Implementing the changes to the National Cervical Screening Program:
A guide for clinicians

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National Cervical Screening Program: A guide for clinicians
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Acknowledgments

Authors

Dr Lynne Wray, Senior Medical Officer, Family Planning NSW
Clinical Associate Professor Deborah Bateson, Medical Director, Family Planning NSW

Family Planning NSW Project Team

Adjunct Professor Ann Brassil, Chief Executive Officer
Jane Estoesta, Director, Research and Evaluation, Project Manager
Belinda Burmeister, Administration Officer

Internal review

The production of this document would not have been possible without the contribution of the following Family Planning NSW staff:
Dr Hilary Bower, Medical Coordinator
Jessica Botfield, Senior Research Officer
Dr Julia Menzies, Medical Officer

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Introduction

This monograph has been written to complement the information contained within Chapter 2 ('The Cervix') of the 3rd edition of Reproductive and Sexual Health: An Australian clinical practice handbook. It provides an update for clinicians regarding the changes to the National Cervical Screening Program (NCSP) to be implemented on December 1st 2017 at which time the Pap test will be replaced by primary human papillomavirus (HPV) testing. The monograph is intended to be used as a brief and practical synopsis of the detailed evidence-based information contained within the Cancer Council Australia online Guidelines *http://wiki.cancer.org.au/australia/Guidelines:Cervical_cancer/Screening* (1) which should at all times be the primary reference point for clinical guidance and decision-making.

The "renewal" of the National Cervical Screening Program

The National Cervical Screening Program (NCSP) began in 1991 and has been very successful, such that Australia has one of the lowest rates of cervical cancer in the world. There has been a 50% decrease in carcinoma of the cervix (predominantly squamous cell carcinoma), largely as a result of the screening program. However, the incidence and mortality rates from cervical cancer have plateaued since 2002. (1)

In 2013 there were 813 new cases of cervical cancer, 85% of which occurred in the target screening group of 20-69 years. There were 223 deaths of women of all ages from cervical cancer in 2014, 149 in the target screening group. Most women with cervical cancer (80%) had not had a Pap test in the previous five years or were under-screened. (2)

Aboriginal and Torres Strait Islander women have more than twice the incidence of cervical cancer and four times the mortality of non-Aboriginal women. (2) Enhancing access to screening for Aboriginal and Torres Strait Islander women is a priority of the renewed NCSP. (1)

Why change the National Cervical Screening Program?

In April 2014, the Australian Government announced changes to the NCSP which will come into effect from December 1st 2017 – referred to as "the renewal". The renewal aims to be a more effective, evidence-based screening program built on increased knowledge about the role of the human papillomavirus (HPV) and the natural history of cervical cancer. The development of new testing technology will enable earlier detection of more cell changes that could lead to cervical cancer than with cervical cytology. Along with the introduction of the National HPV Vaccination Program in 2007, these changes are expected to reduce the number of women diagnosed with cervical cancer by up to 36%. (1)

From December 1st 2017, the national policy is as follows:

- All women who have ever been sexually active should start having the Cervical Screening Test at 25 years of age.
- Cervical screening may cease for women between the ages of 70 and 74 if they have had regular screening tests with negative results and have a negative exit test result.
- Routine screening with the Cervical Screening Test should be carried out every 5 years for women who have no symptoms or history suggestive of cervical cancer. (1)

KEY POINT

The renewed National Cervical Screening Program recommends all women (HPV vaccinated and unvaccinated) who have ever been sexually active to commence screening at 25 years of age with a Cervical Screening Test (HPV test with reflex liquid based cytology). The screening interval is five years in asymptomatic women or women with a negative screening history or no history suggestive of cancer. Cervical screening may cease at the age of 70-74 years for women who have had regular screening with negative results and a negative exit test. (2)

Summary: Changes to the National Cervical Screening Program

National Cervical Screening Program	Program 1991 – November 2017	Program from December 2017
Screening Test	Pap test	Cervical Screening Test
Screening interval	2 years	5 years
Age range	18 - 69 years	25 – 74 years
Exit test	70 years (with 2 normal Pap tests in previous 5 years)	70 – 74 years
Register	Pap Test Register (state and territory based)	National Cancer Screening Register
Reminder/invitation	Overdue reminder	Invitation, recall, reminders letters
Self-collection	No	Yes, through healthcare provider. Only women aged 30 years or older who are under-screened or never-screened
Management	NHMRC guidelines (2005)	National Cervical Screening Program Guidelines developed by Cancer Council Australia (March 2017) (1)

HPV and cervical cancer

More than 99% of cervical cancer is linked to sub-types of human papillomavirus (HPV) known as oncogenic HPV (previously known as high risk HPV). There are 14 oncogenic HPV types. HPV types 16 and 18 are detected in 70–80% of cases of cervical cancer in Australia. (2,3) Other oncogenic HPV types include 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, +/-66 and 68. (4)

KEY POINT

The term oncogenic HPV is preferred to the term 'high risk HPV' in order to minimise confusion with the risk of significant abnormality in Cervical Screening Test results.

HPV infection is very common in sexually active females and males and up to 80% will be infected with at least one genital sub-type in their lifetime.

Most HPV infections are harmless and transient with a mean duration of 8 months and 95% will clear the infection by the normal function of their immune system within 3 years. HPV infection usually resolves itself within 1 - 2 years.

Cervical cancer is a rare outcome of an oncogenic HPV infection that persists. Two percent of persistent oncogenic HPV infections can be associated with cancer, which takes approximately 10 years to develop. (5)

KEY POINT

- HPV is passed between people through sexual activity.
- Anogenital HPV infections are transmitted mainly by skin-to-skin or mucosa-to-mucosa contact.
- Penetrative sexual intercourse is not strictly necessary for transmission of HPV, and HPV can be transferred to the cervix from an original infection at the introitus.
- Transmission of anogenital HPV can potentially occur with genital skin-to-skin contact, vaginal sex, oral sex and anal sex. (1,3)

The new Cervical Screening Test has two components:

1. HPV Test

- HPV testing within the NCSP includes partial genotyping for HPV types 16 and 18, as these types are managed differently to other oncogenic HPV types (not 16/18) in the program.
- HPV DNA test with partial genotyping allows for the independent detection and reporting of HPV types 16 and 18. Other oncogenic HPV types are reported as a pooled result.
- Partial genotyping is performed as HPV 16 and 18 are associated with cervical abnormalities that are less likely to regress and more likely to progress to high grade cervical abnormalities and cervical cancer compared with other oncogenic HPV types. Identification of HPV 16 and 18 improves risk stratification /assessment for women in the cervical screening program. (1)

2. Reflex liquid based cytology

- If the HPV test is positive for any oncogenic HPV type, "reflex" liquid based cytology (LBC) will be automatically performed on the same sample by the laboratory and the result will guide further management. (1)

The co-test (HPV and LBC)

A co-test describes when a cervical sample in the liquid based medium is tested for both HPV DNA and cytology **at the same time.**
This is not part of routine cervical screening in an asymptomatic woman with a negative screening history and must be specifically requested on the pathology request form by the clinician who has collected the cervical sample. (1)

A co-test may be requested in the following situations:

- during follow up of certain screen detected abnormalities e.g. glandular abnormalities after normal colposcopy
- as part of Test of Cure (after a treated high grade squamous intraepithelial lesion (HSIL))
- for some women post hysterectomy
- for diethylstilbestrol (DES) exposed women
- indefinitely for women treated for adenocarcinoma in situ (AIS)
- as part of an investigation of abnormal vaginal bleeding. (1)

Why is HPV testing replacing Pap testing?

- Evidence shows that an HPV test as a primary screening test is superior to cytology.
- HPV testing is more sensitive than cytology and detects high-grade lesions earlier, thus preventing more cervical cancers. (6,7)
- Screening using HPV testing has the potential to improve identification of adenocarcinoma and its precursors. (8)
- A significant false-negative rate associated with Pap tests required more frequent screening to minimise failure to detect disease.
- Women who test HPV negative are at very low risk of high grade squamous intraepithelial lesions (HSIL) and cancer for at least 5 years.
- Compared with cytology, HPV testing provides 60–70% greater protection against invasive cervical cancers, with significantly reduced incidence of adenocarcinomas.
- It is expected that the renewed screening program will deliver a reduction of up to 36% in cancer incidence and mortality as compared to the previous screening program. (1)
- The false negative rate for HSIL with the HPV test is 2.5-3% compared to 30% with cytology. (6)

How should you explain the changes to the screening program to your patients?

- From the woman's point of view, the examination for the Cervical Screening Test will not be any different to the Pap test examination. The screening test will still require a speculum examination to visualise the cervix so that a cell sample can be collected from the transformation zone.
- The clinician collecting the sample will use the same sampling implements, however glass slides

will no longer be used. Slides are replaced by a liquid based medium (e.g. ThinPrep® or BD SurePath™).

- The sample is sent to a pathology laboratory for assessment i.e. HPV test with partial genotyping of HPV 16 and 18 +/- reflex liquid based cytology. (1)

Results are classified into risk groups:

- **Low risk** women will be invited to screen again in 5 years
- **Intermediate risk** women will be invited to screen again in 12 months, to check that the HPV infection has cleared
- **Higher risk** women will be referred for colposcopy (1)

For further information:

http://www.cancerscreening.gov.au/internet/screening/publishing.nsf/Content/the-pap-test-has-changed-more-accurate-less-often

Everything you need to know about the changes to the National Cervical Screening Program is a free brochure for women.
It can be ordered through the Family Planning NSW Shop at *shop.fpnsw.org.au* or downloaded online at *https://www.fpnsw.org.au/changes*

What does an unsatisfactory cervical screening result mean?

An **"unsatisfactory"** result means that the Cervical Screening Test was unable to be evaluated as it was not of satisfactory quality for a result or risk to be assigned. An "unsatisfactory" result could be either an "unsatisfactory HPV" or "unsatisfactory LBC" test report:

- An **unsatisfactory HPV** test can occur when the HPV test cannot be performed due to effects of inhibition (e.g. too much blood) or insufficient human DNA in the sample.
- An **unsatisfactory LBC** can occur when there are insufficient cells, or due to technical problems such as excess blood or lubricant which preclude cytological assessment. (1)

The laboratory will report on why the test was unsatisfactory.

Practical tips for taking a high quality test

- It is essential to ensure adequate transfer of cellular material from the implements to the liquid medium to avoid a technically unsatisfactory result.
- It is preferable to use warm water rather than commercial products as a lubricant on the speculum as lubricants may interfere with sampling implements and lead to cell agglutination and cellular loss.
- If a lubricant is used it is recommended to avoid products containing carbomer and carbopol polymers, to use it sparingly and to avoid putting it on the tip of the speculum.
- Routine cervical screening should be deferred during menstruation but diagnostic co-testing should not be delayed in women with abnormal vaginal bleeding.
- Avoid intravaginal medication for 48hrs prior to testing.

It is recommended that a woman with an unsatisfactory screening report should have a repeat sample collected 6-12 weeks later and the reason for the unsatisfactory sample be rectified.

Note that if the woman has an unsatisfactory LBC and positive HPV test 16 or 18 then the LBC could be repeated at colposcopy. (1)

The examination technique is clearly presented in the National Prescribing Service's training program - National Cervical Screening Program, available at:
https://www.nps.org.au/cpd/activities/national cervical-screening-program

Why has the screening commencement age changed?

- Cervical cancer is rare in women < 25 years of age (vaccinated or unvaccinated);
- Screening women aged < 25 years of age has not changed the incidence or mortality from cervical cancer in this age group;
- The HPV vaccination lowers the risk of cervical cancer for vaccinated and unvaccinated young women. HPV vaccination has already shown a

reduction in screen-detected abnormalities in women < 25 years of age;

- Cervical abnormalities are common in women < 25 years of age and usually resolve themselves. Over-diagnosis and over-treatment is not desirable;
- Women of any age with symptoms such as postcoital bleeding should have a co-test (HPV test and LBC) as part of an initial assessment;
- Women with a history of childhood sexual abuse or early sexual debut (< 14 years and prior to HPV vaccination) can be considered for a single HPV test between the ages of 20 and 24 years. (1,2,10)

What do the changes mean for clinicians?

The changes for clinicians with the renewed National Cervical Screening Program include:

- discussing the changes to the screening program including the new cervical screening pathway for asymptomatic women
- transitioning women to the new cervical screening program
- collecting the Cervical Screening Test using a liquid based medium (glass slides are no longer used)
- completing the pathology request form when ordering a Cervical Screening Test. If specific indications require a co-test this needs to be requested by the clinician on the pathology form
- discussing results and the risk assessment with women
- referring to and using the new management guidelines National Cervical Screening Program: Guidelines for the management of screen-detected abnormalities, screening in specific populations and investigation of abnormal vaginal bleeding, available from: *http://wiki.cancer.org.au/australia/Guidelines:Cervical_cancer/Screening*
- informing women about the National Cancer Screening Register. (1)

There are a number of principles in cervical screening that remain unchanged including:

- communicating to women about the screening program and obtaining informed consent
- taking a clinical history
- addressing barriers to participation and opportunistically screening women
- performing an examination using a speculum, visualising the cervix and taking a sample of cells from the transformation zone including the squamocolumnar junction
- completing the pathology request form including adding details about history, symptoms and examination and past cervical screening history
- establishing procedures to ensure timely receipt, effective review and follow up of results
- the terminology for reported cytology results using the Australian Modified Bethesda System (AMBS) 2004. For further information: *http://wiki.cancer.org.au/australia/Guidelines:Cervical_cancer/Screening/Cytology_and_AMBS_2004_terminology_for_reporting*
- clear documentation of the consultation and all patient contact attempts regarding results and recommended follow up. (1)

Transitioning into the renewed National Cervical Screening Program

The pathway for women transitioning to the renewed NCSP depends on their age, their previous Pap test results and history. The following policy has been developed for transitioning women from the Pap test to the Cervical Screening Test.

- Women in the new target age group of 25 to 74 will be due for their first Cervical Screening Test two years after their last Pap test.
- Until the new NCSP is implemented, all women aged between 18 and 69 who have ever been sexually active should continue to have a Pap test when due. (1)

KEY POINT

The Cervical Screening Test replaces the Pap test

Conventional Pap tests are no longer used.

Reflex liquid based cytology (LBC) is performed on any sample with a positive oncogenic HPV (any type) test result.

Co-testing (HPV and LBC) is performed only as recommended in the guidelines, in the follow-up of screen-detected abnormalities, or for the investigation of abnormal vaginal bleeding. (1)

If a woman has already been screened (with negative cervical screening history) and is still under 25 years of age, she will be a sent a letter advising her to rescreen at age 25 years. At 24 years and 9 months she will receive a letter from the National Cancer Screening Register (NCSR) inviting her to attend for cervical screening. The NCSR will send a follow up reminder if she does not attend. (1)

If a woman has had a negative cervical screening history and she is 25 years old or more, she will receive an invitation to attend for cervical screening 2 years after her last Pap test. If the new Cervical Screening Test is negative, her next Cervical Screening Test will be due in 5 years. (1)

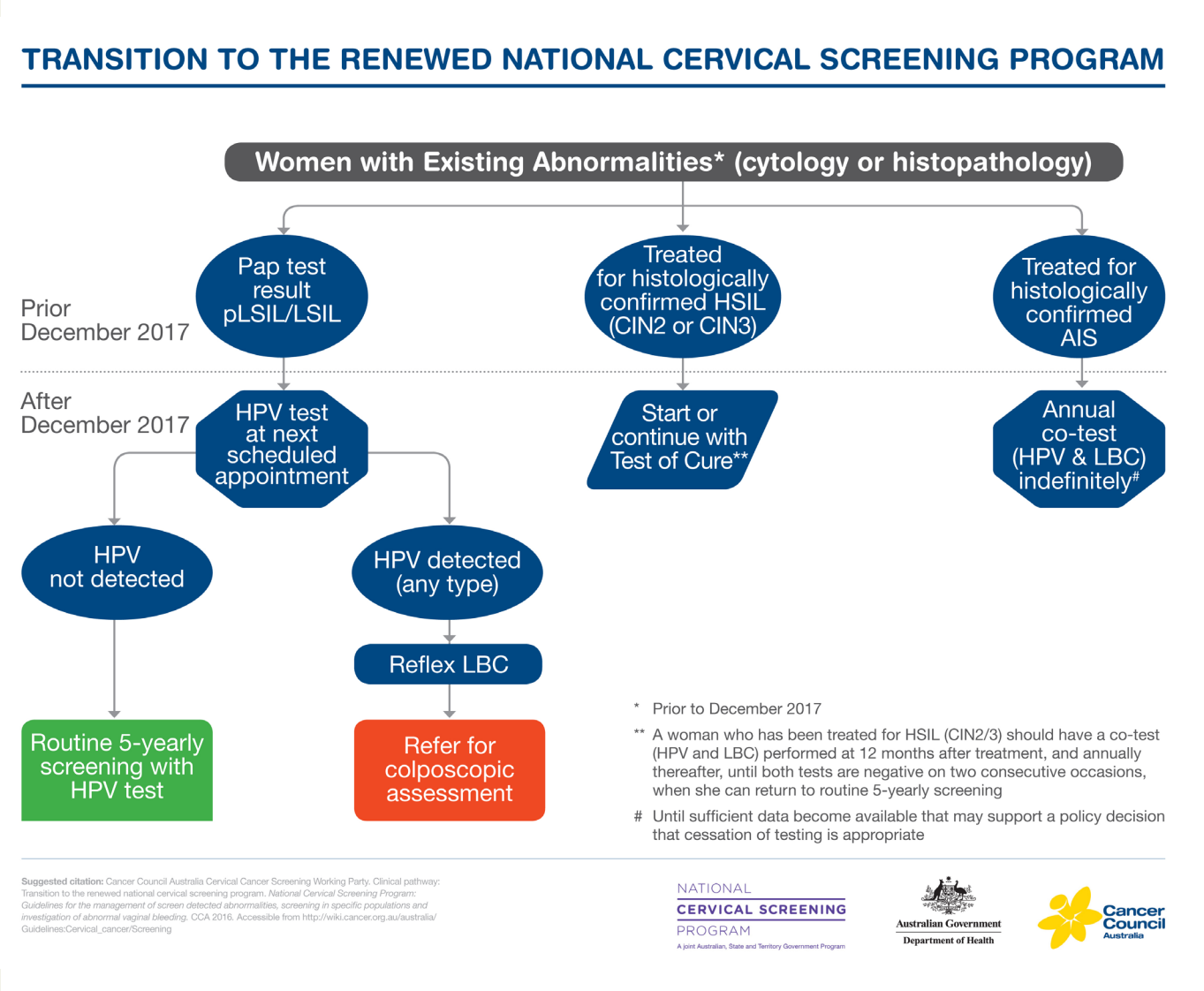
If a woman is already under additional surveillance because of a previous abnormal Pap test or is receiving treatment for an abnormality, her doctor or nurse will advise her as to how she will transition to the new program. (1)

For further information see Figure 1 and:

http://wiki.cancer.org.au/australia/Clinical_question:Transition_to_the_renewed_National_Cervical_Screening_Program

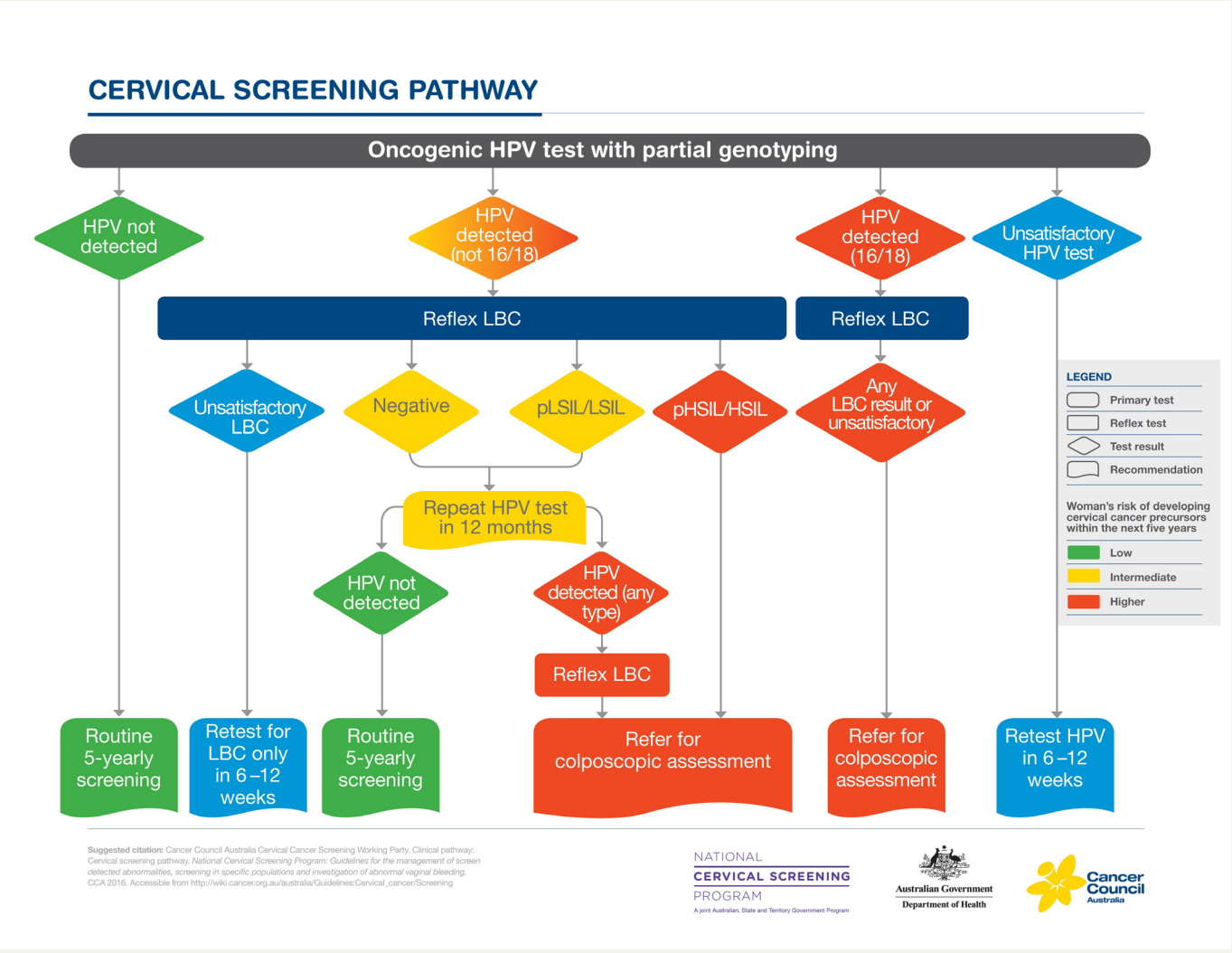
http://www.cancerscreening.gov.au/internet/screening/publishing.nsf/Content/pathology-test-guide-cervical-vaginal-testing

Figure 1: Transition to the renewed National Cervical Screening Program



New cervical screening pathway for asymptomatic women

Figure 2. New cervical screening pathway for asymptomatic women



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What should you expect from the laboratory report?

The laboratory report will show:

- an overall risk assessment (**low**, **intermediate** or **higher**);
- a statement of the test(s) performed and results - HPV test result and LBC (if performed); and
- a recommendation for follow up/action - taking into account the clinical history. (1)

See Tables 1-4 below for examples. (1) More examples are available at: http://wiki.cancer.org.au/australia/Guidelines:Cervical_cancer/Screening/Sample_cervical_screening_reports

Table 1. Laboratory report – no oncogenic HPV detected (1)

Cervical Screening	LOW RISK FOR SIGNIFICANT CERVICAL ABNORMALITY
SPECIMEN	Cervical – ThinPrep® / BD SurePath™
TEST RESULTS	PCR for Oncogenic HPV and genotype:
	HPV 16 – Not detected
	HPV 18 – Not detected
	HPV (not 16/18) – Not detected
RECOMMENDATION	**Rescreen in five years.**

Table 2. Laboratory report – HPV (not 16/18) detected (1)

Cervical Screening	INTERMEDIATE RISK FOR SIGNIFICANT CERVICAL ABNORMALITY
SPECIMEN	Cervical – ThinPrep® / BD SurePath™
TEST RESULTS	PCR for Oncogenic HPV and genotype:
	HPV 16 – Not detected
	HPV 18 – Not detected
	HPV (not 16/18) – Detected
	Liquid Based Cytology (LBC), Manually Read: **There is no evidence of a squamous intraepithelial lesion or malignancy** Endocervical component: Present
RECOMMENDATION	**Repeat test in 12 months.**

Table 3. Laboratory report – HPV 16 detected (1)

Cervical Screening	HIGHER RISK OF SIGNIFICANT CERVICAL ABNORMALITY
SPECIMEN	Cervical – ThinPrep® / BD SurePath™
TEST RESULTS	PCR for Oncogenic HPV and genotype:
	HPV 16 – Detected
	HPV 18 – Not detected
	HPV (not 16/18) – Not detected
	Liquid Based Cytology (LBC), Image Assisted: **There is no evidence of a squamous intraepithelial lesion or malignancy** Endocervical component: Present
RECOMMENDATION	**Referral for colposcopic assessment.**

Table 4. Laboratory report – HPV 18 detected (1)

Cervical Screening	HIGHER RISK OF SIGNIFICANT CERVICAL ABNORMALITY
SPECIMEN	Cervical – ThinPrep® / BD SurePath™
TEST RESULTS	PCR for Oncogenic HPV and genotype:
	HPV 16 – Not detected
	HPV 18 – Detected
	HPV (not 16/18) – Not detected
	Liquid Based Cytology (LBC), Image Assisted: **There is no evidence of a squamous intraepithelial lesion or malignancy** Endocervical component: Present
RECOMMENDATION	**Referral for colposcopic assessment.**

Notes: HPV: Human papillomavirus, LSIL: Low-grade squamous intraepithelial lesion, pLSIL: Possible LSIL, HSIL: High-grade squamous intraepithelial lesion, pHSIL: Possible HSIL, LBC: Liquid-based cytology

Tables 1 – 4 adapted with permission from the Cancer Council Australia from: National Cervical Screening Program: Guidelines for the management of screen-detected abnormalities, screening in specific populations and investigation of abnormal vaginal bleeding available at: http://wiki.cancer.org.au/australiawiki/images/a/ad/National_Cervical_Screening_Program_guidelines_long-form_PDF.pdf

Laboratory reports: composite Cervical Screening Test results and recommendations

Table 5. Summary of results and recommendations

HPV TEST RESULT	REFLEX LBC	RISK OF SIGNIFICANT CERVICAL ABNORMALITY	RECOMMENDATION
Oncogenic HPV not detected	N/A	Low risk	Rescreen in 5 years
Oncogenic HPV (not 16/18)	Negative or pLSIL/LSIL	Intermediate risk	Repeat HPV in 12 months
HPV 16/18	Any result	Higher risk	Refer for colposcopy
Oncogenic HPV (not 16/18)	pHSIL/HSIL+ Any glandular abnormality	Higher Risk	Refer for colposcopy
Oncogenic HPV (any type) persisting at 12 months repeat following initial oncogenic HPV (not 16/18)	Any result	Higher risk	Refer for colposcopy
Test not completed for technical reasons	N/A	Unsatisfactory	Retest in 6 - 12 weeks
Oncogenic HPV (not 16/18)	Unsatisfactory	Unsatisfactory	Retest LBC in 6 - 12 weeks

Notes: HPV: Human papillomavirus, LSIL: Low-grade squamous intraepithelial lesion, pLSIL: Possible LSIL, HSIL: High-grade squamous intraepithelial lesion, pHSIL: Possible HSIL, LBC: Liquid-based cytology

KEY POINT

Transitioning into the renewed NCSP: HPV testing for women in follow-up after pLSIL/LSIL Pap result:

- HPV test with partial genotyping at follow-up in 12 months
- If oncogenic HPV is not detected, return to 5 yearly screening
- If oncogenic HPV (any type) is detected, refer for colposcopic assessment informed by reflex LBC (1)

Management of histologically confirmed low-grade squamous abnormalities

Women who have a positive oncogenic HPV (any type) test result with a LBC report of either negative or pLSIL/LSIL, and histologically confirmed ≤ CIN1 on biopsy, should have a repeat HPV test 12 months later. (1)

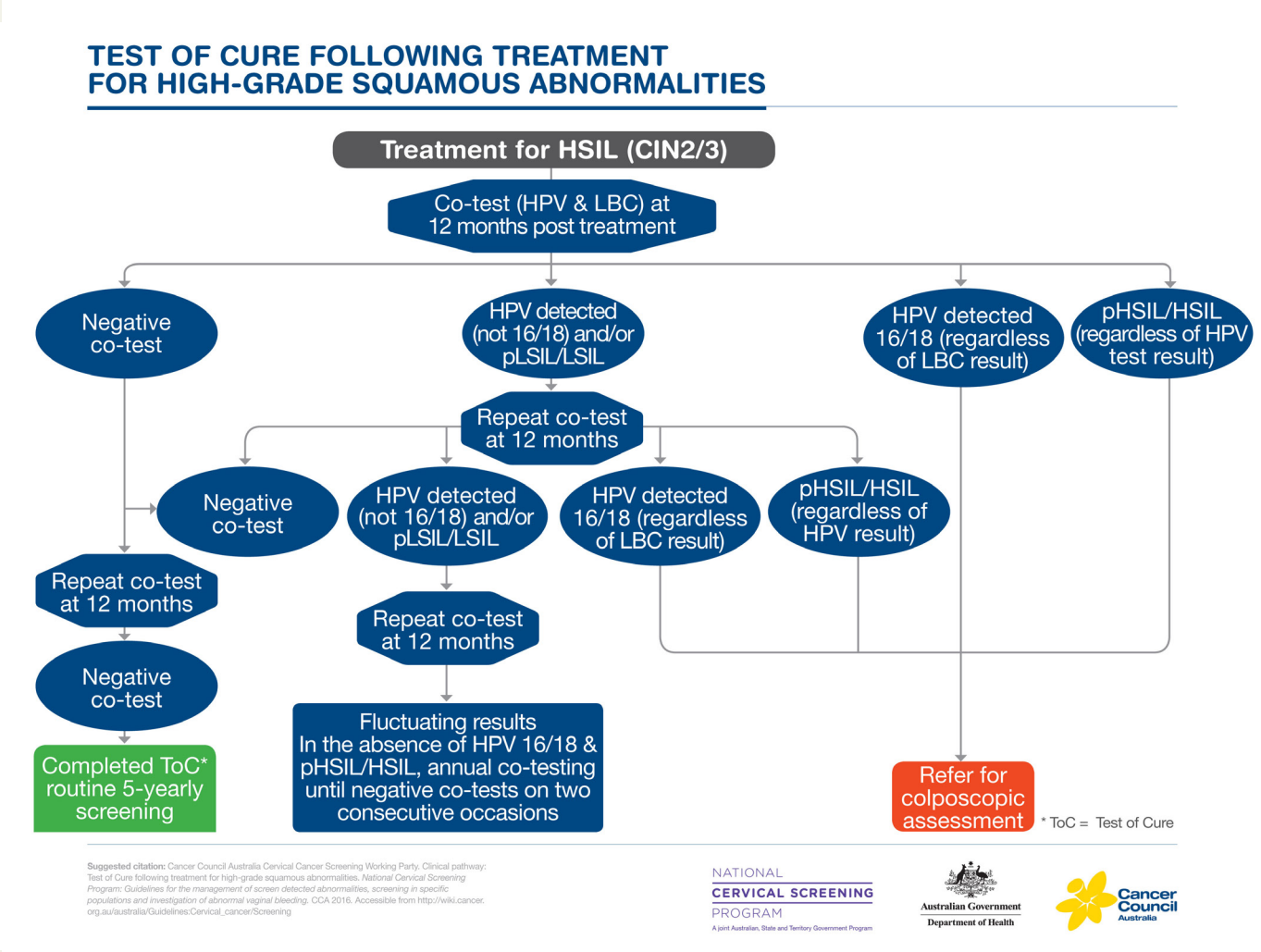
For further information see Figure 1 and *http://wiki.cancer.org.au/australia/Clinical_question:Management_of_histologically_confirmed_low-grade_squamous_abnormalities*

Test of Cure following treatment for high-grade squamous abnormalities

A woman who has been treated for HSIL (CIN2/3) generally returns to their treating gynaecologist 4-6 months post treatment for a follow up including a speculum examination. It is not usually necessary to do an HPV test, LBC or colposcopy at this visit. (1)

Subsequent surveillance post treatment is called a 'Test of Cure' and includes a co-test (HPV and LBC) performed at 12 months after treatment, and annually thereafter, until a negative co-test occurs on two consecutive occasions. The woman can then return to routine 5 yearly screening. 'Test of Cure' can be performed by the woman's GP or another health professional. (1)

For further information: *http://wiki.cancer.org.au/australia/Guidelines:Cervical_cancer/Screening/Management_histologically_confirmed_high-grade_squamous_abnormalities*



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Management of glandular abnormalities

Women who have a positive oncogenic HPV (any type) test result with a LBC report of atypical glandular/ endocervical cells of undetermined significance should be referred to a gynaecologist with expertise in the colposcopic evaluation of suspected malignancies or a gynaecological oncologist. (1)
For further information:
http://wiki.cancer.org.au/australia/Guidelines:Cervical_cancer/Screening/Management_of_glandular_abnormalities

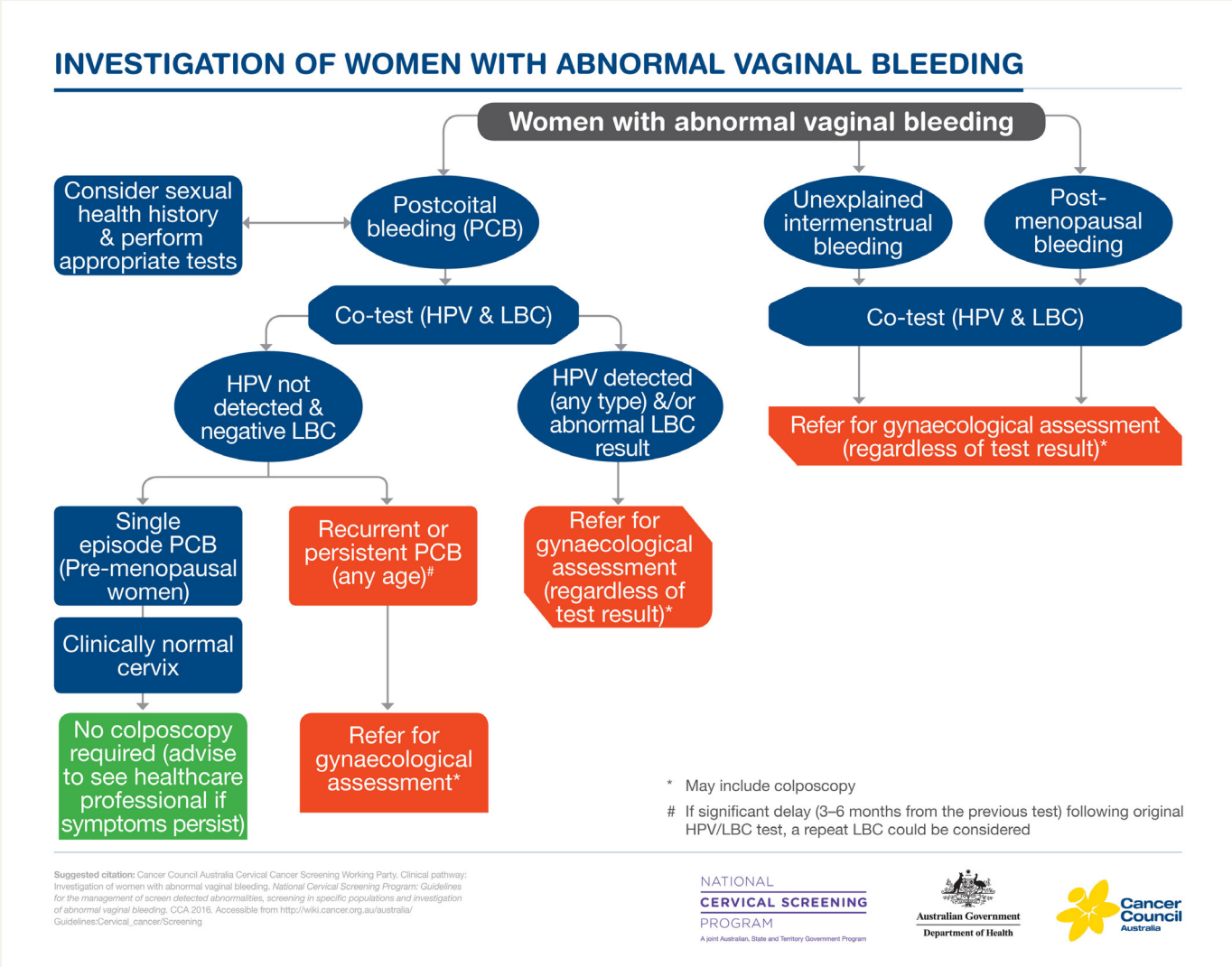
Groups for special consideration in cervical screening

Investigation of abnormal vaginal bleeding: postcoital bleeding, intermenstrual bleeding and postmenopausal bleeding

- **Take a clinical, sexual and cervical screening history** (other causes of abnormal vaginal bleeding can include chlamydia and other sexually transmissible infections [STIs], pregnancy, polyps, endometrial disorders and hormonal contraception, but genital tract malignancy must be excluded). The woman must always be examined.
- **Women at any age who have signs or symptoms** suggestive of cervical cancer should have a co-test (HPV and LBC), and be referred to a gynaecologist for appropriate investigation to exclude genital tract malignancy.
- **Pre-menopausal women who have a single episode of postcoital bleeding** and a clinically normal cervix do not need to be referred for colposcopy if the co-test is negative. If postcoital bleeding recurs, refer for specialist assessment.
- **Women with unexplained intermenstrual bleeding** should be referred for specialist assessment, regardless of any test results.
- **Postmenopausal women with any vaginal bleeding** should be referred for specialist assessment. (1)

For further information see Figure 4 and:
http://wiki.cancer.org.au/australia/Clinical_question:Investigation_of_abnormal_vaginal_bleeding

Figure 4. Investigation of women with abnormal vaginal bleeding



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Groups for special consideration in cervical screening

Management of an abnormal appearing cervix

- Take a clinical, sexual and cervical screening history (consider chlamydia and other STIs). Examine the woman.
- Perform a co-test (HPV and LBC).
- Refer to a gynaecologist for further investigation even if the HPV/LBC co-test is negative. (1)

Early sexual activity and screening in young women

There is no current evidence to show that women who have early sexual activity are at increased risk of cervical cancer. For women who experienced first sexual activity at a young age (<14 years) and who had not received the HPV vaccine before sexual debut, a single HPV test between 20 and 24 years of age could be considered on an individual basis. This includes women who are survivors of child sexual abuse. (1)

For further information:
http://wiki.cancer.org.au/australia/Clinical_question:Women_experienced_early_sexual_activity_or_victims_of_abuse

Screening in pregnancy

- Cervical screening during pregnancy is a special circumstance, as additional consideration needs to be given for the wellbeing of the fetus.
- Routine antenatal care should include cervical screening when this is due or overdue and can be offered **anytime** during the antenatal period.
- The tool for collection of a cervical screening specimen in pregnant women should be a broom type sampler brush. **Do not use an endocervical brush or a Combibrush** as this can cause bleeding and therefore distress to the pregnant woman (note that it has not been shown to be associated with an increased risk of miscarriage).
- Self-collection is not recommended during pregnancy. (1)

For further information:
http://wiki.cancer.org.au/australia/Clinical_question:Screening_in_pregnancy

Screening in postpartum women

If the woman is breastfeeding or has no menses, consider prior vaginal oestrogen to reduce the risk of an atrophic cell sample being reported and to improve comfort with the speculum examination. If screening is due perform a Cervical Screening Test at > 6 weeks after delivery (ideally at 12 weeks). (1)

Screening in postmenopausal women

Routine vaginal oestrogen is not recommended prior to cervical screening in postmenopausal women however a short course of treatment (e.g. vaginal oestrogen pessaries or oestrogen cream for at least 5 nights, excluding the 2 nights immediately prior to screening) could be considered in the following cases:

- to improve the comfort of the speculum examination for women with dyspareunia or discomfort due to vaginal atrophy
- prior to a repeat test after a technically unsatisfactory LBC result due to atrophy, inflammation or insufficient cells
- prior to colposcopy for women positive for oncogenic HPV 16/18
- prior to colposcopy for women with persistent oncogenic HPV non 16/18. (1)

Screening after total hysterectomy

KEY POINT

Women who have had a total hysterectomy for benign disease do not need further surveillance if BOTH of the following apply:

- the woman has a negative cervical screening history OR has been treated for histologically confirmed HSIL and has completed Test of Cure according to current (or pre-renewal) NCSP guidelines AND
- no evidence of cervical pathology was detected on the hysterectomy specimen. (1)

Women will need ongoing surveillance in the case of hysterectomy for:

- benign reasons with a negative cervical screening history /or completed Test of Cure for treated HSIL BUT histopathology of the cervix at hysterectomy showed LSIL or HSIL - requires vaginal vault co-test at 12 months, then annually until 2 consecutive negative co-tests
- benign reasons and previous CIN2/3 treatment with no Test of Cure - even if normal histopathology of the cervix at hysterectomy - requires vaginal vault co-test at 12 months, then annually until 2 consecutive negative co-tests
- HSIL in the presence of benign gynaecological disease - requires vaginal vault co-test at 12 months, then annually until 2 consecutive negative co-tests
- adenocarcinoma-in-situ (AIS) and under surveillance - requires vaginal vault co-test at 12 months, then annual co-tests indefinitely
- if history is not available - requires annual vaginal vault HPV test until 2 consecutive negative results
- subtotal hysterectomy (where the cervix is still present) - continue routine screening (a 5 yearly Cervical Screening Test with management according to the guidelines). (1)

For further information:
http://wiki.cancer.org.au/australia/Clinical_question:Screening_after_total_hysterectomy

Screening in women who have sex with women/lesbians

HPV can be transmitted between women. All sexually active women should have regular cervical screening, even if they have had no male sexual partners. Any woman who has participated in an HPV-risk associated sexual practice including skin to skin genital contact, oro-genital contact, or finger contact should have a Cervical Screening Test as per guidelines. (1)

Screening in transgender men with a cervix

Transgender men with a cervix are eligible for screening under the National Cervical Screening Program. Transgender men are likely to be under-screened for a variety of reasons and an awareness of transgender health issues is essential for cervical screening providers.

A short course of topical vaginal oestrogen therapy may be useful to allow comfortable collection of the sample.

Screening in DES-exposed women

Women exposed to diethylstilbestrol (DES) in-utero should be offered an annual co-test (HPV and LBC) and colposcopic examination of both the cervix and vagina indefinitely. There is a marked increase in risk of clear cell carcinoma of the cervix and vagina in women exposed in utero to DES. Studies have shown one third of samples of clear cell carcinoma of the cervix are HPV positive so lifelong annual screening is recommended. (1) If they are found to have a screen-detected abnormality, they should be managed by an experienced colposcopist.

Daughters of women exposed to DES should be screened in accordance with the NCSP policy (a 5-yearly Cervical Screening Test). There is no evidence for an increased risk of cervical dysplasia in daughters of DES-exposed women compared to the general population. However if these women have concerns, testing similar to that recommended for their mothers could be considered on an individual basis.

Note: Self-collection for HPV testing is not recommended in DES-exposed women. (1)

For further information:
http://wiki.cancer.org.au/australia/Clinical_question:DES-exposed_women

Screening in immune-deficient women

Immune-deficient women who have a negative cervical screening history and **in whom oncogenic HPV is not detected** should be screened every 3 years with a Cervical Screening Test. A HPV Test could be considered in young women aged 20-24 years who have been immune-deficient for more than 5 years.

Immune-deficient women who have a **positive oncogenic HPV (any type)** result should be referred for colposcopic assessment regardless of the reflex LBC result. Assessment and treatment of immune-deficient women with screen-detected abnormalities

should be by an experienced colposcopist or in a tertiary referral centre. (1)

For further information: *http://wiki.cancer.org.au/australia/Clinical_question:Screening_in_immune-deficient_women*

Screening in Aboriginal and Torres Strait Islander women

The incidence of cervical cancer in Aboriginal and Torres Strait Islander women has been estimated to be more than double and mortality found to be four times that of other Australian women. (2) Supporting women who are under-screened or never screened into the NCSP is an important priority of the renewed NCSP.

For further information:
http://wiki.cancer.org.au/australia/Clinical_question:HPV_screening_strategies_for_Aboriginal_and_Torres_Strait_Islander_women

Screening in women with disability

Women with disability are likely to be under-screened for a variety of reasons. To encourage women with disability into the NCSP, healthcare professionals can deliver supportive care and resources that enable these women to make informed decisions.
For further information and resources:
https://www.fpnsw.org.au/disability

Self collected Samples

Self-collection of a HPV sample is available as an alternative screening option for eligible underscreened
or never-screened women who have declined invitations and reminders to participate in conventional screening. Self-collection must be facilitated by a health professional within a healthcare clinic. To collect the sample, a dry flocked swab is self-inserted into the vagina by the woman.

Self-collected testing is less sensitive and specific for cervical disease than a clinician-collected sample. The laboratory cannot perform a reflex LBC on the same sample. (1)

Eligible women:

- women 30 years or over and have **never** had cervical screening
- women 30 years or over and are **overdue by two years** or longer.

Counselling regarding the pathway for self-collected sample results is important:

- if HPV 16 or 18 is detected in the self-collected sample, the woman will be referred directly for colposcopy
- if another oncogenic strain of HPV is detected in the self-collected sample, the woman will need to be examined by a clinician and have a sample collected for LBC which will inform subsequent management. (1)

For further information see Figure 5.

Figure 5. How to take your own sample for a HPV test

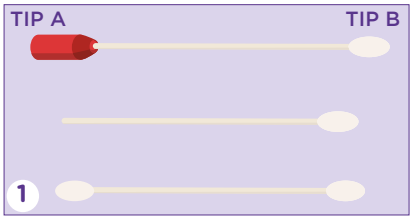
NATIONAL CERVICAL SCREENING PROGRAM
A joint Australian, State and Territory Government Program

How to take your own sample for a HPV test

Self-collection instructions
To be provided only by a healthcare provider during a consultation

Self-collection is to be completed in a health care setting, behind a screen or in the privacy of a bathroom or toilet. Ask your healthcare provider for help if you are having difficulty with taking the sample, or if you would like them to explain these instructions further.

To collect your own sample, follow these instructions.



1. Before starting

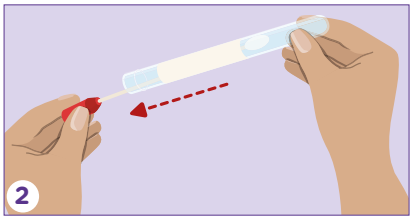
Your healthcare provider will give you a package. Inside is a swab.

Your swab may look different to those pictured here.

Before you open the package, make sure you know which end of the swab can be held (Tip A), and which end is for taking the sample (Tip B). If you are unsure which end is which, ask your healthcare provider for advice.

Before taking the sample make sure your hands are clean and dry.

Make sure you are in a comfortable position and your underwear is lowered.

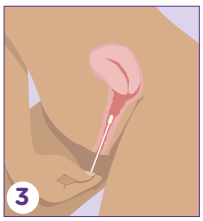


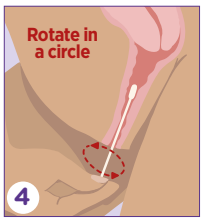
2. Preparing the swab

Twist the cap and remove the swab from the packaging.

Make sure not to touch Tip B that will be inserted to collect the sample.

Do not put the swab down.



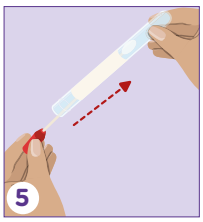


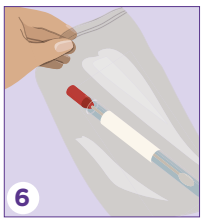
3. Inserting the swab

Use your free hand to move skin folds at the entrance of your vagina. Gently insert Tip B into your vagina (similar to inserting a tampon).
The swab may have a line or mark on it showing you how far to insert.

4. Taking the sample

Rotate the swab gently for 10–30 seconds; this should not hurt, but may feel a bit uncomfortable.





5. Storing the sample

Still holding Tip A, gently remove the swab from your vagina.

Place the swab back into the packaging with Tip B going in first.

Screw the cap back on and return the package to your healthcare provider.

6. Sending the sample

The sample will be sent to a pathology laboratory for HPV testing.

The results of the test will be sent to your healthcare provider.

What if...?	
What if I touched Tip B/the swab with my fingers by mistake?	Please continue to take the sample.
What if I dropped Tip B or the swab on a dry surface?	Please continue to take the sample.
What if I dropped Tip B/the swab on a wet surface?	Let your healthcare provider know and ask them for a new swab kit.

Please note if HPV is detected, you will need to return to your healthcare provider for a clinician-collected sample and appropriate management.

Australian Government
Department of Health

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National Cancer Screening Register

The National Cancer Screening Register (NCSR) will support delivery of the renewed NCSP and bowel screening programs.

The NCSR will:

- have one record for each participant regarding their participation in cervical and bowel cancer screening to allow for ease of data access for health professionals, pathology laboratories and women
- record Cervical Screening Test results and colposcopy data
- have a Health Care provider portal enabling healthcare professionals to retrieve information about participation, screening history and to check if reminders were sent
- have a consumer portal enabling women to access limited screening information, for example to check their due date for a Cervical Screening Test or change their address. Women will be able to opt for contact by the NCSR by mail, email or SMS notifications. Women will also be able to nominate a personal representative to access the register on their behalf
- provide a participant's cervical screening history to pathology laboratories to inform recommendation for follow up or action
- issue letters of invitation to Australians who become eligible by age or are recently enrolled with Medicare e.g. new immigrants
- remind women when they are due or overdue for screening or follow-up of abnormal results.(1)

Once implemented, women will be able to 'opt off' the Register at any time by contacting the NCSR themselves or with support from their health care provider. Previously, the health care provider was responsible for conveying a woman's request to 'opt off' the register via the pathology form sent to the laboratory. Once a woman 'opts off' she will no longer receive invitations to screen or follow-up correspondence from the Register. (1)

In conclusion

Primary health care practitioners play a pivotal role in the successful implementation of the National Cervical Screening Program including recruitment of women into the program, performing expert cervical screening sampling and following up and management of results as required. A range of resources are available to support practitioners in helping to reduce the burden of cervical cancer in Australia, especially for marginalised populations.

Family Planning NSW resources

- Talkline: phone 1300 658 886
- Reproductive and Sexual Health: an Australian Clinical Practice Handbook 3rd edition
- Fact Sheets: Cervical Screening and HPV vaccination
  https://www.fpnsw.org.au/health-information/individuals/cervical-screening
- Everything you need to know about the changes to the National Cervical Screening Program
  https://www.fpnsw.org.au/changes

Online resources

- National Cervical Screening Program: Guidelines for the management of screen-detected abnormalities, screening in specific populations and investigation of abnormal vaginal bleeding. Sydney: Cancer Council Australia. Available from: http://wiki.cancer.org.au/australia/Guidelines:Cervical_cancer/Screening
- Clinical guidelines - Short Form Summary
  http://wiki.cancer.org.au/australiawiki/images/2/2e/National_Cervical_Screening_Program_guidelines_short-form_PDF.pdf
- Clinical guidelines - Long Form Summary
  http://wiki.cancer.org.au/australiawiki/images/a/ad/National_Cervical_Screening_Program_guidelines_long-form_PDF.pdf
- Cancer Council Australia – National Cervical Screening Program publications and resources
  http://www.cancerscreening.gov.au/internet/screening/publishing.nsf/Content/resources-menu
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- Background information on the Renewal http://www.msac.gov.au
- NPS MedicineWise Learning modules on the changes to the National Cervical Screening Program
  https://learn.nps.org.au/mod/page/view.php?id=7804
- National HPV Vaccination Program Register www.hpvregister.org.au
- HPV vaccination http://www.hpvvaccine.org.au/

Glossary

Adapted with permission from *National Cervical Screening Program: Guidelines for the management of screen-detected abnormalities, screening in specific populations and investigation of abnormal vaginal bleeding.* Sydney: Cancer Council Australia.

Term	Definition
Biopsy	Removal of tissue for medical examination.
CIN	Cervical Intraepithelial Neoplasia Refers to abnormal changes in the cells on the surface of the cervix that are seen using a microscope (i.e. histologically-confirmed). CIN1 – mild dysplasia CIN2 – moderate dysplasia CIN 3 – severe dysplasia to carcinoma in situ (The term CIN2+ refers to CIN2,3, or invasive cervical cancer; CIN3+ refers to CIN3 or invasive cervical cancer) CIN2/3 refers to CIN2 or CIN3.
Colposcopy	The examination of the cervix and vagina with a magnifying instrument called a colposcope, to check for abnormalities.
Colposcopists	Health professionals, usually gynaecologists, trained to perform colposcopy.
Co-test	HPV test and LBC both requested and performed on a cervical sample.
Dysplasia	Dysplasia is an abnormality of epithelial growth and differentiation. Categorised as mild, moderate and severe and correlates with CIN1, CIN2 and CIN3.
Experienced colposcopist	An experienced colposcopist is usually considered to be one who is, or has been, associated with a tertiary referral centre and has experience in the management of patients with complex problems
Gynaecological oncologist	A gynaecological oncologist is a gynaecologist who has received special training in the management of genital tract cancer in women and has been certified by the RANZCOG: Certified Gynaecological Oncologist (CGO).
HPV 16/18	Only HPV types 16 and or 18 detected using routine HPV screening tests in laboratory
HPV not 16/18	Oncogenic HPV types other than 16 and/or 18 detected using routine HPV screening tests in laboratory.
HPV any type	Oncogenic HPV types detected using routine HPV screening tests in laboratory.
HPV positive	Women with a positive HPV test result of any oncogenic HPV types detected using HPV testing platforms in a pathology laboratory.
HPV detected	Women with a positive HPV test result of any oncogenic HPV types detected using HPV testing platforms in a pathology laboratory.
HPV negative	Women with whom oncogenic HPV types are not detected by the HPV testing platform
HPV not detected	Oncogenic HPV types not detected by the HPV testing platform.
HSIL	High-grade squamous intraepithelial lesion. In the Australian context, HSIL is used to refer to a **cytology** predictive of a high grade precancerous lesion (AMBS 2004), or **histologically** confirmed high grade precancerous lesion (HSIL-CIN2 or HSILCIN3 as per LAST terminology).
Hysterectomy (total)	Complete surgical removal of the uterus including the cervix.
LBC	Liquid based cytology (LBC) is a way of preparing cervical samples for examination in the laboratory.

Term	Definition
Intermenstrual bleeding	Vaginal bleeding at any time other than during normal menstruation or following sexual intercourse.
LSIL	Low-grade squamous intraepithelial lesion. In the Australian context, LSIL is used to refer to a **cytology** predictive of a low grade precancerous lesion (AMBS 2004), or **histologically** confirmed low grade precancerous lesion (LSIL –HPV, LSIL – condyloma and LSIL –CIN1 as per LAST terminology).
NCSP	National Cervical Screening Program A joint program of the Australian, state and territory governments. It aims to reduce morbidity and mortality from cervical cancer, in a cost-effective manner through an organised approach to cervical screening. The program encourages women in the target population to have regular cervical screening.
Negative co-test	Oncogenic HPV types not detected and LBC negative.
Oncogenic HPV	Potentially cancer-causing HPV DNA types, pathogenically linked to intraepithelial neoplasia – e.g. of the uterine cervix (termed CIN)
Oncogenic HPV types	Oncogenic HPV are HPV types considered capable of causing cancer. Types 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59 and 68 are included in tests suitable for cervical screening. Some tests also detect type 66.
Partial HPV genotyping	Testing for subgroups of high risk HPV types e.g. types 16 or 18
pHSIL	Possible HSIL in the Australian Modified Bethesda System is broadly equivalent to ASC-H in US Bethesda system.
pLSIL	Possible LSIL in the Australian Modified Bethesda System is broadly equivalent to ASCUS in US Bethesda system.
Positive oncogenic HPV (16/18)	Women with a positive HPV test result of HPV types 16 and/or 18 detected using routine HPV testing in a pathology laboratory.
Positive oncogenic HPV (not 16/18)	Women with a positive HPV test result of other oncogenic HPV types other than types 16 and 18 detected using routine HPV testing in a pathology laboratory.
Positive oncogenic HPV (any type)	Women with a positive HPV test result of any oncogenic HPV types detected using routine HPV testing in a pathology laboratory.
Reflex LBC	Reflex liquid-based cytology LBC (cytology) A test performed on a liquid-based cytology sample when there is a positive oncgenic HPV test result. Reflex LBC may allow for the triage of women along different pathways, negative, LSIL and HSIL, glandular. For women who have HPV16 and/or 18, and who are being referred directly to colposcopy, the reflex LBC result would inform the colposcopic assessment.
Register	A database of identifiable persons containing defined demographic and health information, established for a specific purpose. In the case of cervical screening or other cancer screening registers, the purpose includes inviting eligible persons for screening, sending reminders when they are overdue for screening, follow up of abnormalities, statistical reporting and research
Sexual activity	Sexual intercourse, oral sexual contact or genital skin-to-skin contact.
Under-screened	Women who are over 30 years of age and are 2 or more years overdue for their routine 5-yearly Cervical Screening Test.

Abbreviations

Adapted with permission from *National Cervical Screening Program: Guidelines for the management of screen-detected abnormalities, screening in specific populations and investigation of abnormal vaginal bleeding.* Sydney: Cancer Council Australia.

Term/Abbreviation	Definition
AIS	Adenocarcinoma in situ
AMBS	Australian Modified Bethesda System
ASC-H	Atypical squamous cells, possible high-grade lesion
ASCUS	Atypical squamous cells, undetermined significance
CIN	Cervical intraepithelial neoplasia
CIN1	Cervical intraepithelial neoplasia 1
CIN2	Cervical intraepithelial neoplasia 2
CIN3	Cervical intraepithelial neoplasia 3
CIN2/3	Cervical intraepithelial neoplasia 2 or 3
DES	Diethylstilboestrol
DNA	Deoxyribonucleic acid
HPV	Human papillomavirus
HPV 16/18	HPV types 16 and/or 18
HSIL	High-grade squamous intraepithelial lesion
LAST	Lower anogenital squamous terminology
LBC	Liquid-based cytology
LSIL	Low-grade squamous intraepithelial lesion
MSAC	The Australian Medical Services Advisory Committee
NCSP	National Cervical Screening Program
NCSR	National cancer screening register
NHMRC	National Health and Medical Research Council
Not HPV 16/18	All other oncogenic HPV types other than 16 and 18
PCR	Polymerase chain reaction
RANZCOG	The Royal Australian and New Zealand College of Obstetricians and Gynaecologists
STI	Sexually transmissible infection

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