

Glossary of Screening, Diagnosis and Treatment Methods for Cervical Cancer

Cervicography

A technique in which a photograph of the cervix is obtained after application of diluted (3-5%) acetic acid, using a specially equipped camera and a special film. Once developed, the photographs, called cervigrams, are projected as slides and interpreted by specially trained colposcopists.

Cervico-photography

A visual technique similar to cervicography, but using a less expensive camera with standard film. Once developed, the photos (cervico-photographs) may be printed on paper, projected onto slides, or transferred to digital images and be shared electronically.

Cold Coagulation

Cold coagulation is an ablative procedure whereby abnormal cells are killed by applying a thermal probe heated to 60-100° C using the Semm Cold Coagulator. The process is especially painful and results in a significant quantity of discharge.

Colposcopy

Similar to VIA, where 5% acetic acid is applied for 1 minute, after which the vagina and cervix are examined using an optic instrument (colposcope) that provides magnification to allow direct observation and study of vaginal and cervical epithelium *in vivo*.

Cone biopsy

A surgical procedure in which a cone-shaped wedge of cervical tissue is obtained for histo-pathological analysis. Several techniques exist such as the more traditional cold knife conization in which a scalpel is used, and laser conization.

Conization

Same as cone biopsy, the transformation zone is excised in order to remove abnormal tissue.

Cryotherapy

A method of outpatient treatment that uses the gas flow of carbon dioxide or nitrogen into a closed system to freeze a cryotherapy tip at -60° C and then destroy abnormal tissue.



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Electrocautery

A treatment method that uses electrical energy to destroy abnormal tissues. The tip of the probe forms an electrical arc that reaches very high temperatures to destroy abnormal tissue. This method is not recommended for intraepithelial neoplasia.

Electrocoagulation diathermy

A treatment method similar to electrocautery, but which uses ball-type electrodes to ablate surface tissue. This is then followed by the repeated insertion of needle electrodes to destroy deeper tissues.

HPV-PCR hybrid capture testing

Based on HPV DNA probe technology, cervical cells are tested for DNA of the Human Papilloma Virus.

Hysterectomy

A treatment method whereby the uterus is abdominally or vaginally removed. On occasion, when the intraepithelial disease is very extended, it is appropriate to remove the upper vagina as well. General or regional anesthesia is required.

Laser vaporization

Uses carbon dioxide laser to ablate abnormal cells.

Laser excision

Similar to conization, uses laser to excise shallow cone of abnormal cells.

Liquid-based cytology

This screening method is similar to the Papanicolaou test, but a special brush is used to sample the cervical mucus. The tip of the brush is introduced into a liquid vial and when the sample is processed the inflammatory cells and detritus are removed, leaving only the epithelial cells for the final sample. Liquid based cytology has performed well as a screening method.

Loop electrosurgical excision procedure (LEEP)

A method of outpatient excisional biopsy and treatment that is used to remove the entire transformation zone using a thin wire electrode charged with a low-voltage, high frequency alternating current. The procedure produces a tissue specimen suitable for histologic analysis in most circumstances.

Papanicolaou test

Screening technique also known as cervico-vaginal smears and cytology test. A sample of cervical mucus is taken and transferred to a glass slide using a brush or swab. This slide is then immersed in absolute alcohol for at least 15 minutes. The slide is finally colored and examined with a microscope for abnormal cells.

Punch biopsy

A method in which a small sample of tissue is extracted for histological analysis.



Visual inspection with acetic acid (VIA)

Naked-eye visualization (without magnification) of the acetic-acid-washed cervix (using diluted 3-5% acetic acid) to screen for cervical abnormalities, making identification of abnormal tissue easier. The acetic acid interacts with diseased cells, causing epithelial lesions to turn white. Also known as cervicoscopy and direct visual inspection (DVI).

Visual inspection with acetic acid magnified (VIAM)

Visual inspection aided by low-magnification visualization.

Bethesda classification system

System, proposed in 1988 by the US National Cancer Institute, that relies on only two grades for reporting cervical cancer precursor conditions: low-grade squamous intraepithelial lesion (LGSIL), which includes cellular atypia and CIN I, and high-grade squamous intraepithelial lesion (HGSIL), which includes CIN II, III and CIS. To be reviewed during 2001.

Carcinoma in situ (CIS)

Cellular changes in the stratified squamous epithelium associated with invasive cancer but not extending to adjacent structures. CIS is generally a recognizable precursor of invasive squamous cell cancer.

Cervical stenosis

A narrowing of the cervical canal.

Cervical intraepithelial neoplasia (CIN) classification system

Introduced in the 1960s, the CIN classification system for reporting cytological (Pap smear) results grades the severity of cervical lesions so that mild cervical dysplasia is categorized as CIN I; moderate cervical dysplasia as CIN II; and severe cervical dysplasia as CIN III.

Dysplasia of the uterine cervix

Epithelial abnormality involving the cervical epithelium. One of several interchangeable terms used to describe this disease process. Other terms include cervical intraepithelial neoplasia (CIN) or squamous intraepithelial lesion (SIL).

Negative predictive value

Proportion of women having no disease among those with a negative test result.

Positive predictive value

Proportion of women having disease among those with a positive test result.

Sensitivity

The proportion of true positives that are identified as positives.



Specificity

The proportion of true negatives that are identified as negatives.

Squamocolumnar junction

The point at which columnar cells meet ectocervical squamous cells on the cervix. This junction is located in the center of the transformation zone and is most vulnerable to abnormal changes in cervical cells.

Transformation zone

Located on the surface of the cervix, the transformation zone is composed of glandular (columnar) epithelium until the onset of puberty, when the columnar epithelium is gradually replaced by squamous epithelium, similar to the lining of the vagina. Cervical cancer generally originates at the edges of the transformation zone.

Verification bias

Also called workup bias, this occurs when the chances of receiving a reference diagnostic test are different for those who test positive during screening versus those who test negative.

