



HPV

THE LINK TO CERVICAL CANCER

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OUTLINE

HPV-Types and Incidence

HPV and the link with cervical cancer

Characteristics of HPV

Risk and Co-Factors for HPV

Ontario Cervical Screening Guidelines

HPV testing

Prevention

HPV EVIDENCE

Research has shown the main cause of cervical cancer and its precursor is infection with high-risk form of HPV

Oncogenic HPV-DNA is present in 99.7% of cases of cervical cancer

INCIDENCE OF CERVICAL CANCER

In Canada in 2004:

Cervical cancer is the 12th most common cancer

1,350 new cases and 410 deaths

Higher rates in Aboriginal women and new immigrant women to Canada

HPV FACTS

HPV is a viral infection

There is no cure

There are over 100 types of HPV and over 40 of these types will infect the genital region

High-risk (HR) types associated with invasive cervical cancer

Low-risk (LR) types are mainly found in genital warts

HPV INCIDENCE

Transmission through sexual contact and is common among both men & women

High-Risk types are detected more frequently than Low-Risk types

50% of women infected at some point during their lifetime

Peak incidence of HPV is in women aged 18-25

HPV CHARACTERISTICS

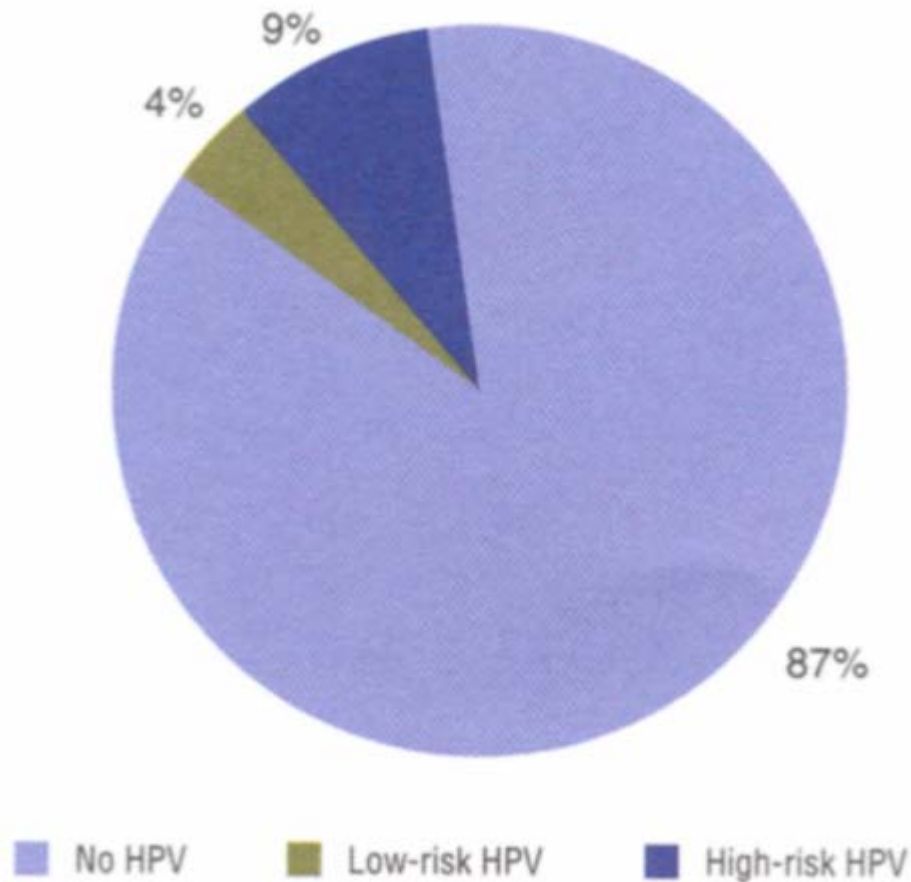
Not known how long HPV can persist in humans

Most HPV infections will resolve spontaneously in healthy individuals without any harm

Persistent infections if left untreated may lead to cervical pre-cancerous lesions or invasive carcinoma

HPV infection status can change in a relatively short time

HPV infections in Ontario women aged 15–49, sampled 1998–1999



Source: Data from Sellors et al., 2000,²⁷ weighted to reflect distribution for the age groups tested

RISK FACTORS FOR HPV AND CERVICAL CANCER

Risk Factors:

Increased number of intimate partners

Early age at onset of sexual intercourse

Sexual partners who are HPV carriers

RISK FACTORS FOR HPV AND CERVICAL CANCER

Co-factors:

Smoking tobacco and exposure to second-hand smoke

Long-term (over 5 years) use of oral contraceptives

Over 5 full-term pregnancies

Other Sexually Transmitted Infections

Poor diet

Immuno-suppressed individuals

PRACTICE GUIDELINES FOR SCREENING

Ontario Cervical Screening Program Recommends:

Annually until 3 successive normal Pap tests

Every 2-3 years thereafter until age 70

HPV-DNA (reflex) testing triage for women over 30 years of age with an ASC-US test

In women under the age of 30, HPV testing is **not** recommended

WHY 30?

The clinical benefit of HPV DNA testing is smaller in younger women than it is in older women due to the high rate of transient HPV infections and the very low incidence of cervical cancer

The clinical benefits of HPV DNA testing for ASCUS increase with age (Lower false +ve rate i.e. less +HPV and -ve colpo exams)

Whereas the likelihood of harms from HPV DNA testing (unnecessary anxiety, treatment and cost) diminish as age increases

HPV TESTING

HPV DNA testing could be used in two ways:

Triage-as a follow up test to selected Pap test results; to women who would likely benefit from colposcopy

Primary screening-can be used alone vs. adjunct to conventional cytology, age of initiation, and method of DNA analysis to be used.

HPV TEST

HPV-DNA testing is recommended in certain circumstances

MDS labs will do the HPV-DNA testing

The patient has to cover the cost of the test (for now)

Prevention of HPV

Regular Pap Tests

Reducing high risk behaviors

Condom use

Male circumcision

Vaccines

HPV VACCINES

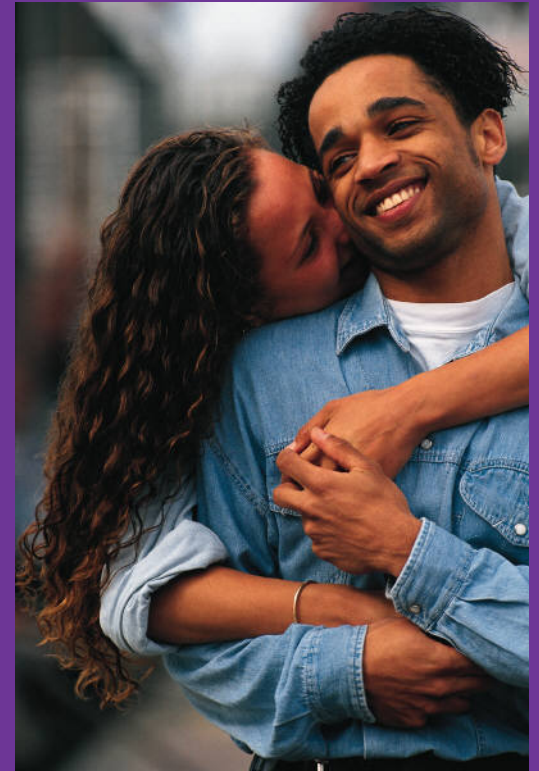
For now:

High rate efficacy is shown short-term

Long-term protection has not yet been established

SUMMARY

HPV immunization could offer a long-term solution to cervical cancer



REFERENCES

Insight on Cancer: news and information on cervical cancer, Canadian Cancer Society, October 2005.

Clinician Fact Sheet: Human Papilloma (HPV), Ontario Cervical Screening Program, September 2005

Cancercare Ontario Website:
www.cancercare.on.ca