



PathWay

THE ROYAL COLLEGE OF PATHOLOGISTS OF AUSTRALASIA



NOVEMBER 2018 | PUBLISHED BY RCPA

ISSUE #086

Australia, leading the way in cervical cancer and HPV screening



We sat down with Professor Annabelle Farnsworth, professor of pathology, anatomical pathologist and specialist gynaecological histopathologist and cytopathologist, to get the latest on cervical cancer, cervical screening and the human papillomavirus (HPV).

Professor Farnsworth said,

“The majority of cervical cancer cases are caused by the human papillomavirus (HPV). The interesting thing is that HPV is a very common infection; it’s a sexually transmitted disease that most people will contract at some point in their lives. The majority of people get rid of the infection naturally. In a very small number of people, the infection persists and changes occur in cells which can develop into cervical cancer, but this takes many years.

Cervical cancer is the growth of abnormal cells in the lining of the cervix. The most common cervical cancer is squamous cell carcinoma, accounting for 80% of cases. There were 898 cases of cervical cancer diagnosed in Australia in 2014. In 2016, 259 were deaths caused by cervical cancer in Australia. Cervical cancer death rates in Australia have halved since the National Cervical Screening Program began in 1991. ^[1]

“In Australia, we have a vaccine against HPV, so the women of Australia are very well protected. The vaccine has been available for over ten years; it was introduced in Australia in 2007. It’s primarily given to boys and girls in their first year of high school; these are students aged 12 to 13 years.

“The HPV vaccine was an Australian invention, created by Professor Ian Fraser and his

team. It's a highly effective vaccine and there's lots of scientific evidence to show that HPV infections and the downstream effects of HPV are diminishing. There has been recent talk that Australia may eradicate cervical cancer in 10 years' time. However, the HPV vaccine alone will not eradicate the disease – we still need to screen for the precursor lesions.

In Australia, as of 1st December 2017, the Pap smear test was replaced with a new Cervical Screening Test.^[2] Instead of looking for changes to the cells of the cervix, the new HPV Cervical Screening Test allows scientists to look for the virus that causes the cell changes in the first place. HPV testing looks for the virus inside the cervical cells, which means doctors can find women who could be at risk of developing cervical cancer in the future. If HPV is found, the scientists will do a liquid-based cytology test (a form of the Pap test) on the same sample of cells. Under the new program, most women aged 25-74 years will be tested every five years. If an individual previously had a Pap smear test, they should have their first HPV test two years after their last Pap test.

“Australia has had an extremely successful cervical screening program over the past 20 years. Because of the (HPV) vaccine effect and the availability of technology, the decision was made to change from cytology (the Pap smear that everyone was traditionally familiar with), to screening for the virus (HPV), instead. The transition from the traditional Pap smear test to the new cervical screening occurred in December last year; therefore, women in Australia are now being tested for HPV.

“For the patient, the way the sample is taken is exactly the same, but instead of the sample being spread out onto a glass slide, it is now placed in fluid that is then tested for HPV. On the basis of the result of the screening test, the patient is then given a ‘risk category’. If the test is negative, she is at ‘low risk’ of developing cervical cancer and is recommended to come back in five years’ time for her next screening round. If the test is positive, the types of HPV are sub-categorised as there are some types of HPV that are a higher risk than others. If the test is positive for those types, the patient is classified as a ‘higher risk’ and needs further investigation. There’s also an ‘intermediate risk’ where the recommendation is to get a repeat sample taken in twelve months’ time and not wait for five years.

“As this is a screening test, what we are really screening for are pre-cancerous lesions, cellular abnormalities that develop before full-blown cancer occurs. This is possible due to the sensitivity of the test. But the HPV test can detect the virus even before any disease has developed. After testing positive for HPV, a cytology test is also done which further indicates what is going on. By picking up cellular abnormalities earlier when they are still in the pre-cancerous phase, it is easier to treat via a minimally invasive procedure. Follow up needs to happen, but the patient is basically cured at this point, rather than going on to develop cervical cancer.

“Preliminary numbers from the screening program to date show that approximately ten percent of the female population will test positive for HPV. Only a tiny percentage of those individuals will develop cervical cancer.

“It’s very important to stress that if a woman has any abnormal bleeding or a particularly abnormal discharge or any other significant changes she might notice, she needs to see a doctor irrespective of her screening history. Don’t wait for five years between the testing. Early changes in cervical cells rarely cause symptoms. If early cell changes develop into cervical cancer, the most common signs include vaginal bleeding between periods; menstrual bleeding that is longer or heavier than usual; bleeding after intercourse; unusual vaginal discharge; vaginal bleeding after menopause; excessive tiredness; leg pain or swelling; and low back pain.

“HPV sample testing, as part of the cervical screening program, is done in laboratories by scientists and pathologists. HPV testing is a molecular test looking for viral DNA. It is done by pathologists and scientists using highly specific state-of-the-art analysers. The cytology component is also undertaken by scientists and pathologists using computerised highly sophisticated image analysis techniques with liquid-based specimens.

“The advances we have implemented in HPV testing and liquid-based cytology with

image analysis are world-leading. Australia really is at the forefront of this new screening method. I've just come back from the US and it's fair to say that the eyes of the world are looking at us to see how our new screening program performs. It is such a significant shift in comparison to what we have done over the last 50 years or so."

For further information on the cervical cancer screening program, please visit - <https://www.cancer.org.au/cervicalscreening>

[1] <https://www.cancer.org.au/about-cancer/types-of-cancer/cervical-cancer.html>

[2] <https://www.cancer.org.au/cervicalscreening>

You are welcome to circulate this article to your contacts, share it on your social media platforms and forward it to any relevant contributors and experts for them to share and post on their websites. If you do reproduce this article in any such fashion you must include the following credit:

This article appeared in the November 2018 Edition of ePathWay which is an online magazine produced by the Royal College of Pathologists of Australasia (<http://www.rcpa.edu.au/Library/Publications/ePathway>).

[« Back to Home Page](#)

Copyright © 2018 The Royal College of Pathologists of Australasia

RCPA - Durham Hall - 207 Albion St Surry Hills NSW 2010 AUSTRALIA | (+61) 2 8356 5858 | www.rcpa.edu.au

[Privacy Policy](#) | [Legal](#) | [Disclaimer](#)

[Unsubscribe](#)