How is cervical cancer diagnosed?

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In Australia about 750 women are diagnosed with cervical cancer every year. Only 1.6 per cent of all cancers in women in Australia are cervical cancers.

Between 1999 and 2008 the rate of cervical cancer fell by 25 per cent. This is probably because more Pap smears were conducted as part of the National Cervical Screening Program. With the introduction of the National Immunisation Program against HPV, there should be a further fall in cervical cancer cases in the coming years.

What is a Pap smear?

The main role of the Pap smear (also called a Pap test) is to help prevent cancer. It shows whether women have abnormal pre-cancerous cells in their cervix.

All women under 70 years of age who are or who have ever been sexually active should have a Pap smear every two years. Women who have had abnormal cell changes should be tested more often.

During a Pap smear the doctor puts an instrument called a speculum into your vagina to hold the walls slightly apart. He or she then uses a brush or spatula to scrape some cells from the surface of the cervix. This may feel slightly uncomfortable but usually only takes a minute or two. The cells are smeared onto a glass slide or put into a fluid. The cells will then be examined under a microscope for any changes.

Occasionally cancer cells are detected in a Pap smear but this is uncommon. A Pap smear is not used to diagnose cancer – if cancer is suspected you will need other tests.

If you have an abnormal result, your GP or gynaecologist will discuss whether you need treatment, further tests or another Pap smear at an earlier interval than two years.

To learn more about Pap smears talk to your doctors. You can also call Cancer Council Helpline 13 11 20 to request a free copy of the National Cervical Screening Program booklet An Abnormal Pap Smear Result: What this means for you.

Cervical cell changes

Sometimes the cells in the cervix start to change and no longer appear normal. This may mean you have a pre-cancerous lesion which is not cancer but may lead to cancer. Cervical cell changes may be found during a routine Pap smear.

There are different types of early cell changes, which are also called epithelial abnormalities.

Atypia – the cervical cells have changed slightly. The cells may return to normal by themselves or the
changes may worsen. If a cell shows signs of atypia, it does not necessarily mean you have cancer or will get cancer. Atypia can also be caused by infection or irritation.

**Squamous abnormalities** – the squamous cells of the cervix are abnormal. This may be classified as a low grade or a high grade abnormality on a Pap smear. High grade abnormalities are pre-cancerous, and although they do not usually cause symptoms, they can sometimes progress to early cervical cancer if they are not detected and treated.

These squamous changes are also called cervical intraepithelial neoplasia (CIN) and are graded according to how severe they appear on a biopsy of the tissue. Early changes are categorised as CIN 1 and these will usually disappear without treatment. Further abnormal changes are categorised as CIN 2 or CIN 3.

**Glandular abnormalities** – the glandular cells of the cervix are abnormal. These abnormalities on a Pap smear always require further assessment as they may be either pre-cancerous or cancerous. If the results from a Pap smear show that your cervix has some abnormal changes, your doctor will recommend that you have one of the following based on the grade of the changes:

- another Pap smear in 12 months time to monitor the cells
- treatment right away
- a biopsy to look at the cervical cells in more detail under a microscope.

**Confirming the diagnosis**

If your Pap smear results show a high-grade abnormality or you have had symptoms of cervical cancer, you will need to have further tests to confirm the diagnosis. You may be referred to a gynaecologist or a gynaecological oncologist. Some tests allow your doctor to see the tissue in your cervix and surrounding areas more clearly. Other tests show your general health and whether the cancer has spread.

**Colposcopy**

A colposcopy can help identify where abnormal or changed cells are located and what they look like. In this procedure the doctor puts an instrument called a speculum into your vagina to hold the walls slightly apart.

Using an instrument called a colposcope, which looks like a pair of binoculars sitting on a large stand, the doctor can see a magnified picture of your cervix, vagina and vulva. The doctor will probably take a tissue sample (biopsy) during the colposcopy.

Before the test the doctor may coat your vagina and cervix with a fluid that will help to highlight any abnormal areas. Some colposcopes are fitted with a camera connected to a TV screen, so you can watch what the doctor is doing if you'd like to. You may experience some mild discomfort for 10 to 15 minutes while the colposcopy is performed.

**Biopsy**

A biopsy is when your doctor removes some tissue and sends it to the laboratory for examination under a microscope. Biopsies are typically done in a clinic and the results are usually available in about a week.

You may feel uncomfortable for a short time when the tissue is removed. Afterwards you may experience some pain, similar to menstrual cramping. You can ask for medication to relieve the pain. You may also have some bleeding or other vaginal discharge for a few hours but these side effects will soon disappear.

To allow the cervix to heal and to reduce the chance of infection, you will probably be advised not to have sexual intercourse or use tampons for two to three days. Check with your doctor.

**Large loop excision of the transformation zone**

Large loop excision of the transformation zone (LLETZ) is another type of procedure to remove some cervical tissue for examination. A small instrument (a loop) is used to cut out the abnormal tissue from the cervix. Sometimes the doctor can remove all visible abnormal cells.

The procedure takes about 10 minutes. It may be done under a local anaesthetic in the doctor’s clinic or under a general anaesthetic at hospital. In some cases the doctor may do it at the same time as a
colposcopy.

After a LLETZ, you may have some vaginal bleeding and cramping. This will usually ease in about two weeks. To give your cervix some time to heal and to prevent infection, you shouldn't have intercourse or use tampons for four to six weeks. LLETZ does not usually affect your ability to become pregnant in the future but you may have a slightly increased risk of an early birth.

**Cone biopsy**

A cone biopsy is used to determine how deeply cancer cells have spread into tissue beneath the surface of the cervix. A cone biopsy is also useful to treat very early and very small tumours.

This procedure removes a cone-shaped piece of tissue containing the abnormal cells from the cervix. It is performed under a general anaesthetic and involves a day or overnight stay in hospital. Cone biopsy results are usually available within a week.

After the cone biopsy some light bleeding or cramping for a few days is common. You may have a small gauze pack put into your vagina to help stop the bleeding. After the gauze is removed you should avoid doing anything physically strenuous for a few weeks as this could restart your bleeding or make you bleed more heavily. If the bleeding lasts longer than two weeks, becomes heavy or has a bad odour, see your doctor.

To allow your cervix to heal and to prevent infection, you should not have sexual intercourse or use tampons for four to six weeks.

A cone biopsy may weaken the cervix. You can still become pregnant, but you may be at higher risk of miscarriage or of having a premature baby. If you would like to become pregnant talk to your doctor before having the cone biopsy. Supportive stitches may be inserted into the cervix to strengthen it and are usually removed before you give birth.

**Further tests**

If a biopsy shows you have cervical cancer other tests may be needed. These will help determine if the cancer has spread to other parts of the body.

**Examination Under Anaesthetic (EUA)**

You will be given a general anaesthetic so the doctor can examine your vagina, cervix, bladder and rectum. Your doctor will insert a narrow instrument called a cystoscope into your urethra to examine your bladder. During this examination, you may also have a biopsy.

You may also have some of the cells in your uterus removed for examination. This is called a dilation and curettage (D&C). After a D&C bleeding is common for a few days. You may feel some cramping for a short time.

Sometimes if the cancer has spread into the tissue around the cervix, the tubes from the kidneys (ureters) can be blocked. The ureters may then need plastic or metal tubes (stents) inserted to keep the urine draining from the kidneys. These stents may be temporary or permanent. Your doctor will inform you if you need to have this procedure done.

**Blood tests**

Blood samples may be taken to check your general health.

**Chest x-ray**

The doctor may take a painless x-ray scan of your chest to check your lungs for any signs of cancer.

**CT scan**

A CT (computerised tomography) scan is a type of x-ray procedure that takes pictures of the inside of your body. It can help show if the cancer has spread to the lymph nodes or to other organs.
To make the scan pictures clearer you may be asked to drink a liquid called contrast fluid or to insert a tampon into your vagina before the scan. Sometimes a liquid is also put into your rectum before the scan. This may make you feel hot all over for a few minutes.

You will lie flat on a table while the CT scanner, which is large and round like a doughnut, takes pictures. The test is painless and usually takes 30 to 40 minutes. After the scan you can usually go home.

MRI scan.

An MRI (magnetic resonance imaging) scan uses a powerful magnet linked to a computer to take detailed pictures of areas inside the body. The pictures are taken while you lie on a table that slides into a metal cylinder. The scan takes less than an hour and most people are able to go home as soon as it is over.

An MRI scan is painless but some women find that lying in the cylinder is noisy and claustrophobic. Let your doctor or nurse know if you feel uncomfortable. They can give you medication to ease this feeling.

PET scan

Before a PET (positron emission tomography) scan, you will have an injection of a sugar (glucose) solution containing a small amount of radioactive material. You will need to sit quietly for 30 to 60 minutes while the solution spreads throughout your body.

Cancer cells absorb the radioactive glucose solution more than normal cells. When your body is scanned the areas of active cancer show up early. The scan takes about one hour.

Want to know where this information comes from? Click here.

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