Preinvasive Disease of FGT (CIN)

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Definition

Cervical Intra-epithelial Neoplasia (CIN) or Cervical Dysplasia

- It is is a condition in which abnormal cells grow on the surface of the cervix. Without treatment, cervical dysplasia can lead to cervical cancer. With early detection and treatment, It can be prevented from becoming cancerous.

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CLASSIFICATION

Cervical intraepithelial neoplasia (CIN) is classified on a scale from one to three.

- **CIN 1:** Refers to abnormal cells affecting about one-third of the thickness of the epithelium.
- **CIN 2:** Refers to abnormal cells affecting about one-third to two-thirds of the epithelium.
- **CIN 3:** Refers to abnormal cells affecting more than two-thirds of the epithelium.

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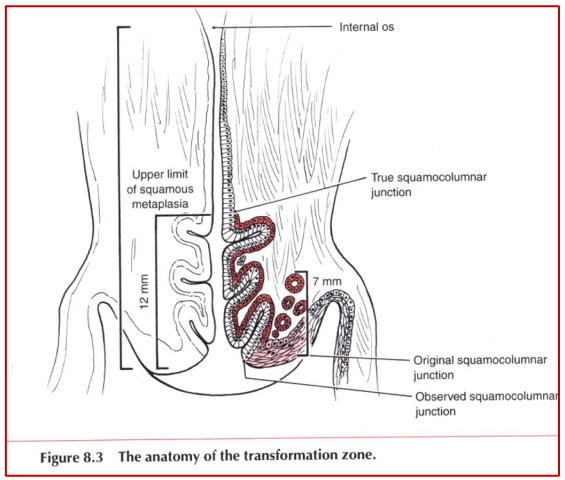
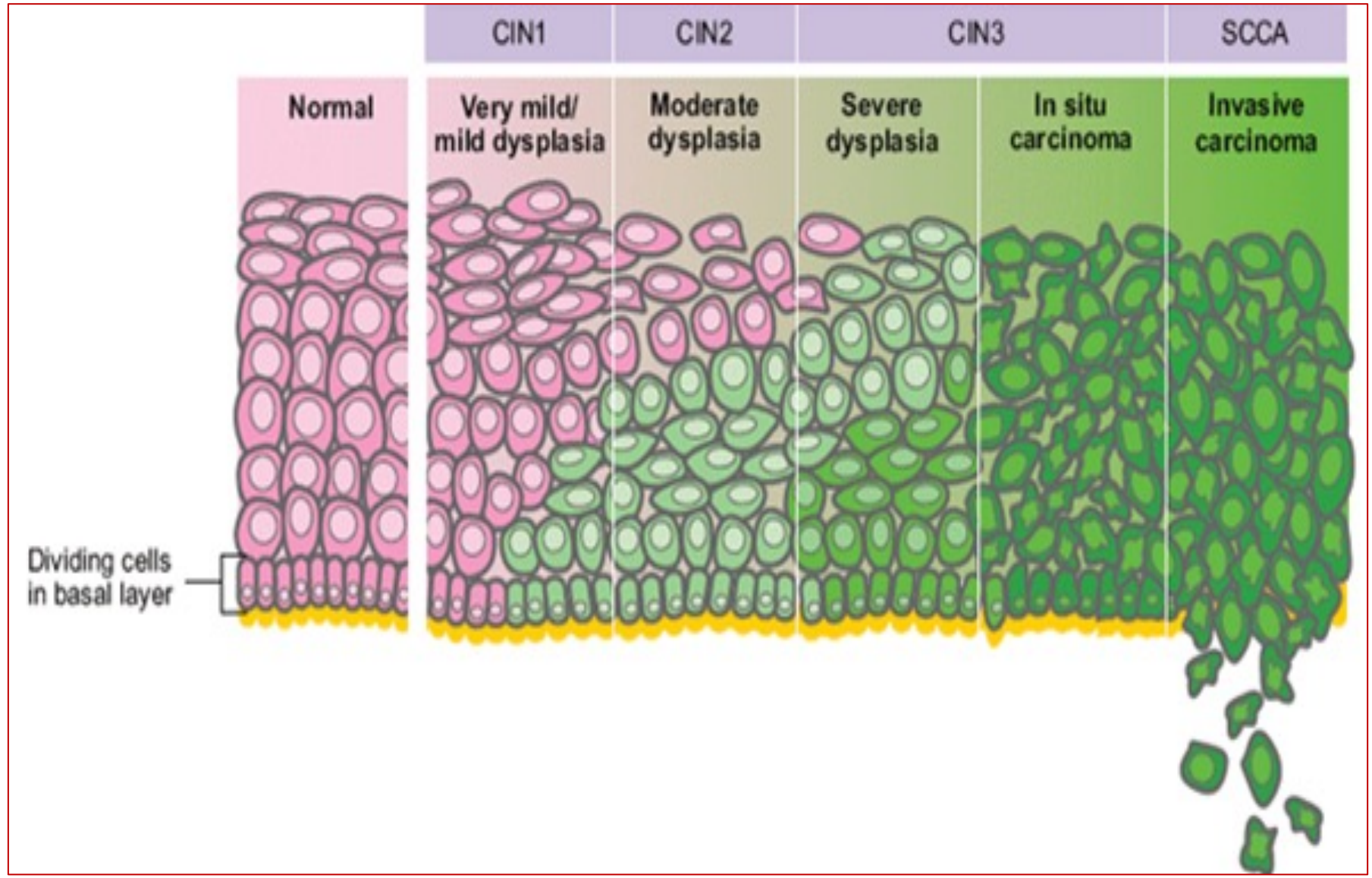
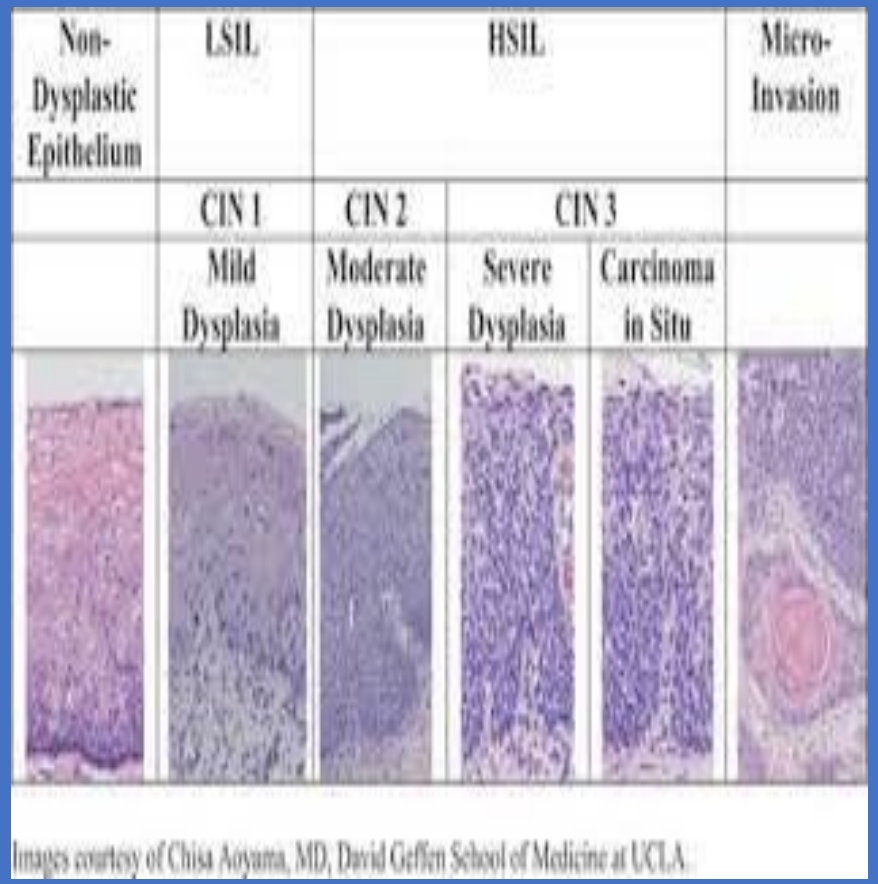


Figure 8.3 The anatomy of the transformation zone.





Images courtesy of Chisa Aoyama, MD, David Geffen School of Medicine at UCLA.

Dysplasia/carcinoma in situ	Cervical intraepithelial neoplasia (CIN)	Squamous intraepithelial lesion (SIL), Current classification
Mild dysplasia	CIN I	Low grade SIL (LSIL)
Moderate dysplasia	CIN II	High - grade SIL (HSIL)
Severe dysplasia	CIN III	High - grade SIL (HSIL)
Carcinama in situ	CIN III	High - grade SIL (HSIL)

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How serious is cervical dysplasia?

Hearing the word “precancerous” can be scary, but it’s important to remember that most people with cervical dysplasia don’t get cancer. Receiving a cervical dysplasia diagnosis means that you may — not that you will — develop cervical cancer if you don’t have recommended treatments. If cancer does form, it takes years to develop, giving your healthcare provider time to find and remove problem areas.

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PROGRESSION TO CERVICAL CANCER

CIN 1 cervical dysplasia rarely becomes cancer and often regresses spontaneously.
CIN 2 and 3 are more likely to require treatment to prevent cancer.

	Regress	Persist	Progress
CIN1	60%	30%	10%
CIN2	40%	40%	20%
CIN3	33%	55%	>12% invasive cancer

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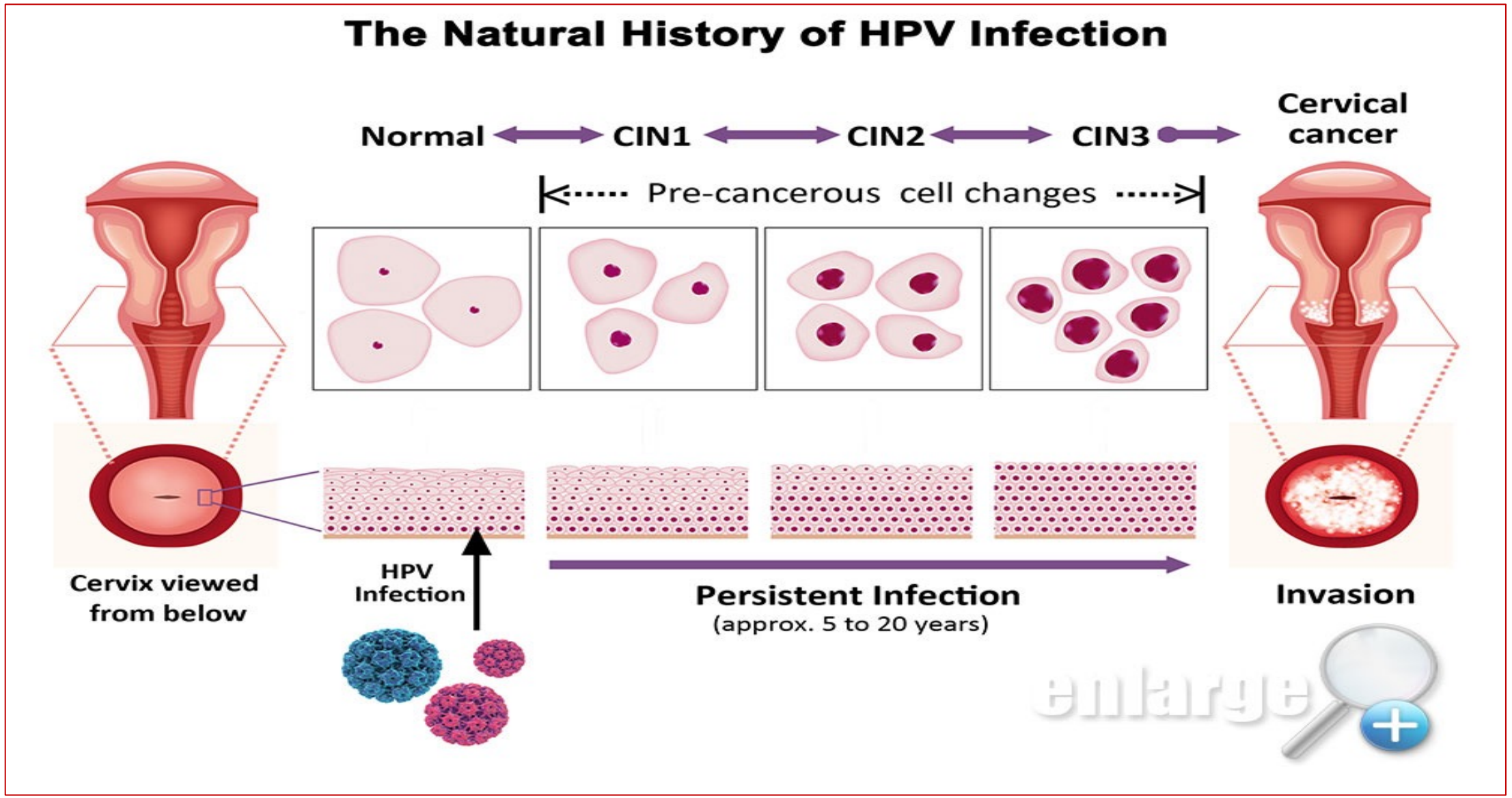

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EPIDEMIOLOGY OF CIN

INCIDENCE:

About 250,000 to 1 million cisgender women in the U.S. get diagnosed with cervical dysplasia each year. The condition occurs most often among women of childbearing age, particularly aged 25 to 35.

HIGH-RISK FACTORS:

1. Human papilloma virus (HPV) ; which is a sexually transmitted disease
2. Other STDs ; such as Herpes simplex type II, HIV
3. Immune deficiency conditions
4. Smoking
5. Early sexual intercourse (before 16 years age).

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EPIDEMIOLOGY OF CIN

Human Papilloma Virus (HPV): there are > 130 HPV genotypes with some differences. > 20 HPV are anogenital infection.

GROUPS:	HPV GENOTYPES:
- High Risk or Carcinogenic	16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 67, 68, 73 y 82.
- Intermediate or Partially Carcinogenic Risk	26, 53 y 66.
- Low Risk	6,11,40,42, 43,44, 54, 55, 57, 61, 62, 64, 69,70,71 ,72,81, 83, 84, y CP6108.

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EPIDEMIOLOGY OF CIN

HPV is Epitheliotropic;

1. No viremia
2. Infection is confined to where it initiated
3. Spreads by infected cell dividing.

Epithelium at Risk of HPV infection:

1. Cervical 2. Vaginal. 3. Vulvar

3. Anal
   - Men and women
   - Anal receptive intercourse
   - Anal Pap smear
   - Anal Colposcopy of Transformation Zone

Incidence of Carcinoma

Cervical

8 - 52 / 100,000

Anal

(at risk population)

35 / 100,000

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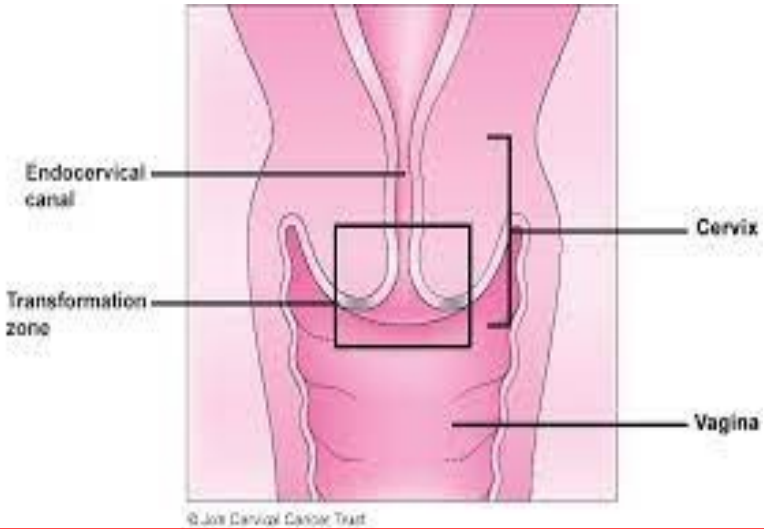
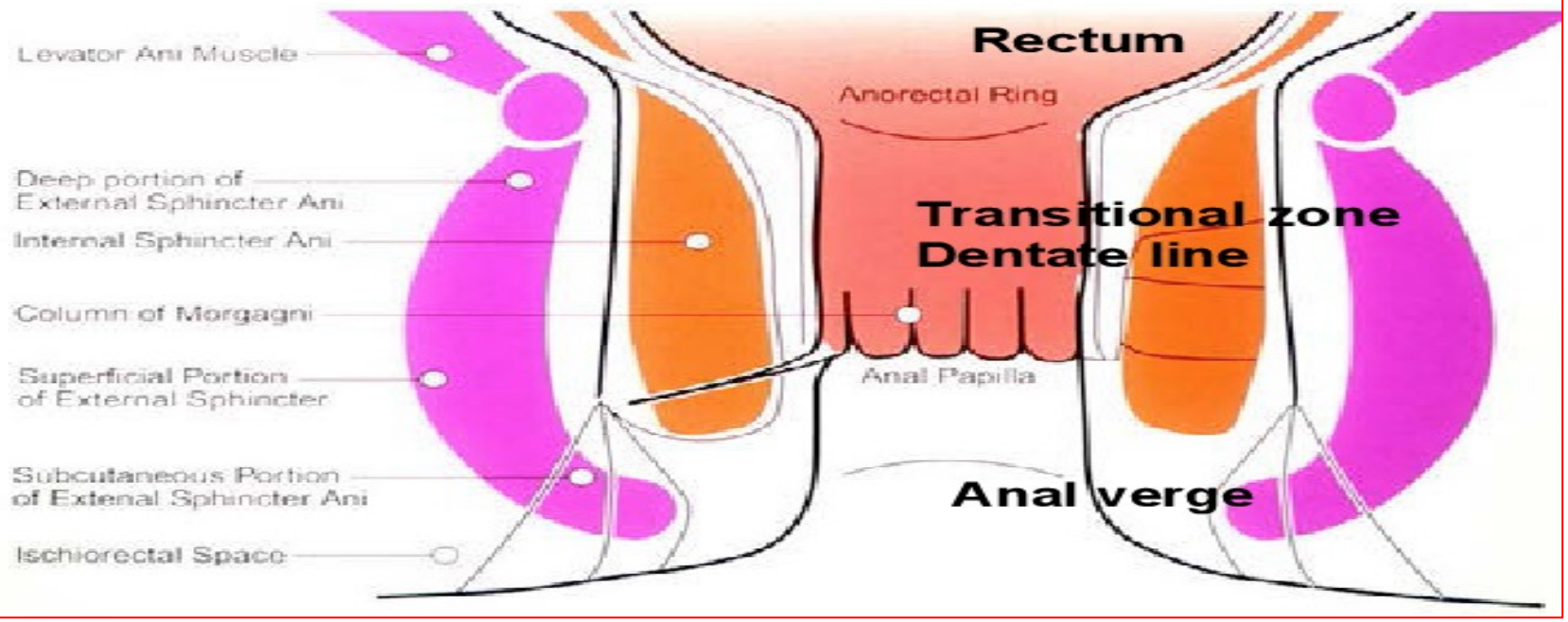


CERVIX

AIN affects
perianal skin
anal canal
anal transformation zone
above the dentate line

Clinically defined by **quadrant**
1, 2, 3 or 4
upper, lower, left or right



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PATHOGENESIS OF CIN

Can a patient have CIN without HPV?

- No. A patient must have HPV to develop cervical dysplasia. But having HPV doesn't necessarily mean that she'll develop CIN. It's unknown why some people develop cervical dysplasia after being infected with HPV while others don't. Some high-risk strains of HPV and the duration of the infection may play a role. Risk factors include:

1. Being over age 55.
2. Smoking cigarettes.
3. Having a weakened immune system.

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Symptoms of CIN

1. Cervical dysplasia doesn't usually cause symptoms.
2. Sometimes vaginal bleeding (mild) following intercourse or digital vaginal examination (contact bleeding).
3. may be diagnosed after finding abnormal cells during a routine PAP smear.

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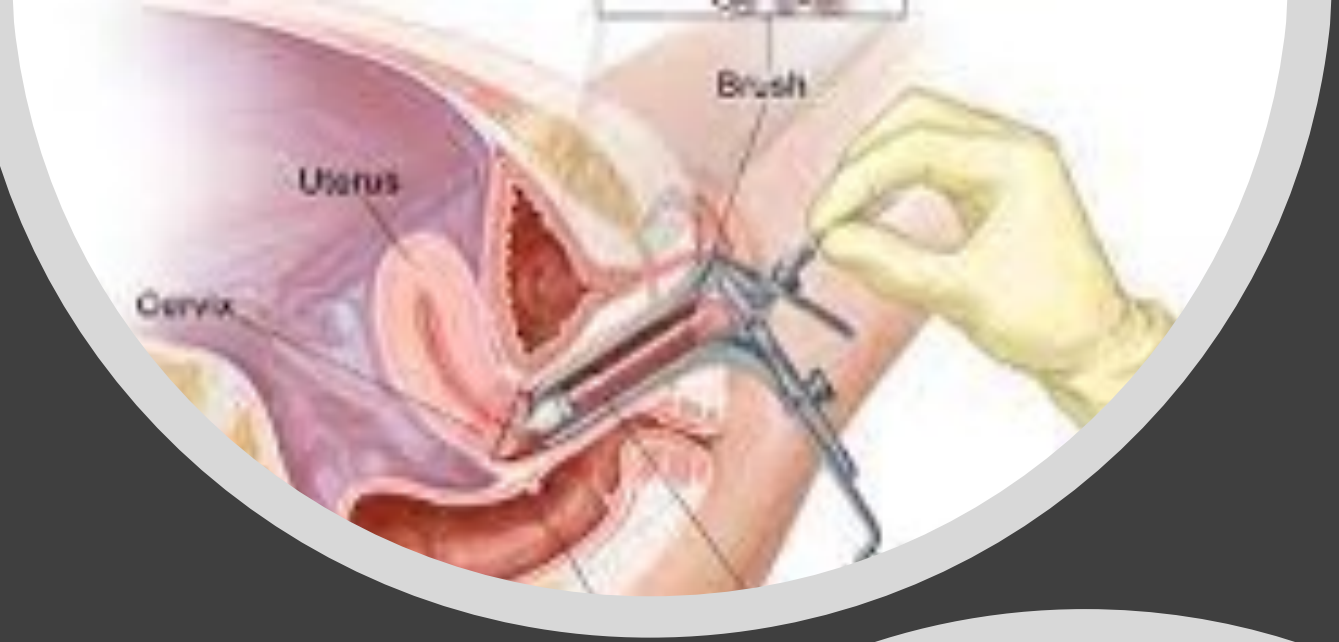
DIAGNOSIS OF CIN



Done by the following :

1. HPV Screening
2. VIA TEST (visual inspection acetic acid)
3. LOGOL'S IODINE TEST
4. PAP SMEAR
5. COLPOSCOPY
6. COLPOSCOPIC GUIDED BIOPSY

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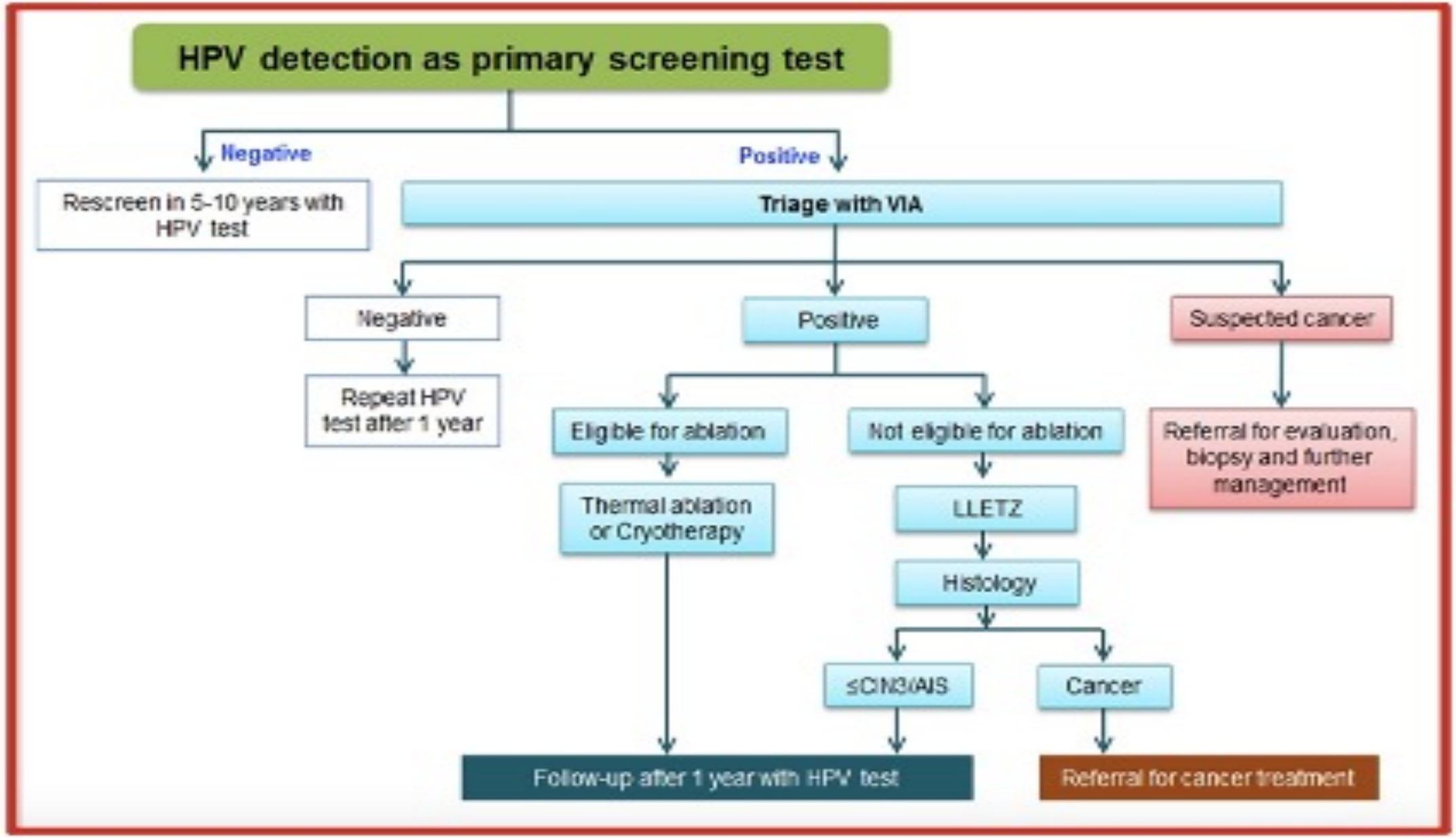
Figure [4-5]: HPV self-sampling.



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DIAGNOSIS OF CIN

Regular Pap smears.

- Woman should have your first Pap smear at age 21. If Pap smears remain normal, current recommendations suggest a repeat Pap every 3 years from 21 to 29.
- Woman should have a Pap and HPV test every five years if she's between ages 30 and 65.
- Pap smears can't prevent cervical dysplasia, but they can detect it early.

VIA testing

Table (4-4): VIA -test findings:

VIA CATEGORY	CLINCAL FINDINGS
Test -Negative	No acetowhite lesions or faint acetowhite lesions; polyp, cervicitis, inflammation, Nabothian cysts.
Test-positive	Sharp, distinct, well-defined, dense (opaque/dull or oyster white) acetowhite areas—with or without raised margins touching the squamocolumnar junction (SCJ); leukoplakia and warts.
Suspicious for cancer	Clinically visible ulcerative, cauliflower-like growth or ulcer; oozing and/or bleeding on touch.

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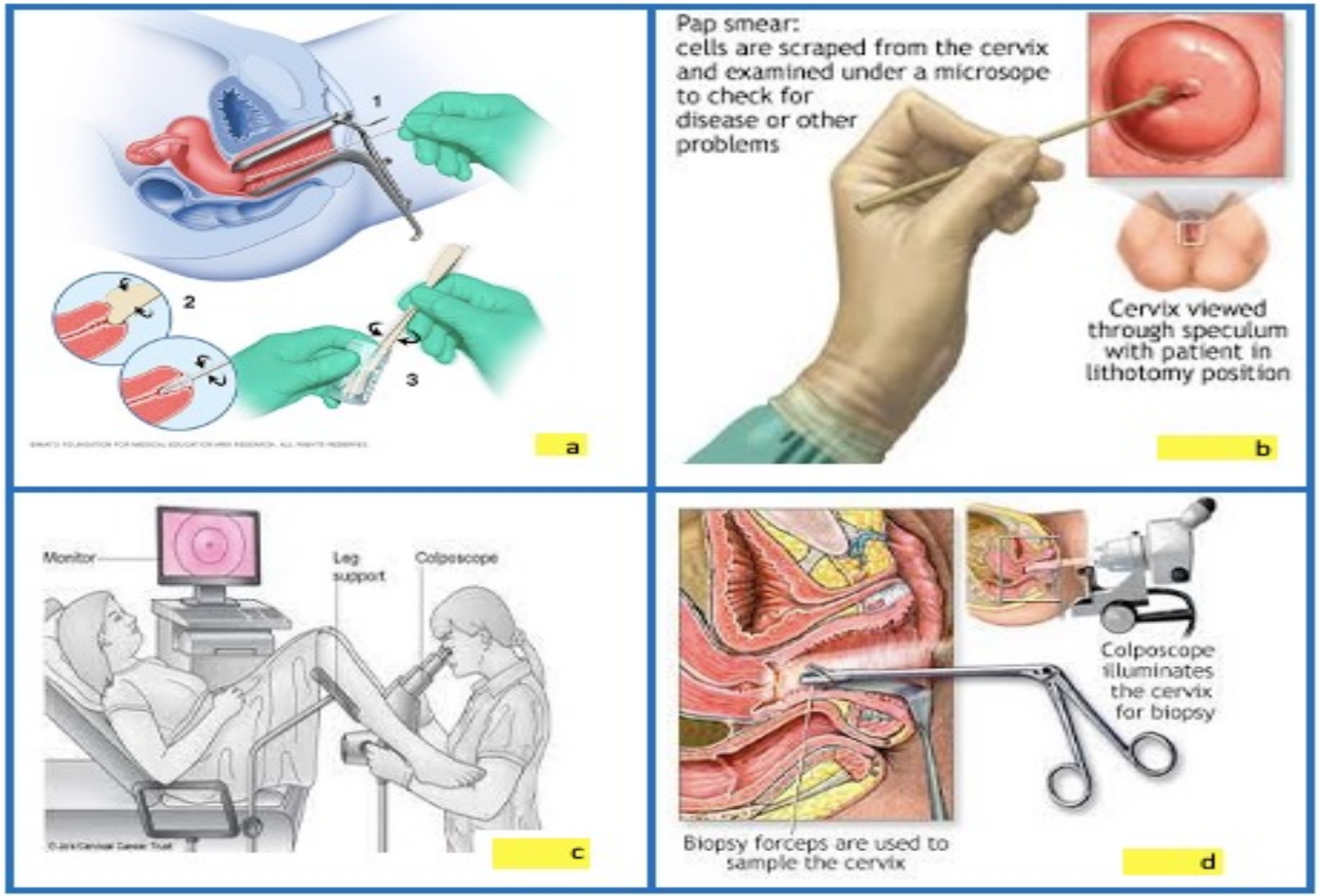
CIN Diagnosis



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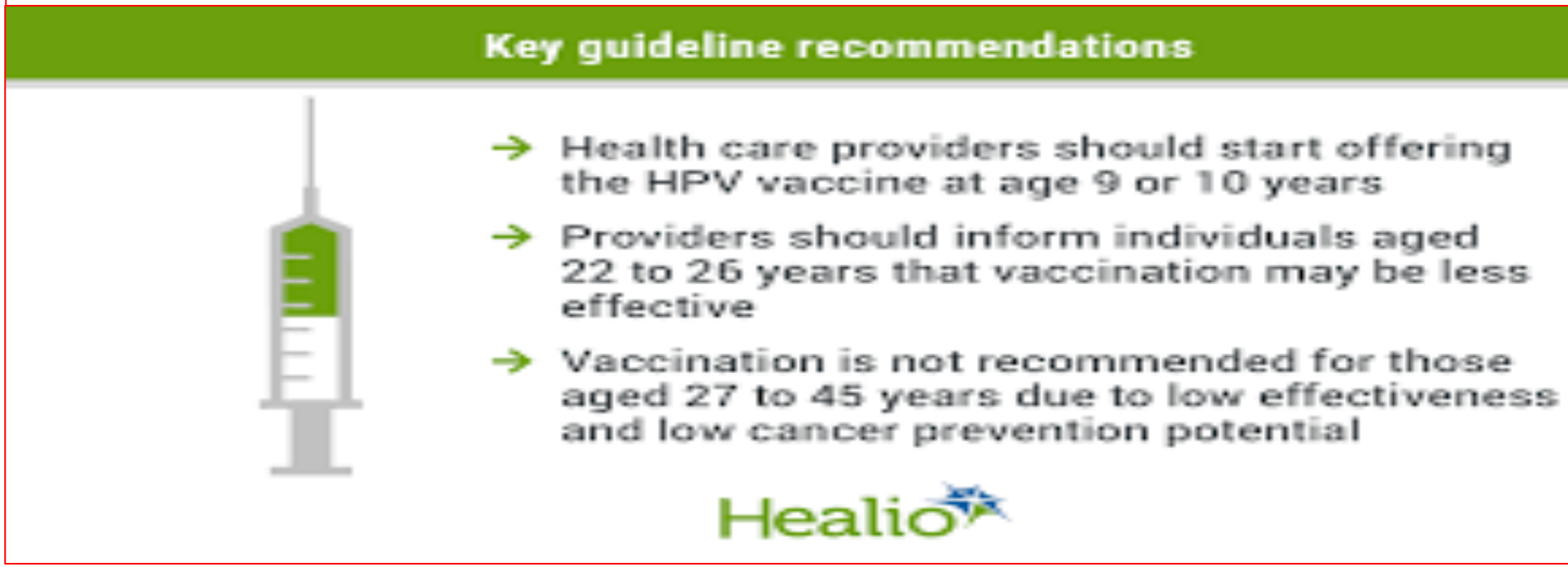
PREVENTION OF CIN

1. **HPV VACCINATION**: The U.S. Food and Drug Administration (FDA) has approved 3 vaccines that prevent the types of HPV most closely associated with cervical dysplasia: Gardasil®, Gardasil 9® and Cervarix®.
2. **Practice abstinence or safer sex.**
3. **No smoking or using tobacoo .**



TREATMENT OF CIN

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ACCORDING TO SEVERITY :

1. **Monitoring abnormal cells**

With low-grade cervical dysplasia, classified as CIN 1,. In majority of these cases, the condition goes away on its own. Only about 1% of cases progress to cervical cancer. Your healthcare provider may choose a conservative approach that calls for periodic Pap smears to monitor any changes in abnormal cells.

2. **Removing or destroying abnormal cells**

If your cervical dysplasia is more severe (CIN 1 or CIN 2), your healthcare provider can remove the abnormal cells that may become cancerous or destroy them.

These procedures may include:

a). Loop electrosurgical excision procedure (LEEP)

b).Cold knife cone biopsy (conization)

c). Large Loop Excision of Transformation Zone (LLETZ)

d). Hysterectomy (total ; best vaginal hysterectomy)

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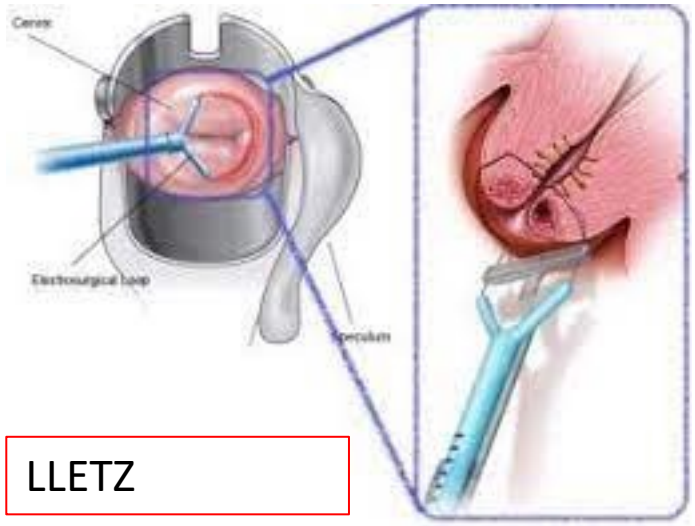
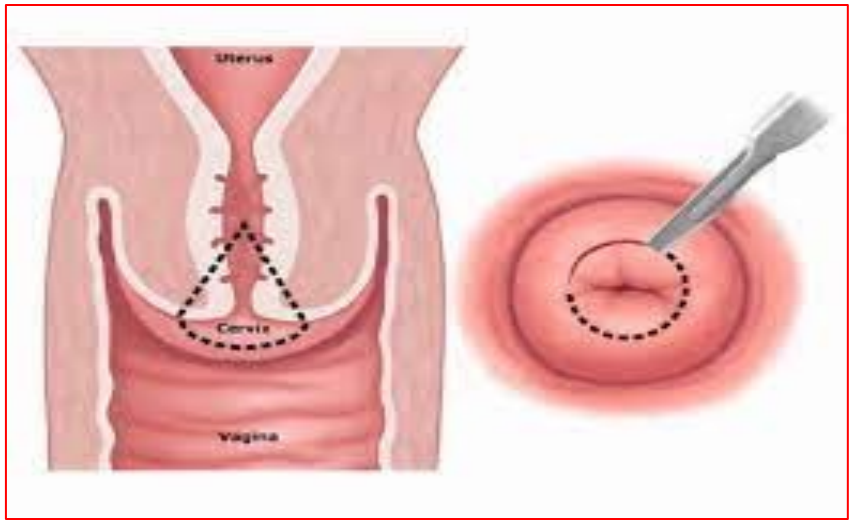
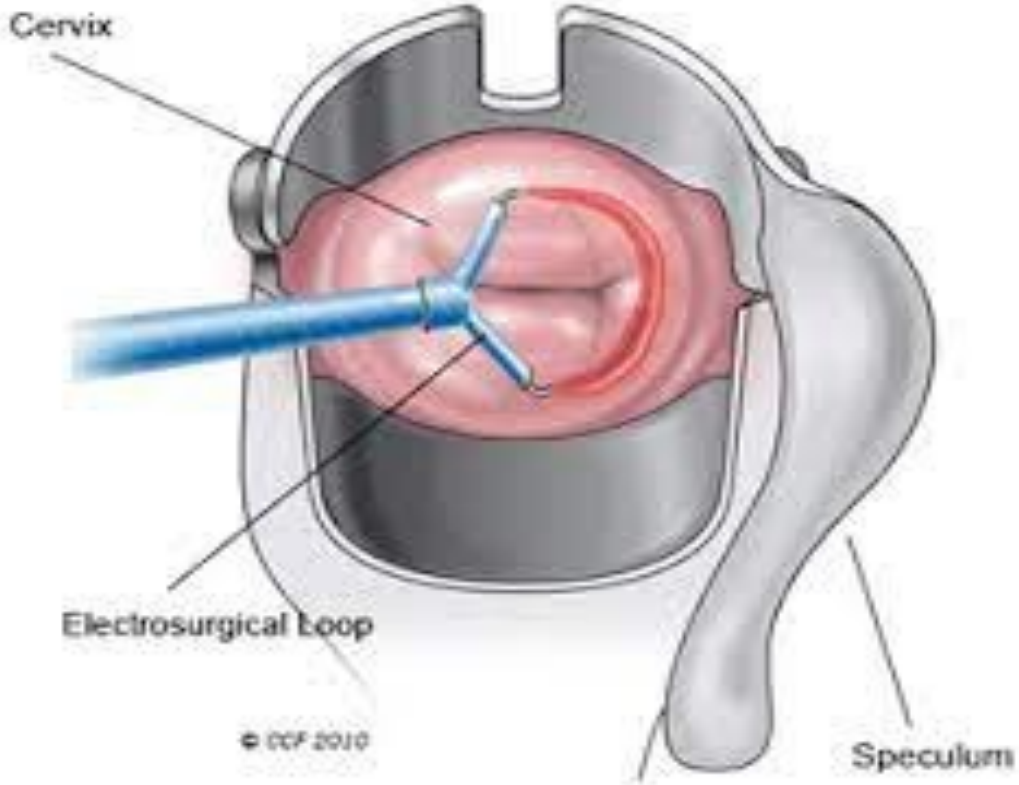


LLETZ



COLD KNIFE CONIZATION



LEEP

THANKS

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