

## Cervical Cancer quick facts

- Regular Pap smear tests decreases a woman's chances of developing cervical cancer by 5 times
- High number of pregnancies increases risk.
- Women who smoke are 2 times more at risk than non-smokers.
- Usage of contraceptives is a factor of cervical cancer.
- Sexually transmitted infections like Chlamydia, Herpes may cause cervical cancer.
- Early sexual experience increases risk of cervical cancer.
- It is the 2nd most common cancer affecting women.
- Cervical cancer is caused by a common virus known as human papillomavirus (HPV).
- Each year, about 500,000 women worldwide are diagnosed with cervical cancer and more than 270,000 die from it.
- Regardless of age, all females risk exposure to the HPV virus as it can spread via skin contact and sexual intercourse.

# Med Pulse

## June 2013

MEDICAL DEPARTMENT

IN THIS ISSUE – CERVICAL CANCER

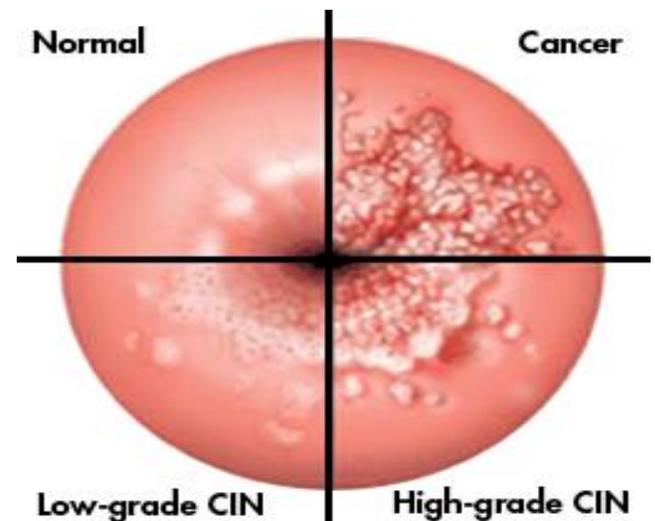
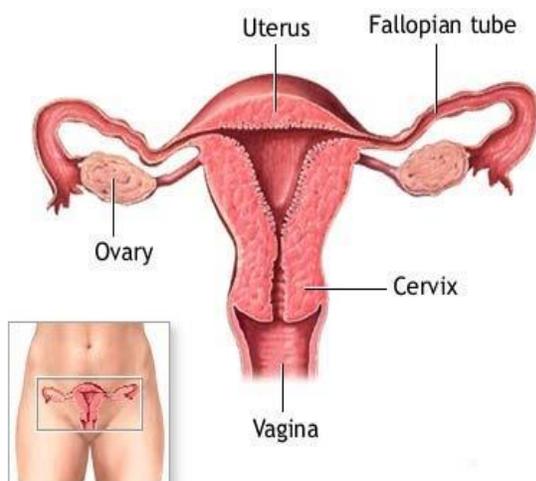
## Visual Inspection with Acetic acid in CA Cervix

Cervical cancer is the most common malignancy among women in the developing world. Cervical cancer occurs when abnormal cells on the cervix grow out of control. The cervix is the lower part of the uterus that opens into the vagina. Cervical cancer can often be successfully treated when it's found early. It is usually found at a very early stage through a Pap test or VIA techniques.

Among women worldwide, cervical cancer comprises 12 percent of all cancers and is the third most common cancer. Over 85 percent of new cases are diagnosed in the developing world, and in these countries, it is the most common cancer in women.

### What causes cervical cancer?

Most cervical cancer is caused by a virus called **Human papilloma virus**, or HPV. HPV is transmitted by sexual contact with the infected individual. There are many strains of the HPV virus. The high-risk types include HPV 16, HPV 18, HPV 31, HPV 33, and HPV 45, not all types of HPV cause cervical cancer. Some of them cause genital warts, but other types may be asymptomatic.



## What are the symptoms?

- + Irregular Menstrual bleeding/ Post menopausal Vaginal bleeding
- + Post coital bleeding
- + Dyspareunia/Pain during sex.
- + **Vaginal discharge** that is tinged with **blood**

### Technique of VIA –

#### Preparation of Acetic acid

#### Ingredients

1. Glacial acetic acid: 5 ml
2. Distilled water: 95 ml

#### Preparation

Carefully add 5 ml of glacial acetic acid into 95 ml of distilled water and mix thoroughly.

#### Storage

Unused acetic acid should be discarded at the end of the day.

#### Label

5% dilute acetic acid

**Note: It is important to remember to dilute the glacial acetic acid, since the undiluted strength causes a severe chemical burn if applied to the epithelium.**

- ] Performing a vaginal speculum examination during which a health care provider applies freshly pre-pared diluted (3-5%) acetic acid (vinegar) to the cervix with the help of cotton swab & the cervix is examined after 1 min under adequate light.
- ] Abnormal tissue temporarily appears white when exposed to vinegar.
- ] Viewing the cervix with the naked eye to identify colour changes on the cervix.
- ] Determining whether the test result is positive or negative for possible precancerous lesions or cancer.
- ] If aceto-white areas were detected in the cervix, the test outcome was recorded as being positive.
- ] Acetic acid is used to enhance and “mark” the acetowhite changes of a precancerous lesion or actual cancer. Differences in precancerous cell proteins make the abnormal cells temporarily appear white when exposed to vinegar.
- ] Aceto-whitening of cervical epithelium may reflect the presence of an abnormal transformation zone as a result of increased cellular density with increased abnormal nuclei and DNA content. Acetic acid application is routinely used in colposcopic examination to visualize abnormal epithelium.
- ] Identification of macroscopic abnormalities such as cervicitis, cervical warts, polyps, erosions, nabothian cysts, bleeding erosions, stippled cervix, irregular edematous elongated cervix, hypertrophied hard indurate cervix, growths, and ulcers.

## INDIA IS SAID TO BE CAPITAL OF CERVICAL CANCER

### Limitation of VIA technique

VIA is that results are highly dependent on the accuracy of an individual's interpretation. This means that initial training and on-going quality control are of par-amount importance.

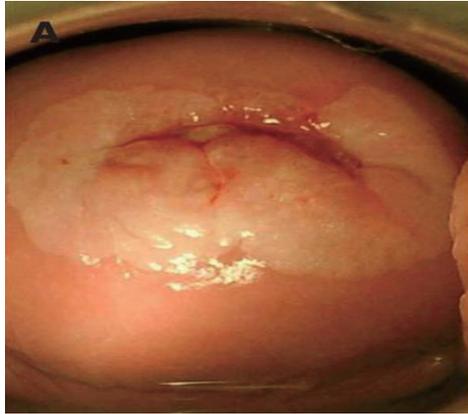
### Findings of VIA



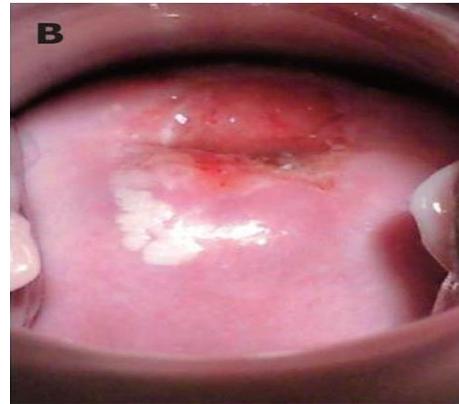
**Negative (Normal parous Cervix)**



**Positive (Abnormal Cervix)**



Dense Acetowhite Area



Dense Acetowhite Area

- ✚ Visual inspection with acetic acid (VIA) can be done with the naked eyes (also called cervicoscopy or direct visual inspection [DVI]), or with low magnification (also called gynoscropy, aided VI).
- ✚ Visual inspection with Lugol's iodine (VILI), also known as Schiller's test, uses Lugol's iodine instead of acetic acid.

### Visual inspection to detect pre-cancer or cancer (Programmatic Intervention)

VIA procedure eliminates the need for laboratories and transport of specimens, requires very little equipment and provide women with immediate test results. A range of medical professionals—**doctors, nurses, or professional midwives**—can effectively perform the procedure, provided they receive adequate training and supervision.

and equipment, with VIA public health systems can offer cervical cancer screening in more remote (and less equipped) health care settings and can achieve higher coverage.

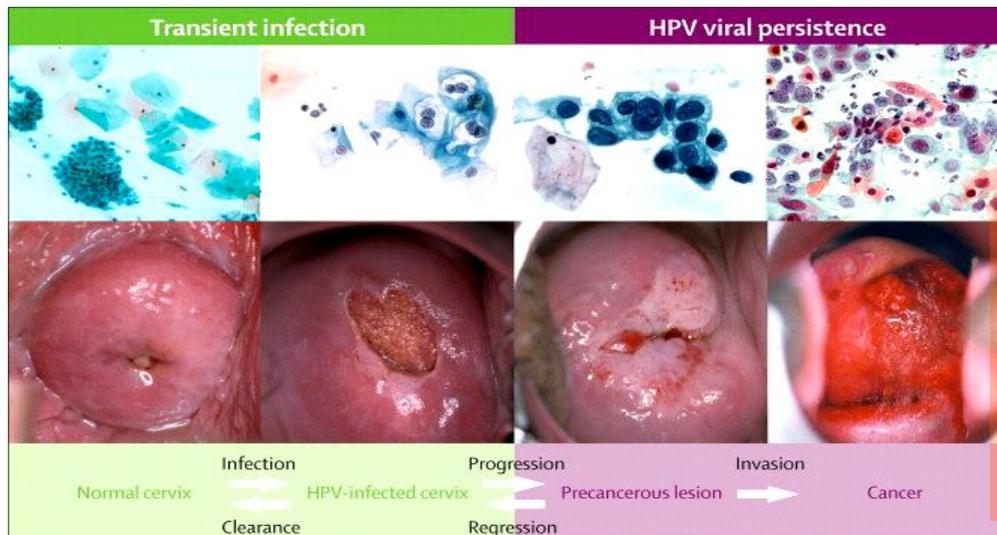
Furthermore, providers can share the results of VIA with patients immediately, making it possible to screen and treat women during the same visit. This helps ensure that follow-up care can be provided on the spot and reduces the number of women who may miss out on treatment because they are not able to return to the clinic at another time.

The treatment for most stages of cervical cancer includes:

- ⇓ Cervical cauterization
- ⇓ Cryotherapy
- ⇓ Surgery, such as a hysterectomy and removal of pelvic lymph nodes with or without removal of both ovaries and fallopian tubes
- ⇓ Chemotherapy
- ⇓ Radiation therapy

VIA can offer significant advantages over Pap in low-resource settings, particularly in terms of increased screening coverage, improved follow-up care and overall program quality. Due to the need for fewer specialized personnel and less infrastructure, training,

#### Progress of the CA-Cervix



#### References

- WHO guidelines
- [www.webMD.com](http://www.webMD.com)
- [www.cancer.gov.in](http://www.cancer.gov.in)
- [www.nhs.uk/](http://www.nhs.uk/)
- [www.cdc.gov/](http://www.cdc.gov/)

*Dear Readers,*

### Season's Greetings!!!

Human Papilloma Virus infection is a known precursor of cervical cancers in India. With introduction of HPV vaccine the incidence of cervical cancers is expected to go down.

### Points to remember about Vaccination

- Regular cervical cancer screening is needed after vaccination as the vaccine will not provide protection against all types of HPV that cause cervical cancer.
- Protective sexual behaviors should be practiced (e.g., abstinence, monogamy, limiting their number of sexual partners and using condoms), as the vaccine will not prevent all cases of genital warts-nor will it prevent other STIs.
- Full benefits of the vaccine may not be received after a woman has become sexually active (and may have acquired a vaccine HPV type) or if they do not complete the full cycle of vaccines.

	Gardasil(Merck)	Cervarix(GSK)
Type	Quadrivalent	Bivalent
Manufacturing Process	Made in yeast	Made in Baculovirus
Adjuvant	Aluminium adjuvant	ASO <sub>4</sub> (Alum and MPL adjuvant)
Schedule	0---2---6 months schedule	0---1---6 months schedule
Dose	0.5 ml injection volume	0.5 ml injection volume
Booster	Not necessary	Not necessary
Efficacy	99% efficacy against developing precancerous lesions	93% efficacy against developing precancerous lesions
Storage	2-8 Celsius and not frozen	2-8 Celsius and not frozen
Protection	Duration: 8.5 years protection against HPV type 16. Protects against four HPV types (6, 11, 16, 18), which are responsible for 70% of cervical cancers and 90% of genital warts.	Duration: 7.3 Years protection against HPV type 16.
Beneficiary	This vaccine has been licensed for use in young adolescent girls(as young as 9 years of age in some countries) to prevent cervical precancers and cancers and anogenital warts in females	This vaccine has been licensed for use in females as young as 10 years of age to prevent cervical precancers and cancers.
Use in Males	Also licensed for the prevention of anogenital warts in males	Registration for indications in males has not been sought
Contraindications	Severe Allergic reaction to the contents, pregnancy	Severe Allergic reaction to the contents, pregnancy, lactation

Reach out and share everything- all the good and bad times. Let the people who want to love you, love you."-  
Fredalyn Everett, Caregiver, Abilene