effective method of screening to find ovarian cancer at an early stage may save the lives of many women who develop the cancer.

What screening tests are available?
There are three possible ways of screening for ovarian cancer.

1. Internal examinations
An internal examination can be performed to detect enlarged ovaries. It can detect large ovarian tumours but even experienced doctors are not able to reliably detect ovarian cancer
at an early stage. This means that it is not an effective method for detecting early ovarian cancer.

2. The CA125 blood test
CA125 is a protein in the blood, and is at a high level in most women with ovarian cancer. The CA125 test is often used to check for ovarian cancer in women who have symptoms. It is also used to check women during and after treatment for ovarian cancer.

A high level of CA125 can also be due to a number of other reasons, such as pregnancy, menstruation, fibroids and endometriosis.

The CA125 test is a quick blood test, which is sent to the laboratory.

3. Ultrasound
Ultrasound scans can be used to look at the size and texture of the ovaries. In ovarian cancer, the ovaries get bigger and the texture becomes abnormal.

Some of these abnormal features are also found in non-malignant ovarian tumours and other conditions in the pelvis. Ultrasound results can be abnormal even when there is no cancer.

Ultrasound scans can be performed either by placing an ultrasound probe on your abdomen or by putting a probe into your vagina (trans-vaginal scan). Trans-vaginal scans usually give a clearer picture.

How effective are screening tests?
Some large studies have looked at using either CA125 or ultrasound to screen for ovarian cancer. Two of the largest studies of screening for ovarian cancer have been in the UK.

The King's College Study looked at ultrasound as a way of screening in over 5000 women. The results showed that ultrasound can detect cases of ovarian cancer at an early stage.

The Royal London and St Bartholomew's Hospital Study looked at using both CA125 and ultrasound in 22,000 women. The results showed that it was possible to detect many cases of ovarian cancer before symptoms developed.

However, it is uncertain whether screening actually saves lives from ovarian cancer. Screening will only be worthwhile if it detects ovarian cancer early enough to make treatment more effective.

Large studies are in progress, and until they have reported their findings, it is unclear whether screening can save lives or not.

What are the problems with screening for ovarian cancer?
The main problem with screening for ovarian cancer is that the CA125 test and ultrasound scans can be abnormal in women who do not have ovarian cancer. These sorts of results called false positives could cause you a great deal of anxiety. You might need an operation to rule out the possibility of ovarian cancer. Operations can have serious complications, and if no cancer is found, then the operation was unnecessary.
As ovarian cancer is relatively uncommon, it works out that more abnormal screening results are due to false positive findings rather than cancer.

Most women find a normal screening result reassuring. However, the CA125 test or ultrasound scan will not pick up every case of ovarian cancer. These sorts of results called false negatives do happen, and this means a small number of women will be wrongly reassured that they do not have cancer.

What studies are in progress?

**UK Collaborative Trial of Ovarian Cancer Screening (UKCTOCS)**
This is a very large study of ovarian cancer screening which was set up in the UK. It involves 200,000 women aged 50 to 74 years.

UKCTOCS is a randomised trial, which means that women who agreed to take part were randomly chosen for screening with CA125, screening with ultrasound, or to be part of a control group who are followed up without screening. This random selection is important to get really clear answers about how effective screening for ovarian cancer is at saving lives.

The study reported its results in December 2015. These showed that it is possible to detect ovarian cancer at a very early stage. However, it did not provide enough evidence to prove whether or not screening would actually save lives.

The UKCTOCS researchers are continuing to follow up the women on the trial for a few more years to see if by then there is firm evidence to show that ovarian cancer screening will save lives.

UKCTOCS is run by the Gynaecological Cancer Research Centre at University College London and is funded by the Medical Research Council, Cancer Research UK and the National Health Service. You can find details of the trial at www.ukctocs.org.uk.

**The UK Familial Ovarian Cancer Screening Study (UKFOCSS)**
This is a national study to assess and improve screening in women with a strong family history of ovarian cancer. The study involves a CA125 blood test every four months and a yearly ultrasound scan. The study has now stopped taking on new volunteers.

When the results are published we will know if screening women with a high risk of developing ovarian cancer is effective.

**Women under 50 with no family history**
If you are under 50 and have no family history of ovarian cancer or breast cancer, your risk of ovarian cancer is small. The risk of a false-positive screening result is high. Screening is not recommended if you fall into this group.

**Women over 50 with no family history**
There is no evidence that screening is of value to women in this age group.
and there are disadvantages associated with screening. For this reason, routine screening is not currently recommended.

**Women with a weak family history**

Many women in this group will have one close relative who has developed ovarian cancer and may be anxious about their own risk. If you are in this group, your risk is generally only slightly increased and the value of screening is uncertain.

However, your risk may be increased if you have a weak family history and come from an Ashkenazi Jewish family. If you have any doubt about your level of risk, it is sensible to ask your GP and if necessary they can refer you to your local cancer genetics centre for advice and counselling.

**Women with a strong family history**

This generally means that:

- two or more close relatives have had ovarian cancer or,
- one relative has had ovarian cancer and another has developed breast cancer aged under 50 or,
- a relative has developed ovarian cancer and two others have had breast cancer aged under 60.

Having a strong family history may mean that you are at a significantly higher risk of developing ovarian cancer. Your GP can arrange access to cancer genetic centre for advice on how you may want to manage your risk. This may include information on having your ovaries removed as a preventative measure.

**Finding out more about risk**

The Macmillan website at www.macmillan.org.uk has an interactive software program called OPERA (Online Personal Education and Risk Assessment) for genetic breast and ovarian cancer if you know your family medical history. OPERA can give you personalised information and advice on whether you might have inherited a genetic risk of breast, and ovarian cancer. It offers you advice about where to go for more information and support.

If you would like more information on the sources and references for this fact sheet, please call us on 0800 008 7054. If you would like to discuss anything about ovarian cancer, please phone our support line on Freephone 0800 008 7054 Monday to Friday between 10am and 5pm. You can also visit our website; www.ovacome.org.uk.

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