BC CANCER CERVIX SCREENING
Provincial Health Services Authority

HPV Primary Screening

A Resource Guide for Health Care Providers

Information to Support Implementation of
HPV Primary Screening for Cervical Cancer in BC

www.screeningbc.ca/cervix

Table of Contents

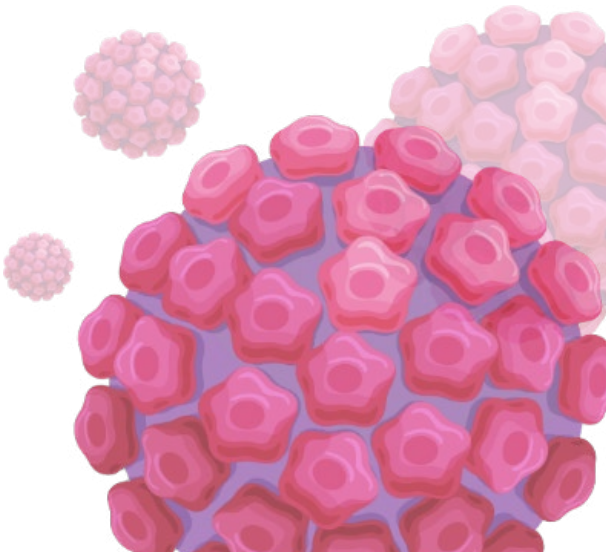
Key Definitions and Abbreviations

The term...	Refers to...
AIS	Adenocarcinoma in situ.
CIN 2	Cervical intraepithelial neoplasia affecting one-third to two-thirds of the thickness of the epithelium; classified as a high-grade pathology result.
CIN 3	Cervical intraepithelial neoplasia affecting more than two-thirds of the thickness of the epithelium; classified as a high-grade pathology result.
Cisgender (Cissexual)	Used in reference to people who feel their gender identity matches their assigned sex at birth; non-trans.
Colposcopy	An examination where a magnifying instrument (colposcope) is used to take a closer look at the cervix.
Cotest	When a provider-collected (liquid-based cytology [LBC]) sample undergoes both HPV and cytology testing.
Eligible People	People with a cervix (including women, Two-Spirit, transgender and gender diverse individuals), aged 25-69, who are or have been sexually active, and who are due and eligible for cervix screening.
Gender Diverse	Gender roles and/or gender expression that do not match social and cultural expectations; gender non-conforming; gender variant.
HPV (Human Papillomavirus)	High-risk HPV genotypes, unless noted otherwise.
HPV Test	When the sample is assessed for high-risk (oncogenic) HPV genotypes. HPV testing for cervix screening is not for detection of low-risk HPV types.
hr-HPV Types	High-risk HPV genotypes.
Linked Clinic	A clinic that has been pre-identified by the Divisions of Family Practice to support follow-up care for unattached patients with positive cervix self-screening results, including performing a follow-up Pap test or supporting patients referred for colposcopy.

The term...	Refers to...
Liquid-Based Cytology (LBC)	A collection method used by health care providers to collect a cervical sample. Cells from the cervix are collected using a spatula and/or cytobrush, which are then transferred into a container with an alcohol-based fixative. The liquid-based sample is submitted to the laboratory for testing and can be used for cytology, HPV testing or both, depending on the indication and testing algorithm.
lr-HPV Types	Low-risk HPV genotypes.
Non-Binary	An umbrella term that refers to diverse people whose gender identity does not fall within (or exclusively within) the binary gender system of woman/girl or man/boy.
Pap Test	Cytology testing conducted on a provider-collected (LBC) sample.
Provider-Collected (LBC) Sample	When the provider collects the cervical screening sample for the patient using the LBC method.
Reflex Test	When the result of the primary screening test necessitates further testing. For example, when a sample was first assessed for hr-HPV and, due to an HPV-positive test result, is then sent for reflex cytology assessment.
Self-Screening	When a patient collects their own sample vaginally using the Self-Screening Kit for HPV testing.
Self-Screening Kit	A kit that has everything a patient needs to collect a sample from their vagina for HPV testing. It includes a dry swab, instructions, brochure about cervix self-screening, plastic bag and pre-paid envelope.
TTGD	Two-Spirit, transgender and gender diverse.
Transgender	An umbrella term that describes a wide range of people whose gender identity differs from their assigned sex at birth.
Two-Spirit	A term used within some Indigenous communities, encompassing sexual, gender, cultural, and/or spiritual identity.
Unattached Patient	A patient who does not have a primary care provider.

10 Things to Know About HPV Primary Screening

1. It **looks for high-risk genotypes of HPV (hr-HPV)**, the virus that, if left untreated and undetected over time, can cause abnormal cells on the cervix.
2. It's **more effective than cytology** at identifying people at risk of developing pre-cancerous cervical lesions.
3. Because HPV testing is more accurate and has a higher negative predictive value, the **interval between negative HPV screens can be safely extended to 5 years** compared to 3 years for Pap tests.
4. Patients aged 25 to 69 who are due and eligible for cervix screening can choose to collect their own sample vaginally (**cervix self-screening**). Studies show self-collected samples are just as accurate as provider-collected samples.
5. **Cervix self-screening uses HPV testing** to look for hr-HPV. It is an **alternative to a provider-collected (LBC) sample**.
6. There are several **benefits of cervix self-screening:** it can be done wherever the patient feels more comfortable, it does not require the patient to attend a medical appointment or have a primary care provider and it is more accessible to those who are adverse to a speculum exam for screening.
7. If a patient is unable to complete or is ineligible for self-screening, they can **have a provider collect their sample** with a cervix self-screening swab or a provider-collected (LBC) sample.
8. The **recommended follow-up for a positive HPV test result** is either a follow-up Pap test (for Other High-Risk HPV Types) or a colposcopy (for HPV 16 and/or 18).
9. **Unattached patients** who complete self-screening and have a positive HPV test result will be connected with a clinic, known as a Linked Clinic, in their community for support and follow-up.
10. **Cervix screening is only effective if patients receive the recommended follow-up and treatment.** Thus, you play a key part in helping patients understand their results and facilitating their attendance at recommended follow-up and management.



HPV and Cervical Cancer

What is the relationship between HPV and cervical cancer?

Human papillomavirus (HPV) is a group of more than 200 different types of viruses – approximately 15 of which are considered "high-risk" and may cause anogenital cancers.

HPV infection is very common, and will affect, at some point, almost all sexually active people who have not received HPV vaccination. Most HPV infections will clear on their own. It is only long-term infection with high-risk HPV (hr-HPV) that may cause pre-cancerous changes to the cells of the cervix, which can lead to cervical cancer if left undetected and untreated.

Did you know?

- Approximately **99.7% of cervical cancers** are associated with a persistent hr-HPV infection, which precedes the invasive cervical tumour.
- Of the more than 200 known types of HPV, approximately 15 hr-HPV types are known to cause cervical cancer. **HPV-16 and 18 are the two most prevalent hr-HPV types** (associated with ~70% of cervical cancers).
- Low-risk HPV (lr-HPV) types cause anogenital warts (AGW) and are not associated with cervical cancer or its precursors. **HPV-6 and 11 are the two most common lr-HPV types.**

Science and Evidence for HPV Primary Screening

What is HPV primary screening? How is it different from cytology screening?

HPV primary screening detects the presence of hr-HPV types associated with cervical cancer. It does not look for low-risk types of HPV. **Cytology screening** assesses for the presence of abnormal cervical cells caused by hr-HPV.

With HPV screening, the sample is detecting hr-HPV DNA on a molecular diagnostic machine — it is **not** identifying abnormal cervical cells. Therefore, a sample of cervical cells is not required for HPV-based screening. HPV screening can be conducted on samples collected from either the vagina or the cervix. Those who test positive for HPV are considered higher risk for cervical pre-cancer and, therefore, will require follow-up testing.

Why is cervix screening transitioning to HPV primary screening?

HPV primary screening has higher sensitivity and a higher negative predictive value than cytology screening, thus it is much more effective at identifying people at risk of developing pre-cancerous cervical lesions.

HPV primary screening has been proven to detect cervical pre-cancer earlier and better than cytology. As a result, the interval between negative screens in average risk individuals can be safely extended from 3 years to 5 years.

Why is the recommended screening interval for HPV screening every 5 years?

Reasons for extending the screening interval from 3 to 5 years include:

1 **For an HPV infection to lead to cervical cancer, it needs to persist for many years (usually 15 or more) and remain undetected and untreated.**[1]

Cervical cancers develop starting with cellular atypia due to longer term, persistent infection with hr-HPV. It typically takes 15 to 20 years from the time of an initial hr-HPV infection to become cancer.

2 **HPV testing is more sensitive and effective at identifying people at risk of developing pre-cancerous cervical lesions than cytology screening.**[2,3,4,5]

HPV testing has a higher negative predictive value (much lower chance of a false negative than cytology), thus the interval between negative screens can be safely extended to 5 years.[6,7,8,9,10] Due to the lower sensitivity of cytology screening, cytology screening was recommended at a more frequent interval to have more opportunities to identify cell changes missed on previous rounds of screening.

	HPV Test	Cytology
One-time sensitivity in detecting CIN 2+	96.1% (94.2-97.4%)	53.0% (48.6-57.4%)
One-time specificity in detecting CIN 2+	90.7% (90.4-91.1%)	96.3% (96.1-96.5%)

Table 1: Performance characteristics for HPV testing and cytology for all ages[11]

3 **HPV is very common and will often spontaneously regress without a person even knowing they had it.**[12]

The majority of HPV infections are cleared by the body's immune system, within about 2 years.[13,14,15]

The purpose of testing for hr-HPV is to identify persistent infections that put people at risk of developing cervical cancer. Although HPV is transmitted through sexual contact, cervix screening using HPV testing is different than testing for a sexually transmitted infection that can be treated. Checking for HPV between screening intervals is **not** recommended.

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[1] World Health Organization. Cervical Cancer, 2016. [Online]. Available: https://www.who.int/health-topics/cervical-cancer#tab=tab_1. [Accessed 22 September 2022].
[2] Murphy J, Kennedy EB, Dunn S et al. HPV testing in primary cervical screening: a systematic review and meta-analysis. J Obstet Gynaecol Can. 2012;34(5):443-452.
[3] Ogilvie GS, van Niekerk D, Krajden M, et al. Effect of screening with primary cervical HPV testing vs cytology testing on high-grade cervical intraepithelial neoplasia at 48 months: the HPV FOCAL randomized clinical trial. JAMA. 2018;320(1):43–52.
[4] Koliopoulos G, Nyaga V, Santesso N et al. Cytology versus HPV testing for cervical cancer screening in the general population. Cochrane Database Syst Rev. 2017;8(8).
[5] Mayrand MH, Duarte-Franco E, Rodrigues I et al. Human papillomavirus DNA versus papanicolaou screening tests for cervical cancer. N Engl J Med. 2007;357:1579-1588.
[6] Coldman A, Phillips N, Kan L, Matisic J, Benedet L, Towers L. Risk of invasive cervical cancer after three consecutive negative Pap smears. Journal of Medical Screening. 2003;10(4):196-200.
[7] Andersson S, Larson B, Hjerpe A et al. Adenocarcinoma of the uterine cervix: the presence of human papillomavirus and the method of detection. Acta Obstet Gynecol Scand. 2003;82(10):960-965.
[8] International Collaboration of Epidemiological Studies in Cervical Cancer. Comparison of risk factors for invasive squamous cell carcinoma and adenocarcinoma of the cervix: collaborative reanalysis of individual data on 8,097 women with squamous cell carcinoma and 1,374 women with adenocarcinoma from 12 epidemiological studies. Int J Cancer. 2007;120(4):885-91.
[9] Sasieni P, Castanon A and Cuzick J. Screening and adenocarcinoma of the cervix. Int J Cancer. 2009;125(3):525-9.
[10] Gottschlich A, Gondara L, Smith LW, Cook D, Martin RE, Lee M, Peacock S, Proctor L, Stuart G, Krajden M, Franco EL, van Niekerk D, Ogilvie G. Human papillomavirus-based screening at extended intervals missed fewer cervical precancers than cytology in the HPV For Cervical Cancer (HPV FOCAL) trial. Int J Cancer. 2022;151(6):897-905.

4 **There are harms to over-screening, including undue anxiety, distress and unnecessary follow-up and treatments, some of which may have long-term consequences for pregnancy.**

Screening between recommended intervals can lead to over-diagnosis and treatment of lesions that may have otherwise regressed spontaneously. Treatment of cervical pre-cancer is associated with potential harms — most importantly, an increased risk of pre-term and low-birth weight babies (especially for people treated with excisional approaches) but also adverse psychosocial consequences.[16,17,18]

[11] Cuzick J, Clavel C, Petry KU, et al. Overview of the European and North American studies on HPV testing in primary cervical cancer screening. Int J Cancer. 2006;119(5):1095-1101.
[12] Ho G, Bierman R, Beardsley L, Chang C, Burk R. Natural history of cervicovaginal papillomavirus infection in young women. N Engl J Med. 1998;338:423-428.
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[14] Woodman CB, Collins S, Winter H et al. Natural history of cervical human papillomavirus infection in young women: a longitudinal cohort study. Lancet. 2001;357(9271):1831-6.
[15] Moscicki AB. Management of adolescents who have abnormal cytology and histology. Obstet Gynecol Clin North Am. 2008; 35(4):633-43;x.
[16] Castle PE, Schiffman M, Wheeler CM, Solomon D. Evidence for frequent regression of cervical intraepithelial neoplasia-grade 2. Obstet Gynecol. 2009 Jan; 113(1):18-25.
[17] Bosch FX, Burchell AN, Schiffman M et al. Epidemiology and natural history of human papillomavirus infections and type-specific implications in cervical neoplasia. Vaccine. 2008 Aug 19;26 Suppl 10:K1-16.
[18] Arbyn M, Kyrgiou M, Simoens C et al. Perinatal mortality and other severe adverse pregnancy outcomes associated with treatment of cervical intraepithelial neoplasia: meta-analysis. BMJ. 2008 Sept 18;337:a1284.

What do my patients need to know?

- HPV testing detects hr-HPV types known to cause cervical cancer. This is an improved technology for cervix screening.
- HPV testing every 5 years is as safe as Pap testing every 3 years because:
    1. HPV testing is more accurate and has less chance of being a false negative, meaning people can go longer between screenings.
    2. Pap testing is recommended every 3 years to improve the performance of cytology since it can sometimes miss detecting abnormal cells, **not** because cervical cancer develops quickly. HPV testing is more accurate so we have much more confidence that a person with a negative HPV result is at very low risk for cervical pre-cancer or cancer.
    3. It can take 15 to 20 years for HPV to cause cervical cancer.
- Over-screening (screening more frequently or earlier than necessary) increases the likelihood of causing harm, including unnecessary follow-up and treatments, some of which may have long-term consequences for pregnancy or cause undue anxiety and distress.

"We don't want to find out too late that we have cancer because it's preventable."

Barby Skaling
Gitxsan-Carrier Nation

HPV Vaccine and Cervical Cancer

Do individuals who have received the HPV vaccine still need to be screened?

People who have received the HPV vaccine still require screening. The HPV vaccine does not protect against all types of HPV associated with cervical cancer, nor does it protect against HPV types a person may have been exposed to before they were vaccinated.

For more information, visit the ImmunizeBC website (www.immunizebc.ca/hpv).

What do we know about the HPV vaccine?

- In Canada, the **Gardasil®9 (HPV9) vaccine** is approved for use in anyone aged 9 and older.
- The vaccine is offered for free through school-based immunization programs in BC. It can also be purchased at some pharmacies, travel clinics, sexual health clinics and through primary care providers. Some private health plans may cover the cost.
- The HPV9 vaccine protects against:
  - 2 types of HPV that cause about 70% of cervical cancer cases and 80% of anal cancer cases;
  - 5 additional types of HPV that cause 15% to 20% of cervical cancers, and 11% of anal cancers in women and 4% in men; and
  - 2 types of HPV that cause about 90% of cases of genital warts.[1]
- The same screening approach must be applied to both vaccinated and unvaccinated individuals because the HPV types that are not prevented by the vaccine can also cause cervical lesions.
- Research has demonstrated that those who have received the HPV vaccine are less likely to develop cervical dysplasia once they start cervix screening at the eligible age.[2]

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[1] Part 4: Biological Products (Vaccines & Immune Globulins) [Internet]. BC Centre for Disease Control. Available from: http://www.bccdc.ca/health-professionals/clinical-resources/communicable-disease-control-manual/immunization/biological-products.

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Program Overview and Eligibility

There are several implications with the transition from cytology to HPV testing as the primary form of cervix screening.

What are the changes?

1) More screening options:
    - **Self-screening:** Anyone aged 25 to 69 who is due and eligible for routine cervix screening can choose to collect their own sample vaginally, wherever they feel safe and comfortable. Self-screening uses an effective and reliable test that looks for hr-HPV. If the patient does not want to or is unable to take their own sample, they can see a health care provider to have the provider take the vaginal sample with a self-screening swab or get a provider-collected (LBC) sample. People who are ineligible for self-screening, such as those who are recommended for a co-test, need to schedule a provider-collected (LBC) sample with a provider.
    - **Provider-collected (LBC):** Patients who have a provider-collected (LBC) sample will have their sample triaged at the lab for either primary cytology or primary HPV testing. The triaging of provider-collected (LBC) samples will support predictable colposcopy volumes and help manage the impact of the change on the overall health system. Samples for patients aged 55 and older will be the first cohort to transition to HPV primary screening. The age for HPV primary screening will decrease through the transition period until all provider-collected (LBC) samples are assessed for HPV infection.
2) Extended screening interval: HPV testing has a higher sensitivity and higher negative predictive value than cytology screening. As a result, the interval between negative screens can be safely extended from 3 years to 5 years.
3) Fewer in-person, provider-collected cervix screens: With the availability of self-screening, lower demand for in-person provider-collected (LBC) samples is expected. The cervix self-screening pilot demonstrated that up to 40% of people who were due to screen again opted to complete their own screening. Patients who complete self-screening will require cytology as their follow-up test about 7% of the time.
4) Follow-up care for unattached patients (Linked Clinics): Cervix screening no longer requires a visit to a provider to access the screening test. Self-screening opens up the opportunity to reach more of the eligible population and offer screening to people who may not have a primary care provider. If follow-up care is needed, the patient will be connected with a clinic, known as a Linked Clinic, in their community for support. Refer to the flowchart on Page 18 for an overview of the process.

"I'm excited that we've found a way in BC for people with a cervix to have necessary screening without the traditional barriers associated with cervix screening."

Francesca Chiste
Nurse Practitioner

Who is eligible for cervix self-screening?

Anyone aged 25 to 69 who:

- Has a cervix;
- Is due for routine screening;
- Has ever had sexual contact (intercourse or digital or oral sexual contact involving the genital area with a person of any gender);
- Is asymptomatic; **and**
- Is registered with the Medical Services Plan.

What are the benefits of cervix self-screening?

- The effective and reliable test detects hr-HPV, the virus that, if left untreated and undetected over time, can cause abnormal cells on the cervix. Follow-up care and treatment can prevent the cells from developing into cancer.
- The patient does not need to see a health care provider or have a speculum exam. A self-screening sample is collected from the vagina.
- The patient can easily collect the vaginal sample themselves, wherever they feel safe and comfortable. If a patient needs help completing self-screening, they can get support from a provider.
- It is painless, easy to complete, and is provided free of charge.
- Studies show self-collected samples are just as accurate as provider-collected samples.

Who is **not** eligible for cervix self-screening?

Patients who have symptoms or are:

- Currently pregnant;
- Recommended to have a cotest; **or**
- Using a pessary.

Patients who have had cervical cancer or been advised that they can discontinue cervix screening should **not** self-screen or have a provider-collected (LBC) sample.

When would a patient require a provider-collected (LBC) sample?

- If the patient will undergo a speculum exam anyway;
- If the patient has already travelled to the clinic and getting to the clinic is difficult for the patient: taking a provider-collected (LBC) sample will prevent the patient from needing to return for another in-person visit if their self-screening result is positive; **or**
- If the patient has a disability, mobility challenge or body habitus that makes self-screening difficult.

Some patients should have a provider-collected (LBC) sample so that both HPV and cytology (cotest) can be assessed. These patients include those who are:

- **Post CIN 2 or CIN 3 excisional treatment and discharged from colposcopy.** These patients should have 1 negative cotest prior to returning to HPV screening every 3 years.
- **Post AIS excisional treatment and discharged from colposcopy.** These patients should have a cotest every 3 years until age 69.
- **Post AIS excisional treatment and immunocompromised and discharged from colposcopy.** These patients should have a cotest every year until age 74.
- **Post total hysterectomy and a history of CIN 2, CIN 3 or AIS:** These patients should have a negative cotest prior to discontinuing cervix screening. If cotesting has been recommended, both cytology and HPV testing will be completed on the sample.

Should pregnant individuals get screened?

People who are pregnant should only be screened if they are due or overdue. Screening is not necessary as a routine part of pre-natal screening for those who are up to date with screening. Self-screening is not recommended for patients who are pregnant.

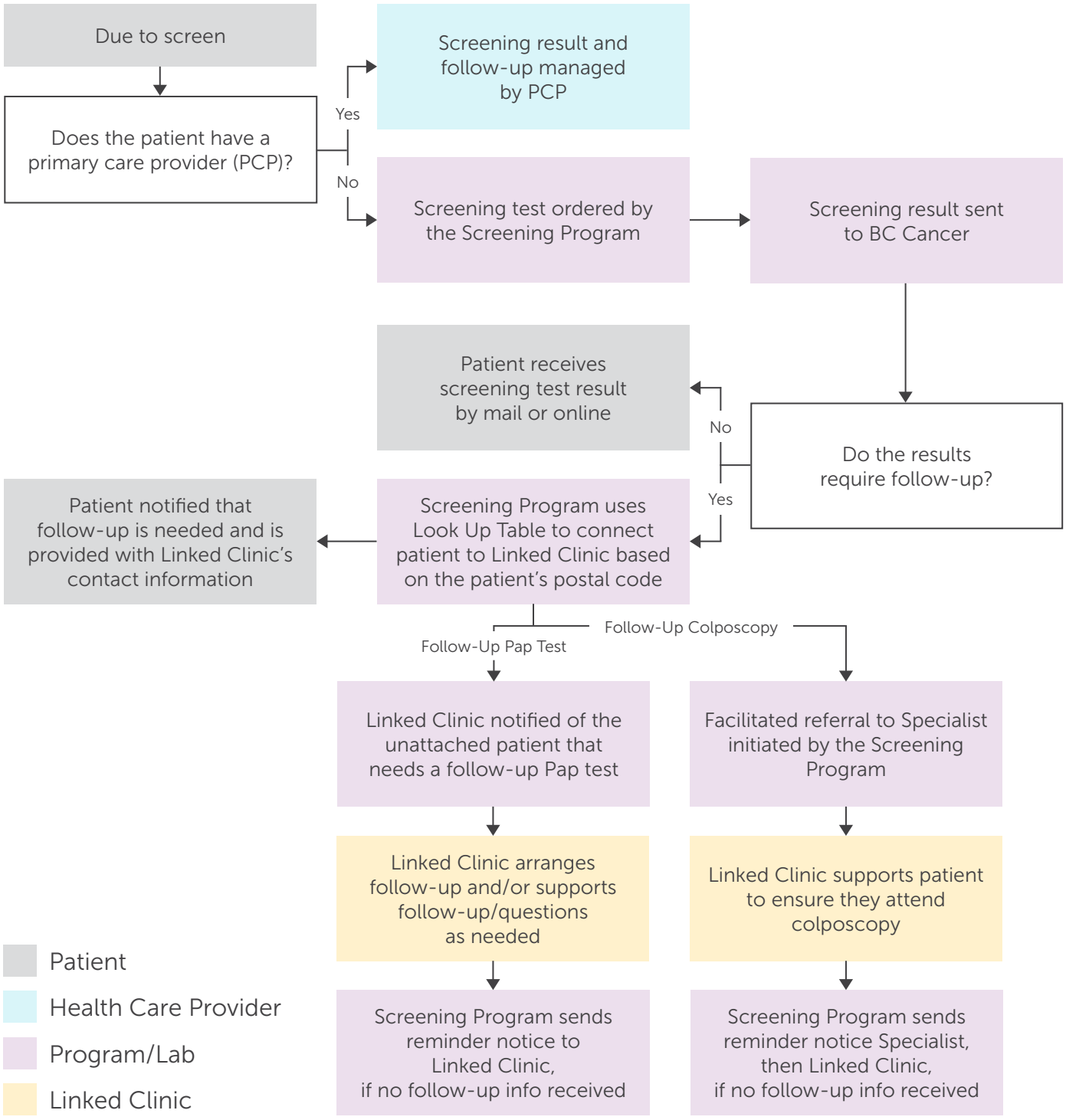
Screening is for age-eligible and asymptomatic people

Cervix screening is for age-eligible and asymptomatic people. People with symptoms (e.g., post-coital bleeding, persistent abnormal bleeding and/or a persistent vaginal discharge) should have a speculum examination by someone with experience in gynecologic exams.

A screening test is not required for referral. If a test is performed, a cotest is the recommended test.

What if a patient does not have a primary care provider?

Cervix screening no longer requires a provider visit to get screened. If a patient does not have a primary care provider but meets all the criteria for cervix self-screening, they are eligible to receive a self-screening kit. If their test result recommends either a follow-up Pap test or colposcopy, the patient will be connected with a clinic, known as a Linked Clinic, in their community for support and follow-up. The flowchart below illustrates this process:



"Self-screening is such a huge movement for women."

Bianca Michell
Tl'azt'en Nation

Cervix Screening Process

You play a critical role in supporting patients to feel comfortable with transitioning to HPV testing as the primary screening method. Some patients may want to know that you support them in completing cervix self-screening, while others may want to continue getting a provider-collected (LBC) sample.

Cervix Self-Screening

How are kits offered and distributed?

Patients will receive a letter in the mail when they are due to screen, inviting them to request a kit directly from the Cervix Screening Program by phone at 1-877-702-6566 or through the Cervix Screening Program's website (www.screeningbc.ca/cervix).

What happens after patients receive their self-screening kit?

Patients will complete self-screening by following the instructions inside their kit. They will then drop off their completed kit at a Canada Post office or post box free of charge (each kit contains a prepaid return envelope provided by BC Cancer).

Results will be sent to both the patient and provider (either their own primary care provider or a Linked Clinic if needed) within 4 to 6 weeks after they mail their kit. Please refer to the Cervix Screening Algorithm (Page 22) and HPV Results (Page 24) sections for information on the types of HPV results and recommended follow-up for average risk patients.

Can the same swabs be used to take oral samples from the throat?

No. Although HPV is associated with head and neck cancers, the cervix self-screening test is not validated for the collection of oral samples. If a non-vaginal sample is collected and sent in, it will be rejected at the lab.

What if my patient is eligible for self-screening but asks for a Pap test?

If the patient is interested in learning more about self-screening, explain how it works and the benefits. Reassure them that it is safe, effective and that HPV testing is in fact the improved technology for cervix screening.

If the patient would still prefer to get a Pap test after your conversation, let them know:

- their Pap test may still be tested for HPV at the lab; **and**
- in a few years, because HPV testing detects cervical pre-cancer earlier and better, HPV screening will become the only screening test.

Can I get self-screening swabs for my clinic?

If you are in a health care or community health setting where you can assess patient eligibility for cervix screening, you can order self-screening kits for your clinic through the BC Cancer Cervical Cancer Screening Lab (CCSL) ordering system (bccancer.silverbacksystems.io).

Provider-Collected (LBC) Sample

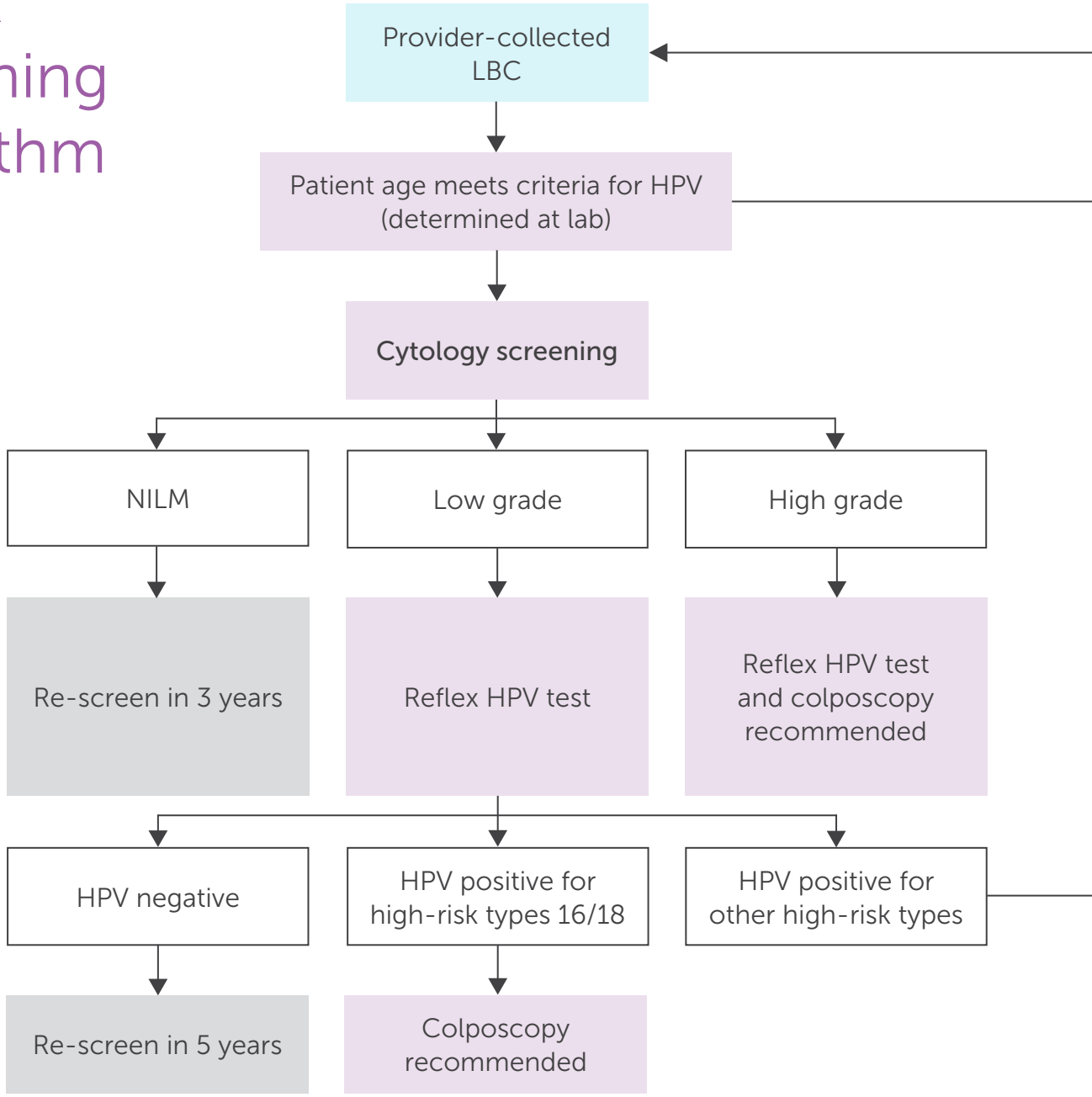
What happens after I submit a LBC sample?

Based on the patient's age, provider-collected (LBC) samples will be triaged at the lab to undergo HPV-based testing, cytology or both. Samples for patients aged 55 and older will be the first cohort to transition to HPV primary screening. The age for HPV primary screening will decrease through the transition period until all provider-collected (LBC) samples are used for HPV testing. The patient age for HPV testing of provider-collected samples will be available on the program and laboratory website.

Are routine pelvic exams required as part of cervix screening?

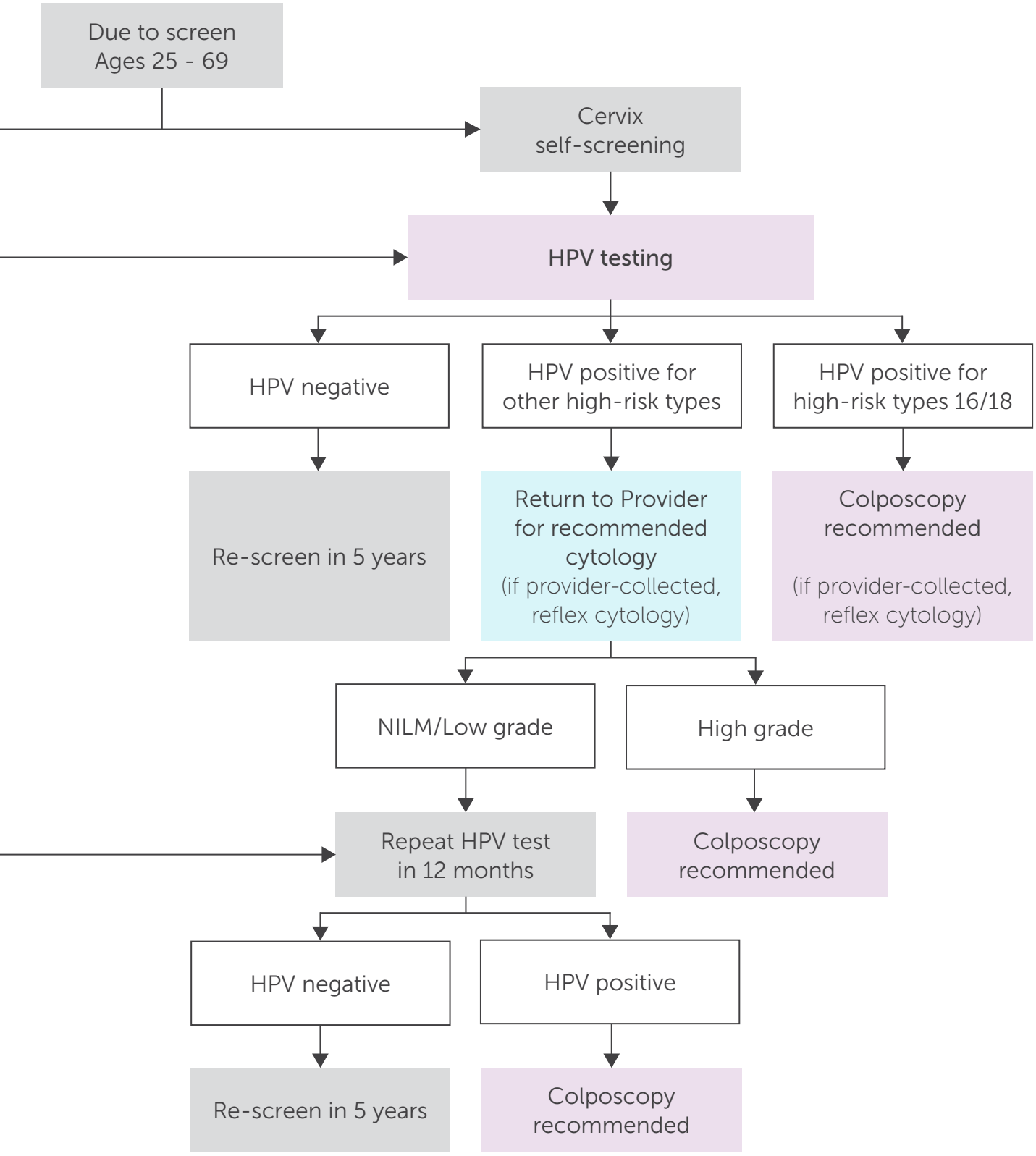
The Canadian Task Force on Preventive Health Care (www.canadiantaskforce.ca/guidelines/published-guidelines/pelvic-exam) recommends **not** performing a screening pelvic examination to screen for non-cervical cancer, pelvic inflammatory disease or other gynecological conditions in asymptomatic patients. A pelvic exam is appropriate in other clinical situations, such as for diagnosis of gynecological conditions when a patient presents with symptoms or for follow-up of a previously diagnosed condition.

Cervix Screening Algorithm



- Patient
- Health Care Provider
- Program/Lab
- Results

To print the Cervix Screening Algorithm, visit the Cervix Screening Program's Health Professionals web page (www.screeningbc.ca/health-professionals).


Due to screen
Ages 25 - 69
Cervix
self-screening
HPV testing
HPV negative
HPV positive for
other high-risk types
HPV positive for
high-risk types 16/18
Re-screen in 5 years
Return to Provider
for recommended
cytology
(if provider-collected,
reflex cytology)
Colposcopy
recommended
(if provider-collected,
reflex cytology)
NILM/Low grade
High grade
Repeat HPV test
in 12 months
Colposcopy
recommended
HPV negative
HPV positive
Re-screen in 5 years
Colposcopy
recommended

HPV Results: Average Risk Patients

Both the patient and ordering health care provider will receive a copy of the results online and/or by mail.

The lab will report the result:

- HPV Negative,
- HPV Other High-Risk Type Positive,
- HPV 16 and/or HPV 18 Positive, **or**
- Unsuitable for Testing or Invalid Result.

For an overview of the results and follow-up, refer to the Cervix Screening Algorithm on Page 22. Detailed follow-up recommendations, including those for non-average risk patients, can be found in the Cervix Screening Program Overview (www.bccancer.bc.ca/screening/Documents/Cervix-Program-Overview.pdf).

Result: HPV Negative

This means the patient is negative for HPV 16, HPV 18 and Other High-Risk HPV Types.

Recommendation: **For average risk patients, screen again in 5 years.**

Result: HPV Other High-Risk Type Positive

This means a high-risk type (other than HPV 16 and/or 18) was found in the sample.

Recommendation: **Cytology**

- *Self-screening:* Patient to obtain provider-collected sample.
- *Provider-collected:* Sample will be reflexed to cytology.

Follow-up cytology results:

- *Cytology NILM, ASCUS or LSIL:* Repeat HPV test in 12 months*.
- *Cytology ASCH, HSIL, AGC or invasive carcinoma:* Colposcopy. Patients will be referred to colposcopy by the Cervix Screening Program on behalf of the ordering provider or the Linked Clinic for unattached patients.

*At the 12-month follow-up HPV test, if the patient's result is:

- *HPV Negative:* Screen again in 5 years.
- *HPV 16 and/or 18 or Other High-Risk Types Positive:* Colposcopy is recommended.

Acronyms:

- **NILM:** Negative for intraepithelial lesion or malignancy
- **ASCUS:** Atypical squamous cells of undetermined significance
- **LSIL:** Low-grade squamous intraepithelial lesions
- **ASCH:** Atypical squamous cells, cannot exclude a HSIL
- **HSIL:** High-grade squamous intraepithelial lesions
- **AGC:** Atypical glandular cells

Result: HPV 16 and/or HPV 18 Positive

This means HPV 16 and/or HPV 18 was found in the sample.

Recommendation: **Colposcopy**

Patients will be referred to colposcopy by the Cervix Screening Program on behalf of the ordering provider or the Linked Clinic for unattached patients.

Result: Unsuitable for Testing or Invalid Result

This means the sample could not be tested (e.g. broken container) or the sample was tested but determined to be invalid (e.g. when no beta-globin was found in the sample).

Recommendation: **Repeat HPV testing. The Cervix Screening Program will mail a new self-screening kit to the patient.**

Why is follow-up care and treatment important?

Appropriate follow-up care and treatment have a greater impact on reducing mortality than high screening coverage.

It has been estimated[1] that in places with:

100% screening coverage		50% screening coverage
and		and
follow-up and **treatment of 50%** of patients detected with precancerous lesions		follow-up and **treatment of 100% of patients** detected with precancerous lesions
led to		led to
50% reduced mortality		70% reduced mortality

[1] Murillo R, Almonte M, Pereira A, Ferrer E, Gamboa OA, Jeronimo J, Lazcano-Ponce E. Cervical cancer screening programs in Latin America and the Caribbean. Vaccine. 2008:26 Suppl 11:L37-L48.

Talking to Your Patients About Their Positive HPV Results

Cervix screening is only effective if patients receive the recommended follow-up and treatment. You play a key role in helping patients understand their results, complete their recommended follow-up care and return for routine screening.

What should I keep in mind?

- Normalize and destigmatize HPV: Let your patients know that HPV is the most common sexually transmitted infection and most people will have HPV at some point in their lives.
- The patient may feel a variety of emotions including fear, shame and guilt. These feelings may impact a patient's adherence to recommended follow-up and treatment.
- Offer support and counselling: Counselling can involve encouraging patients to share what knowledge they have about HPV and cervical cancer, their experience with gynecological examinations and the goals they have for their care.
- Listen for any fears and concerns the patient may have and probe for any doubts or questions about what the HPV test result means for them. This will help you better support their understanding and needs and promote adherence to follow-up.
- Share information about the follow-up procedure, including what to expect, how the procedure is performed and the intended outcomes of the procedure.
- Let the patient take the lead in the content and pace of these discussions. One way to start the conversation is by asking, "What do you know or have heard about HPV?" The patient may wish to discuss their results and concerns over a few appointments.

Answering Common Questions and Concerns About Positive HPV Results

"How did I get it?"

HPV spreads through any kind of sexual contact, including intimate touching, and oral, vaginal and anal sex.

HPV is very common. Most sexually active people will have HPV at some point in their lives. You can have HPV for a long time without ever knowing it. In fact, it's unrealistic to expect that a sexually active person may have never been exposed to HPV.

"Does this mean I have cervical cancer?"

No, a positive HPV result does not mean you have or will develop cervical cancer. HPV will usually go away on its own within 2 years.

The positive result helps us identify who's at risk of developing abnormal cells on their cervix, so that we can find and treat the abnormal cells early to prevent them from developing into cancer.

"I'm so worried about my result."

I understand, a lot of people feel that way when they hear they have HPV. Learning more about it might help you feel better. What questions do you have about HPV?

"The follow-up procedures sound scary."

I hear you. How can I support you with the process? It's important that you do the [Pap test/colposcopy] because it can help us identify any abnormal cells and treat them before they can develop into cancer.

"Do I need to tell my partner(s)?"

It's completely your choice. There is no medical reason to tell a partner: HPV is a very common virus, it usually goes away on its own, and there is no treatment for the HPV infection itself.

If your partner has a cervix and is eligible for cervix screening, it is recommended that they get screened when they are due. There is currently no screening test available for those who do not have a cervix.

"Does this mean my partner(s) had sex with other people?"

Having a positive HPV result does **not** mean that you or your partner(s) had other partner(s) during your relationship.

You or your partner may have been infected with HPV many years before without ever knowing it.

For more information on supporting patients with a positive HPV result, check out SmartSexResource's HPV: Health Care Provider's Guide (www.smartsexresource.com/resources/hpv-health-care-providers-guide).

Common Questions and Concerns About Cervix Screening

Accuracy of Self-Screening

I haven't ever missed a Pap test. My nurse practitioner always makes sure it's a smooth experience for me. At my last appointment, they mentioned I can collect my own sample but I wasn't confident that I could do it myself. I was worried my results wouldn't be accurate.

See Page 16 (Benefits of Cervix Self-Screening) for more information.

Perceived Susceptibility to HPV and Cervical Cancer

Isn't HPV screening for teenagers, not a lady in her 60s like me? Why start screening now when I've never even had a Pap test? Anyway, my husband and I have been married for 30 years and neither of us have been with anyone else. There's no way I could have HPV.

See Page 8 (HPV and Cervical Cancer) for more information.

Convenience of Self-Screening

I can't wait to use my self-screening kit! It's a convenient option for a busy person like me who doesn't always have time to go to the doctor.

See Page 16 (Benefits of Cervix Self-Screening) for more information.

Screening in Privacy

I think I'd feel more comfortable collecting my own sample because I can do it in the privacy of my own home.

See Page 16 (Benefits of Cervix Self-Screening) for more information.

Screening Interval, Translated Health Information

My last Pap test was 3 years ago when I had a check-up right before I immigrated to Canada. Is it time for me to get screened again? It would be helpful to get this information in my preferred language, or to have an interpreter at my appointment.

See Pages 9-11 (Science and Evidence for Primary HPV Screening) for more information.

Eligibility

Are trans men eligible for screening? When I asked my health care providers in the past, it seemed like they didn't really understand my needs.

See Pages 14-17 (Program Overview and Eligibility) for more information.

For more conversation tips, visit the Cervix Screening Program's website (www.screeningbc.ca/cervix).

Additional Resources

For More Information About HPV Primary Screening in BC

- Get the latest updates and resources about HPV primary screening on the Cervix Screening Program's Health Professionals web page (www.screeningbc.ca/health-professionals).
- Find detailed cervix screening and follow-up recommendations, including those for non-average risk patients, in the Cervix Screening Program Overview Document (www.bccancer.bc.ca/screening/Documents/Cervix-Program-Overview.pdf).

Patient Resources

Access resources for patients, including brochures, posters and animated videos, on the Cervix Screening Program's website (www.screeningbc.ca/cervix).

Culturally-Safe and Trauma-Informed Supports

Talking about sexual health can be difficult for some people. There are many supports across BC that can help:

Crisis Helplines

- **Hope for Wellness Helpline:** Offers immediate mental health counselling and crisis intervention by phone or online chat, 24 hours a day. Call toll-free 1-855-242-3310 or start a confidential chat with a counsellor on the Hope for Wellness Helpline website (www.hopeforwellness.ca).
- **Kuu-Us Crisis Line Society:** Provides crisis services for Indigenous people across BC. Call the Adults/Elders line (250-723-4050), youth line (250-723-2040), or toll free (1-800-588-8717). Get more information on Kuu-Us Crisis Line Society's website (www.kuu-uscrisisline.com).
- **Métis Crisis Line:** A service of Métis Nation British Columbia. Call 1-833-MétisBC (1-833-638-4722).

Virtual Care

- **First Nations Virtual Doctor of the Day:** Provides virtual health care and referral support for people who do not have a doctor or are unable to get an appointment. It is for all First Nations people living in BC and their family members, including family members who are not Indigenous. Call 1-855-344-3800 to book an appointment. For more information, visit the FNHA Virtual Doctor of the Day web page (www.fnha.ca/virtualdoctor).

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