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Cervical Screening (Cervical Smear Test)

Women are routinely invited to have cervical screening tests (smear tests). The tests are done to prevent cervical cancer, not to diagnose cancer.

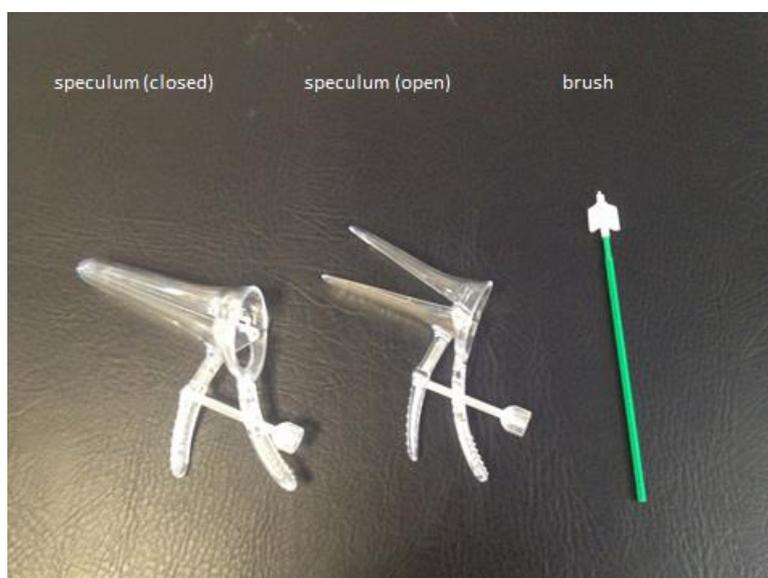
What is a cervical screening test?

During each test some cells are removed from the neck of the womb (cervix), with a plastic brush. The cells are examined under a microscope to look for early changes that, if ignored and not treated, *could* develop into cancer of the cervix. You are very unlikely to develop cervical cancer if you have regular cervical screening tests at the times advised by your doctor. If the test shows any abnormality, you will have treatment to stop you ever getting cancer of the cervix. So, an abnormal test usually does *not* mean you have cancer. It means you should have some treatment to stop you getting cancer.

How is the test done?

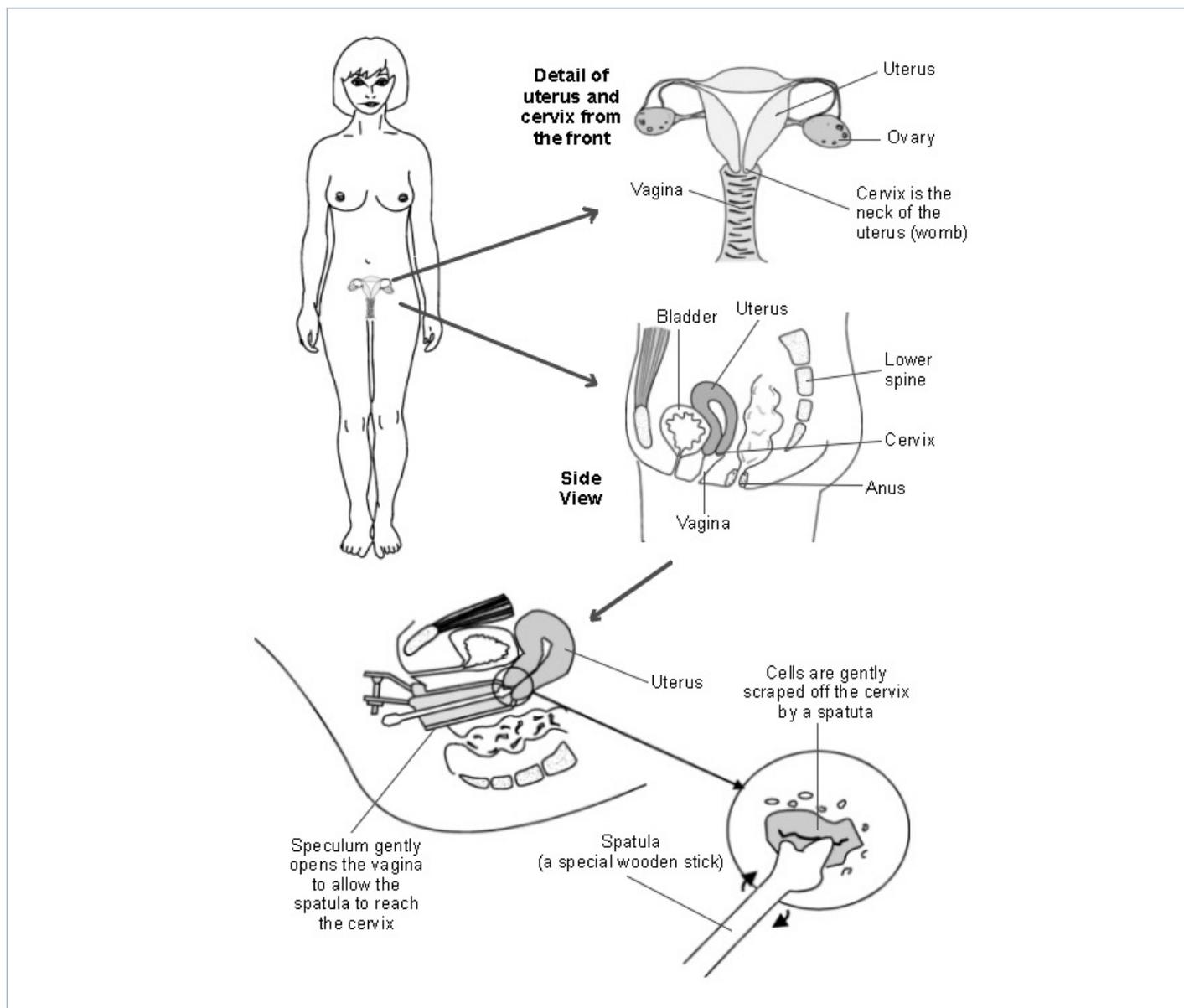
The cervix is the lowest part of the womb (uterus). It is often called the neck of the womb. It is inside a woman's vagina. If you were to put a clean finger into your vagina as far as it will go, you might be able to feel your cervix deep inside.

You will be asked to remove your clothing from the waist down. If you wear a loose skirt, you may only need to remove your knickers. You will be asked to lie on your back on the examination couch. You should bend your knees, put your ankles together and let your knees fall open. A doctor or nurse will put an instrument called a speculum into your vagina. The speculum is put in while it is shut. The doctor or nurse then gently opens it. This opens the vagina and allows the cervix to be seen (at the top of the vagina). The doctor or nurse then uses a thin plastic stick with a small brush at the end to gently scrape some cells from the surface of the cervix. The cells that are obtained on the brush are sent away to be examined in the laboratory.



Cervical screening tests are not painful, although some women find the speculum uncomfortable. It generally helps if you can relax - this makes the experience better for you and easier for the person taking the sample. The newer disposable plastic specula are also a lot less cold than the older metal ones!

The sample taken from your cervix is put into some liquid to be sent to the laboratory for testing. At the laboratory the liquid is spun to get rid of any extra cells such as blood cells or mucus. The cells from your cervix are then put on a slide and examined under the microscope. In some cases the same sample may be tested for a virus called human papillomavirus (HPV) which is known to cause cancer of the cervix.



Why are cervical screening tests advised?

Cervical cancer is a disease that can often be prevented. Early changes can be detected in the neck of the womb (cervix), which indicate that cancer may develop. Since screening started, the numbers of cases of cervical cancer have dramatically dropped, and so have the numbers of women dying from it. Cancer of the cervix is now only the fourteenth most common cancer in women in the UK, whereas across the world it is the third or fourth most common cancer. This is because of the screening programme. It is one of the few types of cancer which can be detected and stopped before it ever begins.

The cervical screening test is not a cancer test. The test is used to detect early abnormalities of the cervix which, if untreated, could lead to cervical cancer in the future.

In most women the cells that are taken are found to be normal. Abnormal cells are found in some women. An abnormal result does **not** mean cancer in the vast majority of cases. Abnormal cells indicate that cancer **may** develop sometime in the future. About 6 women in 100 will have an abnormal result that requires further testing or treatment. Most of these changes will **not** lead to cervical cancer. Treatment can be given to prevent cancer from developing in women with abnormal cells.

Where do I go for a cervical screening test?

In the UK most women have the test at their GP surgery. It is usually done by the practice nurse. You can have it done at a family planning clinic if you prefer. A copy of the result is usually sent to you, your GP and the health authority. This takes about two weeks. Ask at your GP surgery for the result of the test if you do not receive it.

The NHS Cervical Screening Programme

The NHS Cervical Screening Programme in the UK invites all women for regular tests automatically. You need to be registered with a GP, as this is how the programme obtains your name. It is therefore important that your GP has correct address details for you.

A computer system is used. Your record on the computer is updated when you have a test so it knows when your next one is due. You should receive a letter asking you to make an appointment to have a test when it is due. Computerised recall systems are good - but not foolproof. Contact your GP if you think you should have had a cervical screening test but have not yet received an invitation to have one.

Cervical screening is a free service on the NHS. Depending on which country you live in, you may be called at different ages for cervical screening:

- First invitation for screening in the UK is at age 25.
- Routine recall (repeat screening test):
 - UK: three-yearly tests from age 25 to age 49. Five-yearly tests from age 50 to 64. Screening stops at age 65.
- Women over 65 years of age should be screened if:
 - They have not had a cervical screening test since the age of 50.
 - A recent cervical screening test has been abnormal.
- Cervical screening does not stop simply due to age until a woman with a previously abnormal cervical screening test has had three negative results.

Why is the cervical screening test important?

Cervical cancer is not uncommon. In recent years the number of cases has fallen due to cervical screening tests. However, there are still around 3,000 new cases of cervical cancer diagnosed each year in the UK. Most of these occur in women who have never had a screening test, or who have not had one for many years. Cervical cancer can be prevented if you have regular screening tests. It is estimated that over 4,000 women are prevented from developing cervical cancer every year in the UK, due to cervical screening.

What do the results of the cervical screening test mean?

The results are reported as one of the following:

- Normal.
- Inadequate.
- Abnormal - of which there are several grades or degrees of abnormality:
 - Borderline.
 - Mild abnormalities in the cells of the neck of the womb (cervix): mild dyskaryosis.
 - Moderate abnormalities in the cells of the cervix: moderate dyskaryosis.
 - Severe abnormalities in the cells of the cervix: severe dyskaryosis.
 - Possible cancer cells: invasive or glandular neoplasia.

The test may also look for human papillomavirus (HPV). This is a type of wart virus that can be passed on by having sex. It is involved in the development of most cases of cervical cancer. However, most infections with HPV will clear completely from the body within two years. This means that most women who are infected with HPV do not develop cancer.

Normal result

About 93 in 100 routine cervical screening tests are normal. You will be sent a letter inviting you for another one after 3-5 years, depending on your age. A normal result means you have a very low chance of developing cervical cancer. It is not a guarantee that cervical cancer will not occur.

No screening test is 100% accurate. Some tests will be falsely reassuring (so-called false negative results) - where the test is reported as normal but an abnormality is present. This is why it is important to have tests regularly. Cervical cancer takes years to develop from the earliest abnormalities. Therefore, there should be plenty of opportunity to detect abnormalities before problems do develop. (It is also possible to have false positive results. This means that a result is incorrectly labelled as abnormal. This can cause a lot of worry, but usually a colposcopy examination - see below - will reveal that things are normal.)

Inadequate test

About 2 tests in every 100 are inadequate and need to be repeated. Inadequate simply means no result can be given, as not enough cervical cells were present for examination under the microscope. In the unusual event that a woman has three inadequate tests in a row, she should be referred on for colposcopy examination (see later section).

Abnormal result

About 6 in 100 tests are reported as abnormal. There is a range of changes that may occur. **In nearly all cases, these changes do not mean cancer.**

Dyskaryosis is a medical term used to describe abnormal cell changes, seen with cervical screening. Dyskaryosis is not cancer. About 9 out of 10 cases of dyskaryosis revert back to normal on their own, without treatment. Nearly all abnormal tests show no more than small changes in the cervical cells.

Depending on the degree of abnormality (and the HPV test if it is done), women with abnormal results may:

- Need nothing further other than normal recall for another smear in the normal 3-5 years.
- Have a repeat cervical screening test at a shorter time interval.
- Be referred to a gynaecologist or to a colposcopy clinic for further examination of the cervix. Depending on the result of this examination, treatment may or may not be needed.

Borderline change is the mildest abnormality seen on cervical screening. About 3-4 in 100 results are borderline. Whilst the cells are not quite normal, they are not abnormal enough to be categorised as dyskaryosis.

Mild dyskaryosis is a common abnormal result from cervical screening. About 2 tests in every 100 show mild abnormalities of the cervical cells. Most of these changes go back to normal without any treatment.

Moderate or severe dyskaryosis shows up in even fewer women. About 1 in every 100 smear tests shows either one of these abnormalities. If your test shows moderate or severe dyskaryosis it is still very unlikely that you will have cervical cancer. The main difference is that these changes are less likely to return to normal by themselves. You will probably need some treatment and this will happen at colposcopy.

Invasive or glandular neoplasia is a more serious abnormality which shows in less than 1 test in 1,000. Neoplasia means new growth of cells. Invasive neoplasia suggests cervical cancer *might* be present. This is *not* proven until a sample of cervical tissue (a biopsy) has been taken at colposcopy. *Glandular neoplasia* is another significant abnormality that can be seen on cervical screening. It suggests that there is an abnormality in the lining of the womb (the endometrium), rather than on the cervix. This is because glandular cells (found lining the womb) are different to the ones normally found on the cervix. Glandular neoplasia again does not necessarily mean cancer, but cancer needs to be excluded. You will probably need to have a colposcopy and may need to have a small camera passed into the womb (called *hysteroscopy*).

It is important to remember that it is rare for cervical cancer to be found on cervical screening. Screening is designed to find early changes that *could* become cancer in the future, if left untreated.

Human papillomavirus (HPV)

Some samples are also tested for the presence of HPV. This currently varies depending on where you live. Much of the UK is working towards a system where this will become the first test, and if the sample is negative for HPV no further tests on that sample would be needed. This is because if the HPV test is negative, your chances of developing cervical cancer are so tiny, you can go back to your normal three- or five-year recall without extra tests.

At the moment in some areas if your test shows borderline or mild abnormal changes, the same sample will automatically be tested for HPV. In other areas, where HPV is not tested for on the first sample, if you have borderline or mild abnormal changes, you will have a repeat smear after six months with HPV testing, or be referred for colposcopy (see below).

Across the UK, if you have had treatment for abnormal cells after an abnormal smear, your next smear test will be automatically tested for HPV. Knowing whether HPV is present or absent helps to determine how you should be treated and screened from that point on. This test - the combination of the smear looked at under the microscope with the HPV test - is called a 'test of cure'.

The reason for HPV testing becoming increasingly important is that over 99 in 100 cases of cancer of the cervix are caused by HPV. Therefore, if it is not present, the chances of getting cancer of the cervix are vanishingly small. This is also the reason why since 2008 in the UK, [school-aged girls are vaccinated against HPV](#). It is hoped, as time goes by, this will further reduce the numbers of people with cancer of the cervix. As more studies are done, it is likely that testing for HPV will change across the UK.

What is colposcopy?

Colposcopy is a more detailed examination of the neck of the womb (cervix). An instrument called a colposcope is used to magnify the cervix so it can be seen in more detail.

You may be referred for a colposcopy if you have one of the higher grades of abnormality on your test. You may also be referred for colposcopy if you have had three inadequate or borderline results in a row, or if you have had three abnormal results (of any grade) within a 10-year period.

The laboratory that reports the cervical screening results will determine whether you need to be referred for colposcopy (based on the current result and your past results). Usually in the UK the laboratory will refer you directly to colposcopy, and they will let you know and send you an information leaflet about the process. [Read more in the separate leaflet called Colposcopy and Cervical Treatments.](#)

Can abnormal cells be treated?

Yes. A minor abnormal change often goes away by itself. This is why a repeat test after 3-12 months may be all that is needed. If the cells remain abnormal, or the changes are more marked, treatment is offered. This will stop cancer from developing in the future. Treatment, if needed, is simple and almost 100% effective. Treatment is done at the colposcopy session. Abnormal cells are removed or destroyed by freezing, burning, laser or cutting them away.

Is there any other way of testing for cervical cancer?

Cervical screening is going through some exciting changes. It is hoped that new developments will mean in the future even fewer women develop cervical cancer. The nationwide roll out of the [HPV vaccine](#), which began in 2008, should reduce cases significantly. The use of HPV testing as part of the smear process is becoming more widespread. This is improving the accuracy and efficiency of the smear programme. Studies are being done to see if just testing HPV could be used to prevent cervical cancer. Some have studied how effective it is if women take their own samples from the vagina. Even better, HPV in the neck of the womb (cervix) can be detected from a sample of urine. If this could be used as a screening process, it would be much easier than having a smear taken. There are studies going on to see if this could be used as a reliable screening test in the future.

Some common questions about the cervical screening test

How effective is the cervical screening test?

It is estimated that the cervical screening test can detect and prevent three quarters of all cases of cervical cancer. This means that for every 100 women who would have developed cancer of the neck of the womb (cervix), about 75 cases can be prevented. So, although it does not detect an abnormality every single time one occurs, overall it is a reliable test.

I have never had sex. Do I need a cervical screening test?

The test is recommended for all women - even if you have never had sex. However, the risk of getting cervical cancer is very low if you have never had sex. This is because the main cause of cervical cancer is a past infection with HPV - the type of common wart virus that is normally passed on by having sex. There are other, less common types of cervical cancer, not caused by HPV, so women who have never had sex are still at risk.

For more information, see the separate leaflets called [Human Papillomavirus Immunisation \(HPV\)](#) and [Cervical Cancer](#). You may decide that you do not want to have a test if you have never had sex.

I am a lesbian. Do I need a cervical screening test?

Yes. If you are a lesbian, you are still advised to have cervical screening. This is because there is still a risk of cervical cancer, and HPV can still be transmitted between partners. Additionally, some lesbians may have had sexual contact with a man in the past.

I have had a hysterectomy - do I need to have a cervical screening test?

This depends on the type of [hysterectomy](#), and why it was done. Your doctor will advise you on this. In general, if you have a total hysterectomy - removal of the womb (uterus) and cervix - for a reason not due to cancer, you no longer need cervical screening tests. Some types of hysterectomy leave the cervix (called subtotal hysterectomy), and some are done to remove a cancer. In these situations, a test of the cells of the remaining cervix, or of the top of the vagina (called the vault), may still be advised.

Does the cervical screening test really save lives?

Yes. By studying the statistics of cancer cases since the tests began it is estimated that up to 4,500 cases of cervical cancer are prevented each year in the UK. After screening was introduced, the number of cases of cervical cancer each year dropped by almost half.

Wouldn't it be better to have yearly tests?

No - yearly cervical screening is not recommended for most women. This is because cervical cancer takes a long time to develop. The early changes that can occur in cervical cells often improve without treatment anyway. More frequent screening would be expensive for the NHS, is unlikely to identify or prevent any more cancers, and could cause physical or psychological harm to women - through over-treatment or anxiety. More frequent cervical screening is therefore not a cost-effective use of resources.

Some women will need to have more frequent cervical screening or colposcopy, after abnormal results or cervical treatment. This is an extremely important part of follow-up. Your doctor will advise you how often you need to be recalled.

Why aren't women in the UK called from age 20?

This decision was made by a panel of experts who looked at all the evidence. Their main reasons are:

- Cervical cancer is extremely rare in women under 25 years of age.
- Abnormal cervical screening test results are very common in women under the age of 25. Many of these changes seen revert back to normal without any treatment.
- Cervical screening in these much younger women may do more harm than good. Women may be very anxious and worried about abnormalities that eventually go away anyway. Also, there is the potential for harm to occur, as these women might end up being over-treated. This would mean removing cells from the cervix earlier than was needed, perhaps without waiting for the problems to go away by themselves.

It is really important that women in the UK (especially sexually active women) do not miss their first invitation for cervical screening at age 25. Otherwise, there is the potential (especially if the woman has been sexually active since her teenage years) for abnormalities in the cervix to become more serious. So, the main risk of starting the screening programme at age 25, is that some women might miss their first invitation. However, since this was changed, initially in England, experts have been following up the effect. There has not been a rise in cancers in this age group, so it seems safe.

Can I have my cervical screening test or colposcopy when I am having my period?

It is best to have your cervical screening test when you are not having your period (menstruating). Ideally, the test is best performed mid-cycle. If you are bleeding heavily, there may be too much blood and mucus on the brush and too few cells from the cervix will be removed.

Similarly, it is probably best to delay your colposcopy examination if your period starts. It is not impossible to perform colposcopy when you are menstruating, but it can make it difficult to get a good view. You should ring up the clinic where you have your appointment to check whether they would prefer you to reschedule or not.

Can I have cervical screening when I am pregnant?

If you are due your routine cervical screening test and you are pregnant, this should be put back until after your baby is born. Usually, it is advisable to wait until at least 12 weeks after your baby is born. This gives the cervix a chance to recover from pregnancy and childbirth. Tests performed earlier are more likely to be inadequate.

If you have had an abnormal cervical screening result and have been invited for colposcopy, it is important you attend, even if you are pregnant. Colposcopy can be safely carried out on pregnant women. As long as no major problems are found, treatments will probably be delayed until after you have had your baby. Sometimes repeat colposcopy may be done later in pregnancy. It is possible to give treatment to the cervix, if it is essential, whilst you are pregnant.

I have irregular bleeding - do I need to have a cervical screening test straightaway?

No. Cervical screening is a routine test performed on women without any symptoms. The aim is to look for problems in cervical cells that could become cancer in the future. A cervical screening test would **not** be used as an investigation for irregular bleeding (but you should still attend for your cervical screening test when invited).

Note: if you get any of the following symptoms, you should see your GP:

- Bleeding after having sex (called postcoital bleeding).
- Bleeding between periods (called intermenstrual bleeding).
- Bleeding after the menopause (called postmenopausal bleeding).

A little bit of light bleeding or spotting for up to a day after having a smear test may sometimes happen, and is normal.

I am a transgender man - do I need cervical screening?

If you were born female and have had a sex change, you need only have cervical screening if you have retained your cervix. If you have had a total hysterectomy (with removal of the cervix), you do not need to attend for screening.

I have HIV infection - do I need to do anything differently?

Women with **HIV infection** should ideally have cervical screening and colposcopy when their disease is diagnosed. Current recommendations are to have a cervical screening test every year. This is because HIV increases your risk of developing cervical cancer.

Does being immunosuppressed increase my risk of cervical cancer?

Yes - women who are immunosuppressed are at an increased risk of having changes that may become cancerous.

Immunosuppressed means your immune system doesn't work well. This may be because of certain diseases or medicines. The main groups affected are:

- Women with **HIV - the virus that causes AIDS**. These women need yearly cervical screening (see above).
- Women who have had a kidney transplant. Also women who have kidney disease which is severe enough to require dialysis. These women should have a smear and/or colposcopy done as soon as possible after the decision for transplant or dialysis has been made. However, it is not recommended that these women have more frequent cervical screening - just that early referral to colposcopy is advisable with any abnormal screening results.

Women taking cytotoxic medicines for rheumatological disorders, immunosuppressive medicines after other transplants, **chemotherapy for cancer**, **steroids** or **tamoxifen** have not been shown to be at increased risk. They should, however, have regular screening in line with their age group.

Further reading & references

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