

HPV CLINICAL MANIFESTATION & DIAGNOSIS

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COMMON SYMPTOMS

CUTANEOUS HPV TYPES



Plantar Warts: often found on the heel or the balls of the feet, look like hard, grainy growths that can cause discomfort ¹



Flat Warts: typically smaller than other types of warts, smooth, and flat-topped lesions that can appear on various body parts; children commonly develop these on the face, men in the beard area, and women on the legs ¹



Common Warts: Rough, raised bumps that usually develop on hands and fingers. Bumps may be prone to injury and bleeding. ¹

MUCOSAL HPV TYPES



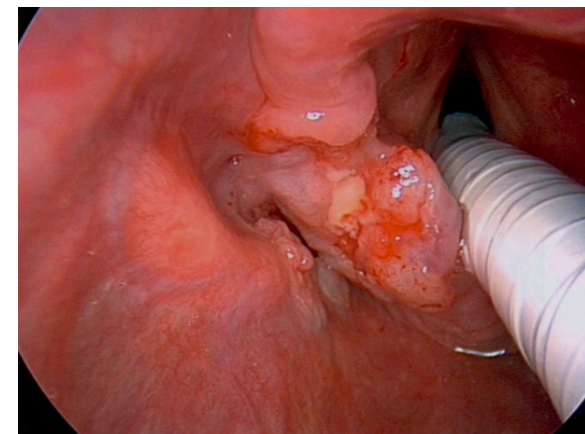
Oral condyloma acuminatum



Anogenital warts*



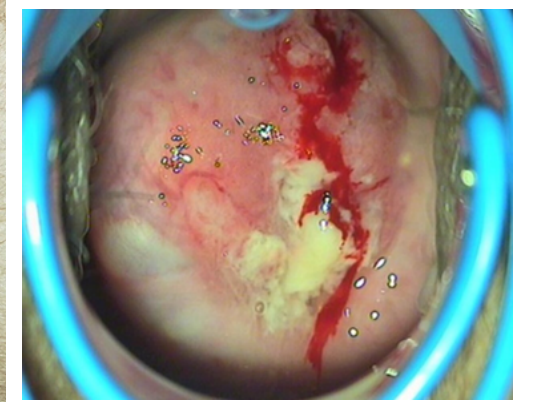
**Anogenital warts may look flat, cauliflower-like, or stem-like. In women, they can occur on the vulva, near the anus, cervix, or in the vagina; In men, they often appear on the penis, scrotum, or around the anus ¹*



Oropharyngeal cancer



Anal Cancer



High-grade squamous intraepithelial cervical cancer

LOW RISK SEROTYPES



HIGH RISK SEROTYPES

Low Risk Serotypes: typically leads to genital warts and benign or low-grade cellular changes. Mostly involves serotypes 6 and/or 11.

High Risk Serotypes: these types have been associated with cancers of the vulva, vagina, anus, penis, and oropharynx. ² Most HPV-related cancers are caused by HPV types 16 or 18.

Common S/Sx by Location

Anogenital: mostly minimal but can include dyspareunia, pruritus, and bleeding.

Vaginal: usually asymptomatic but can cause bleeding or obstruction of the birth canal during pregnancy.

Urethral: hematuria or impaired urinary stream

Anal: usually asymptomatic but may include pain, bleeding on defecation, and itching.

***HPV lesions are often diagnosed clinically. However, a biopsy may be recommended if the diagnosis is uncertain based on visual examination alone, the lesions are particularly large or atypical, or the lesions do not respond to the treatment as expected. ³**

Lesions from HPV may appear similar to, but are different from...

Syphilis⁴

Chancre: primary lesion; painless ulcer, usually on genitals or mouth. May also see painless regional lymphadenopathy

Condyloma lata: highly contagious, papular lesions in intertriginous areas (e.g. gluteal folds, perineum), found in 10-20% of people with secondary syphilis



Herpes Simplex Virus⁵

Painful ulcers; may also present with dysuria, vaginal or urethral discharge, and tender lymphadenopathy



Molluscum Contagiosum⁶

Painless, flesh-colored with dimpled center, may be itchy or tender. More common in immunocompromised individuals.



Other differentials include... ⁷

- Acrochordon
- Adnexal tumors
- Benign melanocytic nevi
- Bowen's diseases of genitalia
- Corns & calluses
- Erythroplasia
- Herpes vegetans
- Keratoacanthoma
- Psoriasis

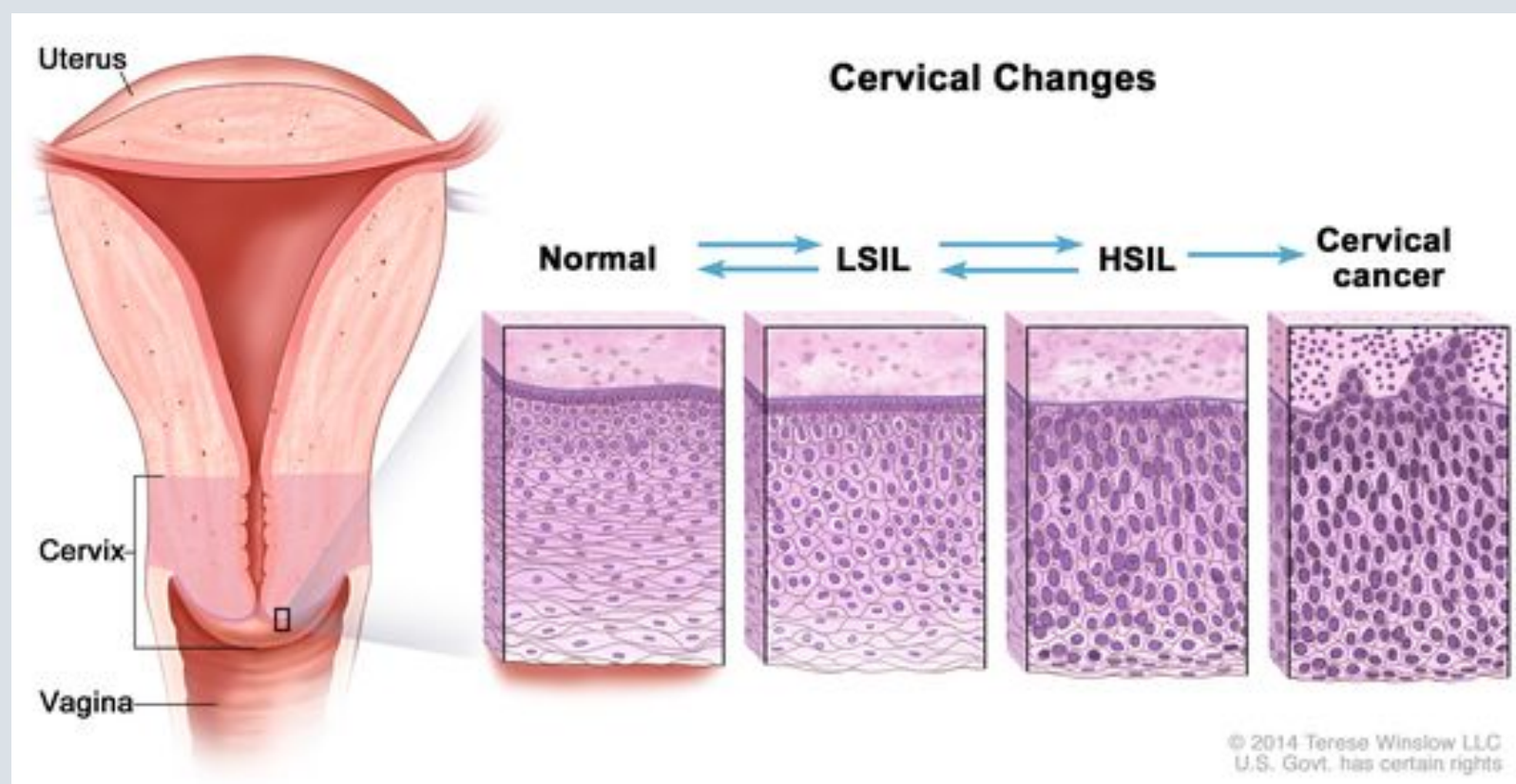
Molecular testing is indicated for cervical samples only.

HPV and Cancer

Every year in the United States, 36,500 people (including women and men) are estimated to be diagnosed with a cancer caused by HPV. Although cervical cancer is the most well-known of the cancers caused by HPV, there are other types of cancer caused by HPV including anal cancer, oropharyngeal cancer, vulvar & vaginal cancer, and penile cancer. HPV vaccination and screenings could prevent more than 90% of cancers caused by HPV from ever developing.⁸

Pap (Papanicolau) Test

The Pap smear, conducted in a healthcare provider's office, looks for abnormal cellular changes in the cervix which may indicate the presence of HPV.⁹



<https://www.cancer.gov/publications/dictionaries/cancer-terms/def/low-grade-squamous-intraepithelial-lesion>

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Results may be described as:

ASC-US (atypical squamous cells of undetermined significance): presence is often a sign of HPV infection
LSIL (low-grade squamous intraepithelial lesion): mildly abnormal cell changes, can resolve on its own
HSIL (high-grade squamous intraepithelial lesion): serious cell changes, linked to precancerous and cancer presence
ASC-H (atypical squamous cells, cannot exclude HSIL): cells that indicate HSIL presence
AGC (atypical glandular cells): glandular cells found in tissue of inner canal of the cervix, raises concern of precancer and cancer.

Some Paps are available **over-the-counter** (often not accepted by insurance):

FDA Approved: Self vaginal swab in a healthcare setting

Non-FDA Approved: Self vaginal swab at home; results in several days. Confidential.

Refer to Prevention and Vaccination page for recommended age at screening.

“The American Cancer Society now recommends HPV testing for primary screening (of cervical cancer) beginning at 25 years of age.”³

Cervical cancer screening includes cytology (Pap smear), testing for high-risk HPV, or cotesting (Pap and high-risk testing). See Prevention and Vaccination page for recommended testing method by age group.³

Screening: Non-Cervical HPV-Related Lesions

Oropharyngeal cancer: No recommendation for routine screening for asymptomatic adults. No FDA-approved tests available for oropharyngeal lesions. However, the World Health Organization recommends a comprehensive visual inspection of the oral cavity as a primary screening test, which may require a referral to a dental provider.^{3,11}

Anal cancer: all adults with HIV should be screened at least once a year for anal abnormalities with a digital rectal exam (DRE), regardless of history of anal intercourse.

- If under age 35, a standard anoscopy is recommended if DRE is abnormal.
- If men who have sex with men (MSM) age 35 or older, or any adult age 45 or older with HIV, a high-resolution anoscopy is recommended if DRE is abnormal. If this is not available, refer for biopsy.
- In both cases, screening can be performed with HPV co-testing. This is available in many clinical laboratories, but are not yet approved by the FDA.^{3,12}

References



Additional Resources

