

“HPV Has Been Found in Your Sample”: Explaining HPV-Detected Results Based on an Updated Understanding of the Natural History of HPV

To ensure patients understand their cervix screening results, it is essential that health care providers are up to date with the natural history of HPV and the potential clinical implications.

Clearly explaining to patients how and why HPV is detected (i.e., found) in a sample during cervix screening can help:

- Ease anxiety or fear;
- Prepare patients to successfully navigate conversations about HPV results with their sexual partner(s);
- Equip patients with information about HPV that will assist them as they go through subsequent rounds of HPV screening in the future; and
- Build trust with health care providers and this newer method for cervix screening.

What you need to know: Natural history of HPV

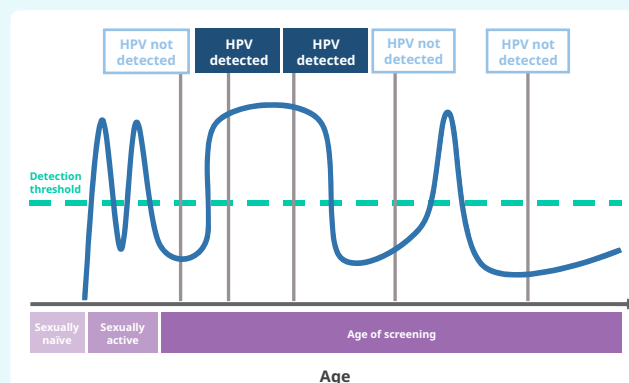
When an HPV infection is acquired, most people build a strong immune response within 1 to 2 years. This can make HPV undetectable in laboratory tests and is often referred to as “viral clearance”.

Recent research shows that HPV may remain in the basal layers of the epithelium of the cervix as a latent or low-level, immune-controlled infection that is undetectable by HPV testing. Periods of immune suppression may lead to increased HPV replication, and a previously immune-controlled HPV infection may become detectable or re-detectable in laboratory tests. Therefore:

- 1 **If HPV is no longer detectable on a laboratory test, it does not mean that the virus has completely cleared** nor does it mean the patient will have a detectable HPV infection again in the future. It is important that the patient stays up to date with cervix screening to monitor and effectively address possible persistent infections that could lead to cervical precancer.
- 2 **HPV detection does not mean there is a new HPV infection:** Finding HPV in a sample, when HPV was not detected in previous tests, does not mean the patient or their sexual partner(s) had other partner(s) during their relationship. The test may have detected a previously-acquired infection, which has only now become clinically detectable due to relative immune suppression and resultant higher viral shedding.

An example of HPV natural history across the life span for a person with a cervix

The example below shows how a patient's HPV results can change between cervix screens. HPV may be detected due to a new infection from a new sexual partner, or as a re-detection of a previously-acquired HPV. It is undetectable when the immune system has gained control of the virus, decreasing the amount of HPV to below the test detection threshold. At these low, undetectable levels, HPV is not considered clinically significant.



There are many possible explanations for having HPV detected during cervix screening:

Explanation	Description
Acquisition	An HPV-naïve cervix is infected with a new HPV genotype. There is viral replication.
Reinfection	The cervix is infected with an HPV genotype again after having cleared the previous infection with the same HPV genotype. There is viral replication.
Viral reactivation of a latent infection	A cervical HPV infection is detected on a cervical sample after a period of not being detectable. Even while it was undetectable, HPV was present in the epithelium but without any viral replication and no evidence of disease.
Re-detection of a low-level chronic infection	A cervical HPV infection is detected on a cervical sample after a period of not being detectable. Even while it was undetectable, there was an active HPV infection with viral replication but the viral load was below the detectable threshold of a given assay.
Deposition	HPV is deposited in the vagina and/or cervix after a recent sex act. Deposited HPV does not infect the cervix and viral replication in the cervix does not occur.
Autoinoculation	The cervix is infected due to autoinoculation from other sites (such as vagina, vulva, and anus). There is viral replication.

See the next page for information on how to explain to patients what it means when HPV is found in their sample

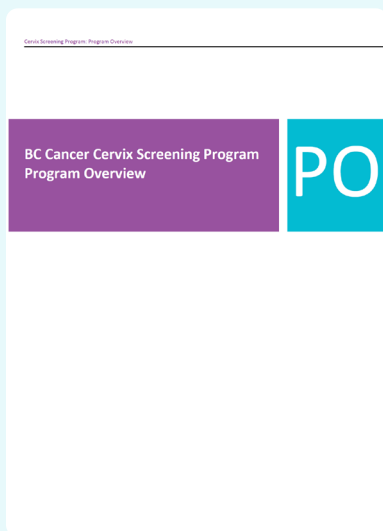
HPV is a virus that may, but rarely, cause cervical precancer and cancer.

- 1 **HPV is very common:** Most women and people with a cervix will have HPV at some point during their lifetime. Even though HPV is common, most people will never have cervical precancer or cancer because the HPV infection will likely go away on its own without treatment.
 - 2 **How you got HPV does not change how we manage the result:** You can't know exactly when or from whom you got HPV. What matters most is that you attend screening and your follow-up exams. The follow-up Pap test or colposcopy can find out if you have an HPV-related disease that needs treatment.
 - 3 **HPV may be found in your sample even if: your last test did not find HPV; you have not been sexually active for a long time; or you have only had one sexual partner:** If a recent cervix screen shows that HPV was found in your sample, this could be because your body has not been able to control an HPV infection from before (not because you have a new infection from a sexual partner). Because cervix screening did not check for HPV until January 2024 in BC, you may have had HPV before even if your last Pap test was normal.

It is important to follow the next steps, including getting screened when you are due or getting further cervix exams. All of your cervix screening test results help to know what your next steps should be. Follow-up exams, such as colposcopy, can find out if you have any HPV-related disease that needs treatment.



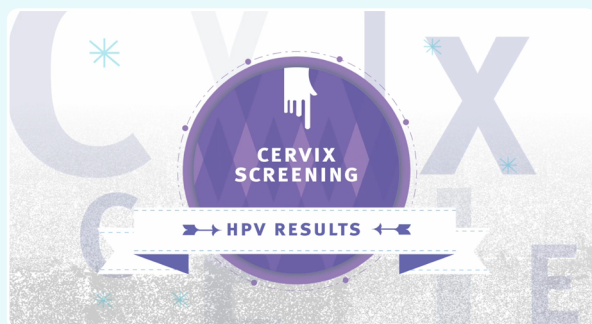
Helpful Resources



Resource: Cervix Screening Program Overview

An overview of the BC Cancer Cervix Screening Program detailing eligibility and screening recommendations.

Visit this link to always access the latest version: www.bccancer.bc.ca/screening/Documents/Cervix-Program-Overview.pdf



Video for Patients: HPV Results

An animated video for patients explaining what it means if HPV is found in their sample.

www.youtube.com/ScreeningBC



An updated understanding of the natural history of cervical human papillomavirus infection—clinical implications

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Introduction

Human papillomavirus (HPV) is causally related to anogenital precancers and cancers, particularly those arising in the cervix.¹⁻³ Upon HPV acquisition, most individuals are able to mount a strong cell-mediated immune response within

1 to 2 years,⁴ resulting in loss of HPV detectability—a phenomenon often defined as viral clearance.⁵ However, a growing body of literature reports that even when HPV is undetectable by conventional tests, it remains in the basal layers of the epithelium of the uterine

cervix as a latent or low-level chronic infection,⁶⁻⁸ with subsequent risk of re-detection of HPV during periods of relative immune suppression.⁹⁻¹² As a result, the International Papillomavirus Society (IPVS) convened a working group on cervical HPV latency to review

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Article: An updated understanding of the natural history of cervical human papillomavirus infection—clinical implications

The inspiration for this Fact Sheet, this article describes sources of HPV infection and HPV re-detection based on an updated understanding of the natural history of HPV.

www.sciencedirect.com/science/article/pii/S0002937825001103



Video: Christina's Story: Cervical Cancer Survivor

Christina shares how the HPV test, through cervix self-screening, helped her catch her cervical cancer.

youtu.be/hrH5ynMVm8w

