



# FEMALE GENITAL SYSTEM PATHOLOGY

## Lec. 2



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- Department of Pathology

## Case presentation

A 65-year-old woman , presented with history of vulvar painfull lump and abnormal discharge , she had history of significant vulvar and perianal itching with white patches 5 years ago.

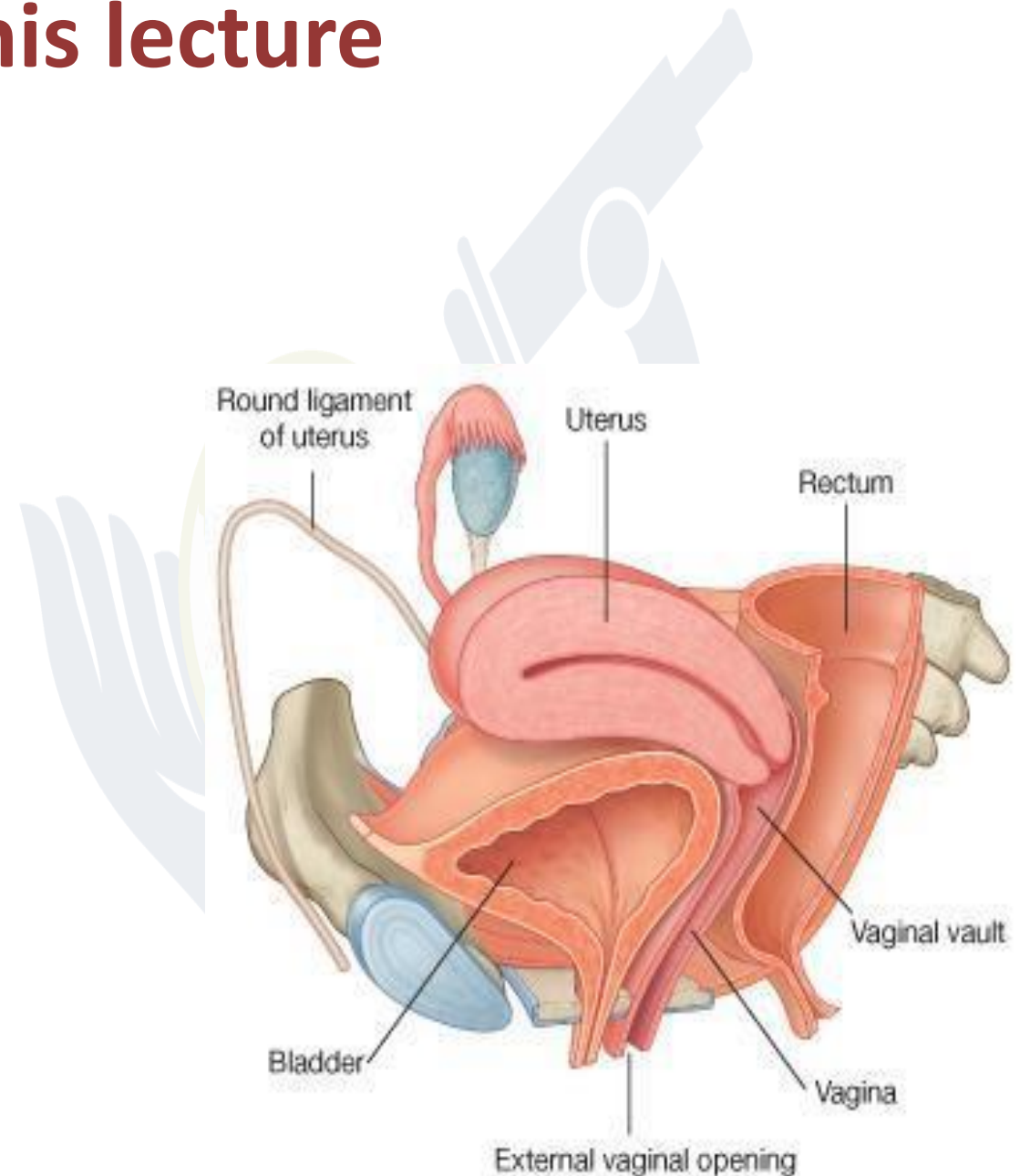
**Examination** there is lump on the labia majora associated local bleeding and discharge.

**Excisional biopsy Histopathologic examination** of the lesion showed:-

**Variably sized, invasive, squamous nests some with central keratinization.**

# Objectives of this lecture

- Invasive disease (vulvar cancer)
  - ❖ Types
  - ❖ Presentation
  - ❖ Histopathological finding
- Vaginal Invasive disease (vaginal cancer)



# Vulvar cancer

Is relatively uncommon, representing only 3% of female genital cancers; most occur in women older than 60 years.

The [labia majora](#) are the most common sites involved representing about 50% of all cases, followed by the [labia minora](#). The clitoris and Bartholin glands may rarely be involved

## **Risk factors:-**

**Factors appear to increase risk of the disease.**

- ❖ HPV infection
- ❖ Chronic inflammatory (vulvar dystrophy) or autoimmune processes (**Lichen Sclerosus**)
- ❖ Precancerous changes (VIN).
- ❖ Cancer of the vagina or cervix
- ❖ Chronic granulomatous disease.
- ❖ Older age
- ❖ Heavy cigarette smoking

- ❖ **Squamous cell carcinoma**
- ❖ **Most vulvar cancer (approximately 90%)**
- ❖ **Originates from epidermal squamous cells.**
- ❖ **VIN is a precursor lesion**
- ❖ **More common with older age,( young women with risk factors may also be affected).**
- ❖ **They grow by local extension invaded nearby organs such as the vagina, urethra, and rectum and spread via their lymphatics.**

❖ **Adenocarcinoma** can arise from the Bartholin gland .

❖ **A verrucous carcinoma** of the vulva is a rare subtype of squamous cell cancer and tends to appear as a slowly growing wart and tend to have good overall prognoses.

## Signs and symptoms:-

### Squamous cell carcinoma

Typically, a lesion presents in the form of a **lump or ulcer on the labia majora and may be associated with itching, irritation, local bleeding or discharge, in addition to pain with urination or pain during sexual intercourse.**

**Adenocarcinoma can arise from the Bartholin gland and present with a painful lump.**

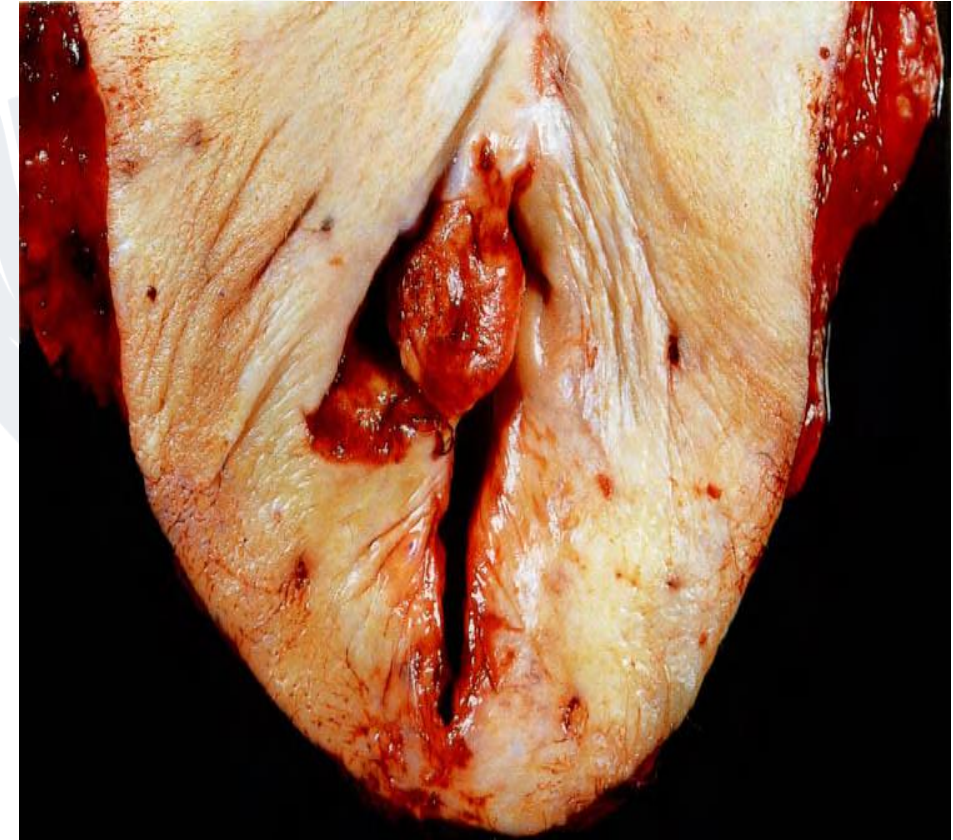
### Differential diagnosis:-

Paget's disease of the vulva.

vulvar intraepithelial neoplasia (VIN).

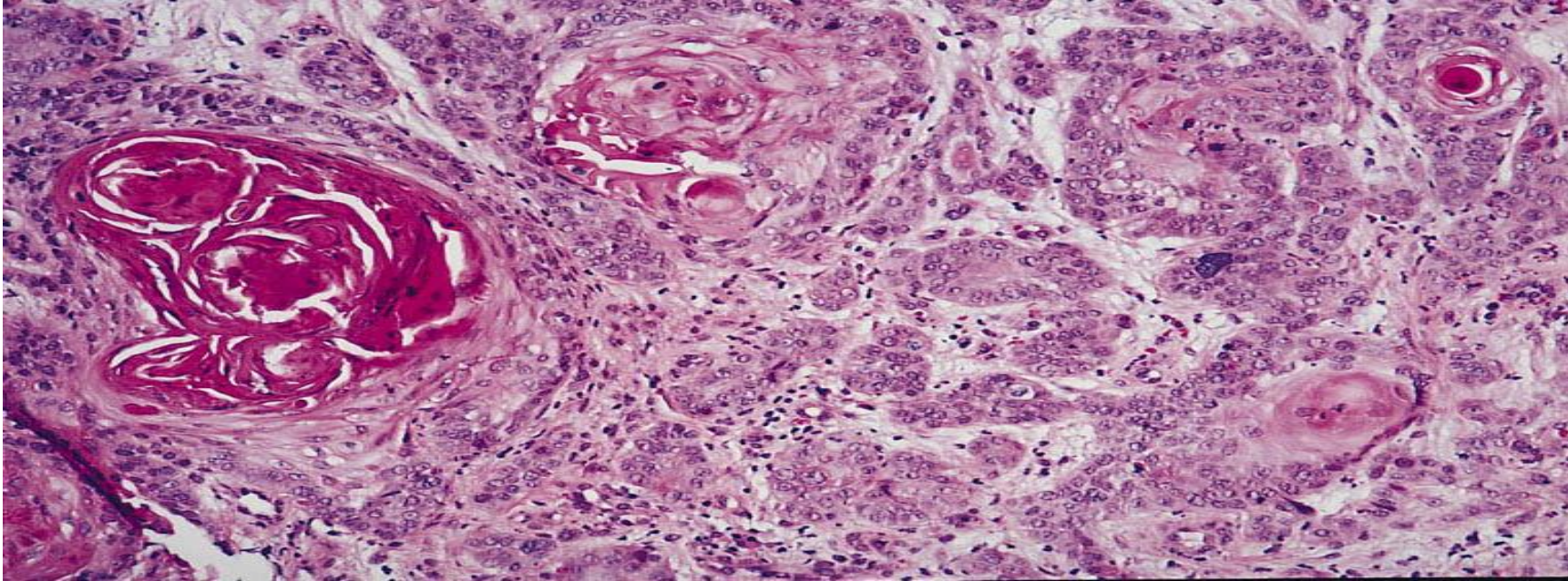
lichen sclerosus, squamous cell hyperplasia.

Infectious lesions including herpes genitalis, human papillomavirus, syphilis, .....



# Microscopically

## Well-differentiated SCC of vulva



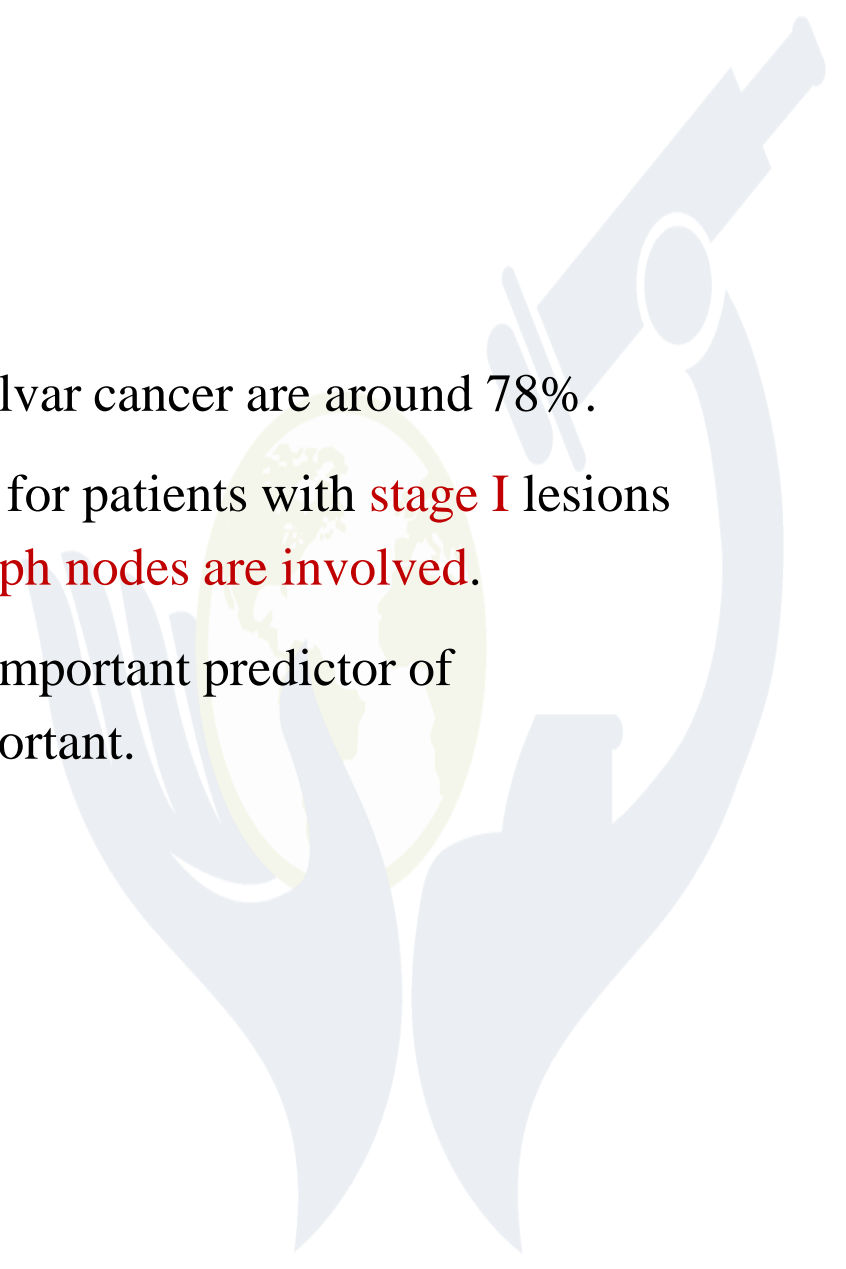
**Variably sized, invasive, squamous nests some with central keratinization**

### Prognosis:-

Overall, five-year survival rates for vulvar cancer are around 78%.

Five-year survival is **greater than 90%** for patients with **stage I** lesions but **decreases to 20%** when **pelvic lymph nodes are involved**.

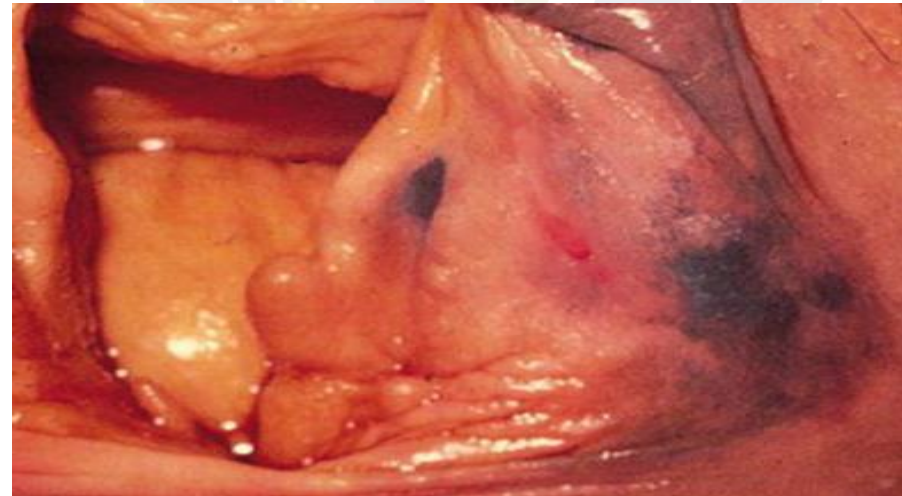
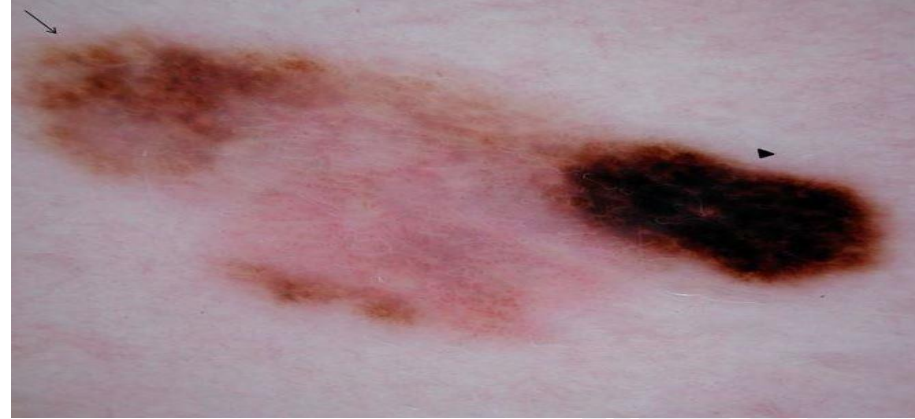
Lymph node involvement is the most important predictor of prognosis. Thus, early diagnosis is important.





## **Malignant Melanoma**

- ❖ **The second most common type**
- ❖ **Less than 5% of vulvar cancer cases , 2% of female melanomas.**
- ❖ **Arise from melanocytes**
- ❖ **Most common in Caucasian women 60–80 years old.**
- ❖ **May affect a much younger population.**
- ❖ **Tend to display the typical asymmetry, uneven borders and dark discoloration as do melanomas in other parts of the body.**
- ❖ **5-year survival is less than 32% due to delays in detection and rapid progression to a vertical growth phase.**



# Vaginal cancer

Cancer of the vagina is rare and is only 2% of all gynecological cancers .

- 80-90% are metastatic:- from
- **Cervix or endometrium are more common.**
- **Vulva, ovaries, recto-sigmoid, bladder, renal cell carcinoma, melanoma, and breast cancer are less common**
- Mean age of patients with primary vaginal cancer is **60-65 years.**
- **Site :-**

**Upper third of the vagina (51%)**

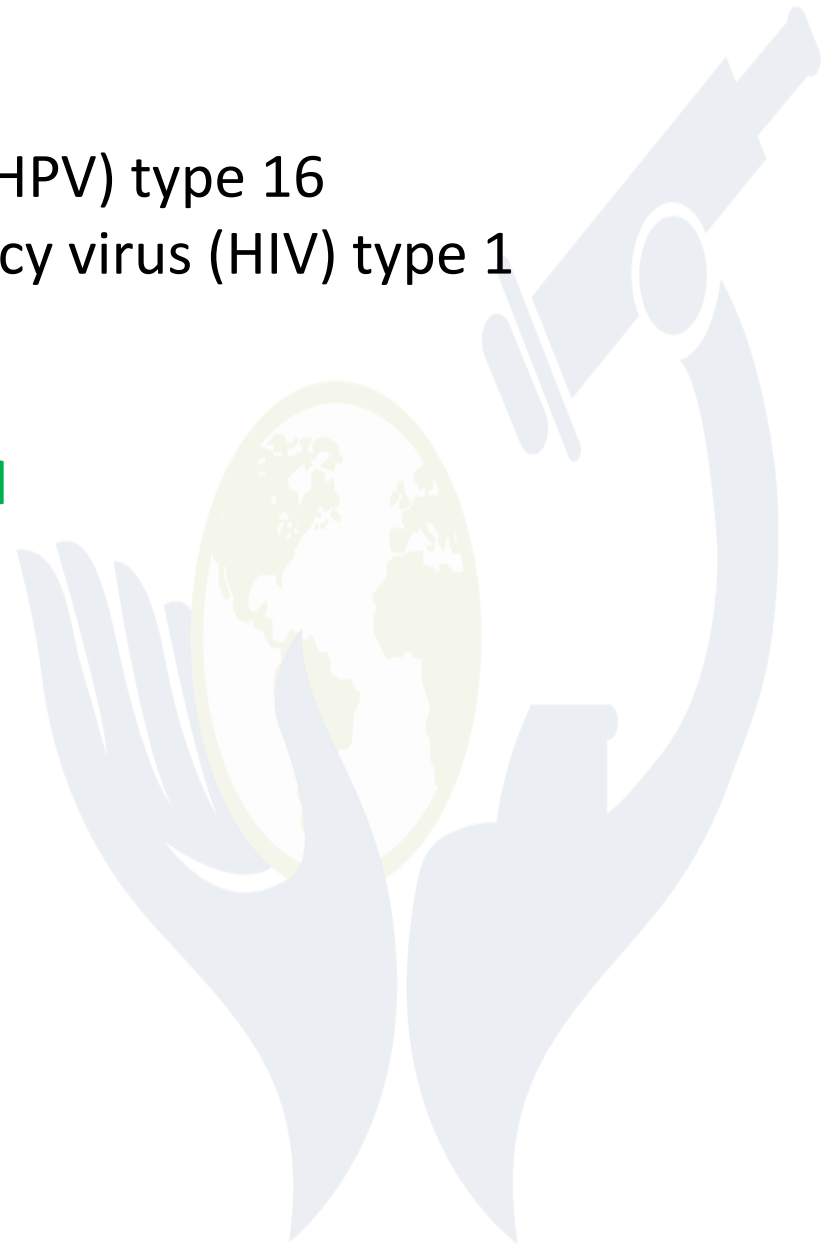
**Lower third 30%.**

**Middle third 19%.**



## **Risk factors of Vaginal Cancer**

- Infection with human papillomavirus (HPV) type 16
- Infection with human immunodeficiency virus (HIV) type 1
- Previous history of cervical cancer
- Smoking
- Prenatal exposure to **Diethylstilbestrol**



# Vaginal Cancer precursors

## **VAIN (vaginal intraepithelial neoplasia)**

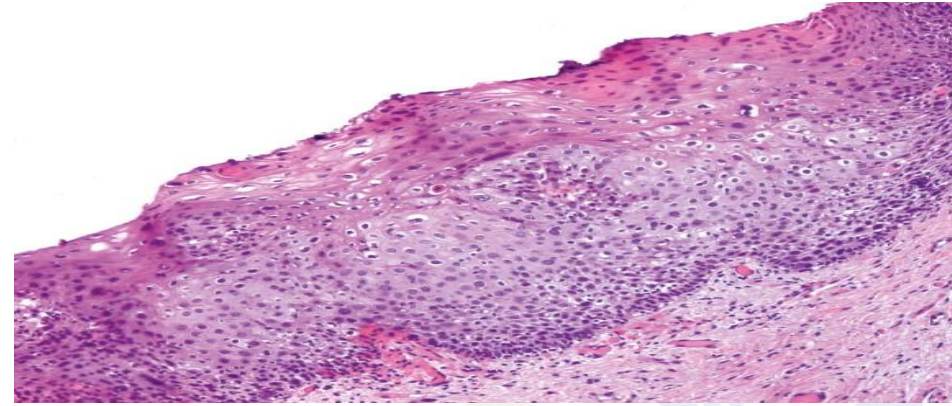
- Cytologic atypia- (Pleomorphism, irregular nuclear contours and chromatin clumping), Abnormal maturation ,Without invasion of basement membrane
- **10-30% progress to Vaginal Ca**



## Types of VAIN :-

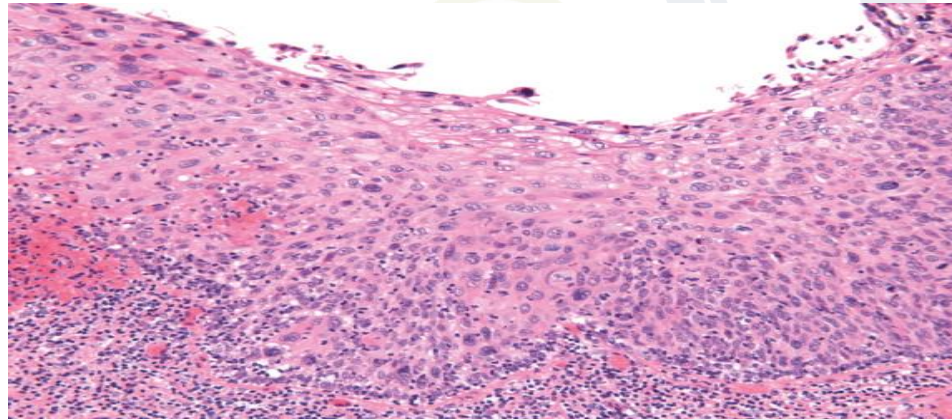
### ❖ VAIN 1

**Susperfacial koilocytosis and mild squamous atypia confined to the lower third of the epithelium**



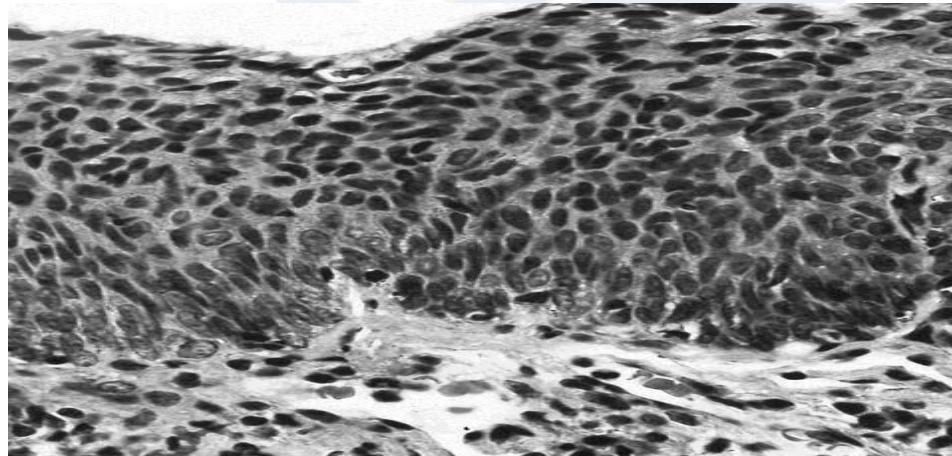
### ❖ VAIN 2

**Moderate squamous atypia confined to the lower two-thirds of the epithelium or marked atypia confined to the lower third of the epithelium. Koilocytes may be seen**



### ❖ VAIN 3

- Severe cytologic atypia, are seen throughout the full thickness of the squamous epithelium
- usually occurs in upper third of vagina and is multifocal and diffuse in half the cases.
- 1/3 of patients have a hx/o CIN



# **Types of vaginal cancer :-**

## **1- Squamous-cell carcinoma**

**Arises from the squamous cells (epithelium).**

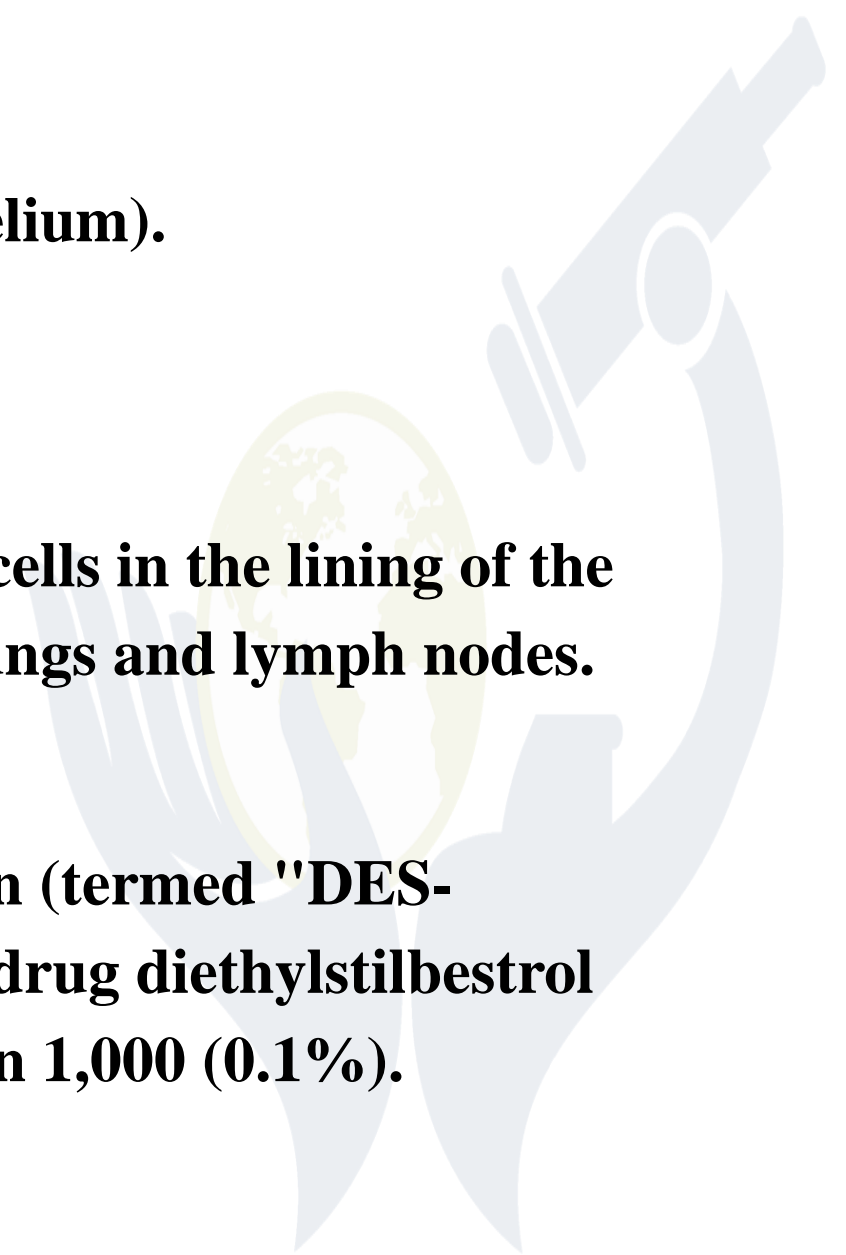
**It is the **commonest** type.**

## **2- Adenocarcinoma**

**Arises from the glandular (secretory) cells in the lining of the vagina. More likely to spread to the lungs and lymph nodes.**

## **3- Clear cell adenocarcinoma**

**Occurs in a small percentage of women (termed "DES-Daughters") that were exposed to the drug diethylstilbestrol (DES) in utero in Approximately one in 1,000 (0.1%).**



#### **4- Vaginal germ cell tumors**

(primarily teratoma and endodermal sinus tumor)

Are rare.

They are found most often in infants and children.

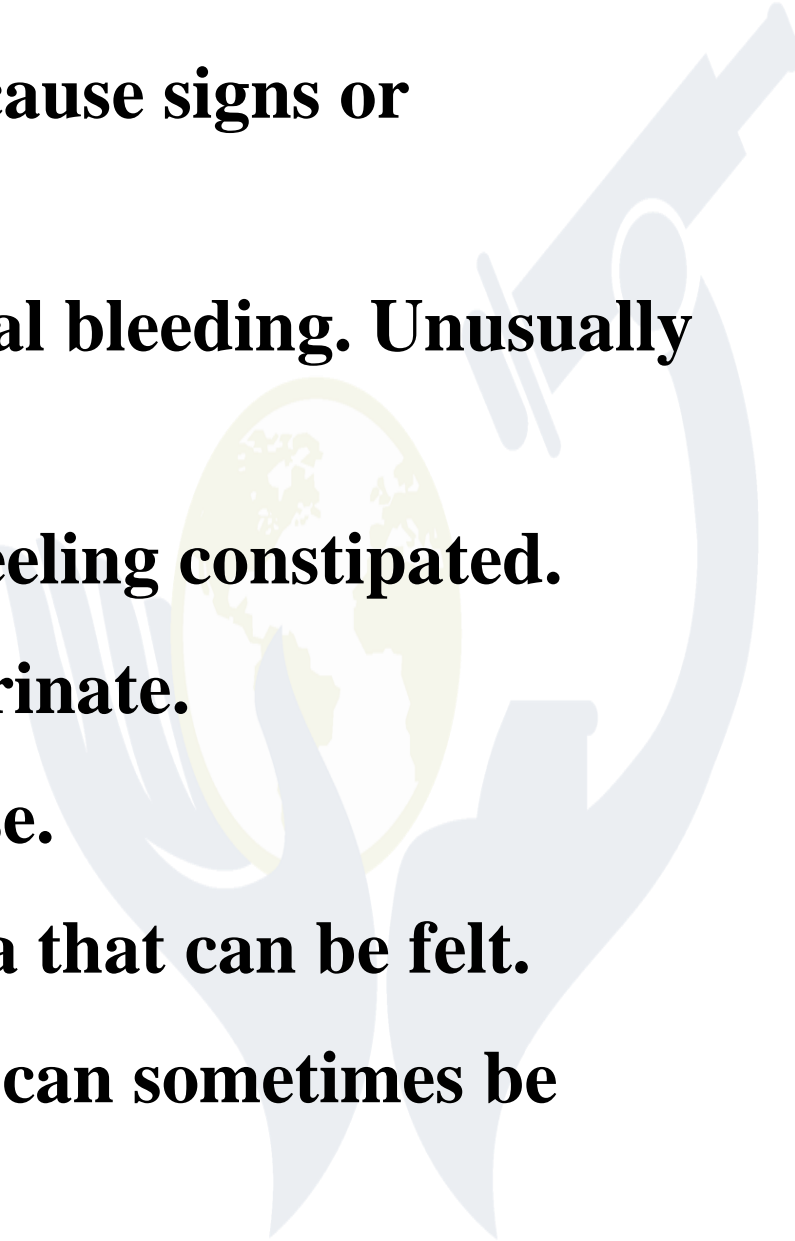
#### **5- Sarcoma botryoides, a rhabdomyosarcoma**

This is an uncommon, highly malignant vaginal tumor in **infants and children** consisting of embryonal rhabdomyoblasts (myogenic progenitor cells).

The tumors are polypoid, bulky masses composed of grapelike clusters (hence the alternative name, sarcoma botryoides) that can protrude from the vagina. Tumors tend to invade locally and cause death by penetration into the peritoneal cavity, or by obstructing the urinary tract.

#### **6- Vaginal melanoma,**

## **Signs and symptoms:-**

- **Most vaginal cancers do not cause signs or symptoms early on.**
  - **Vaginal discharge or abnormal bleeding. Unusually heavy flow of blood.**
  - **Blood in the stool or urine. Feeling constipated.**
  - **Frequent or urgent need to urinate.**
  - **Pain during sexual intercourse.**
  - **Lump or growth in the vagina that can be felt.**
  - **Enlarged pelvic lymph nodes can sometimes be palpated.**
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**Sarcoma botryoides (embryonal rhabdomyosarcoma) of vagina**



# FIGO Staging system

**Stage 0:-** Carcinoma in situ

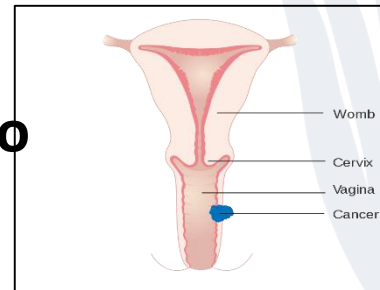
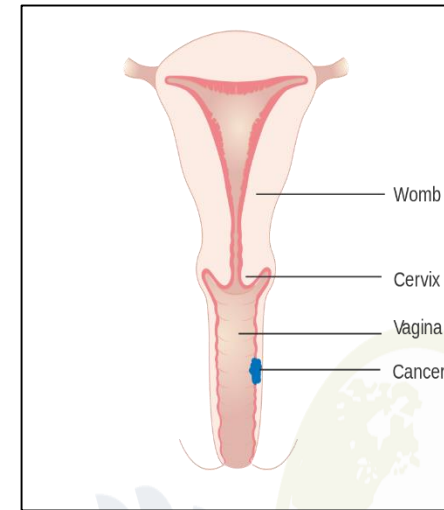
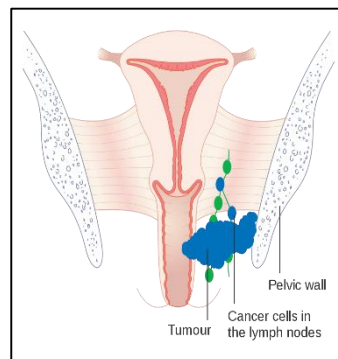
**Stage I:-** Invasive carcinoma confined to the vagina.

**Stage IA** Tumour < 2 cm wide & < 1 mm depth of invasion.

**Stage IB** Tumour > 2cm wide & > 1 mm depth of invasion.

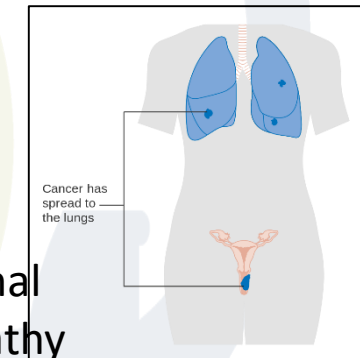
**Stage II:-** Tumour invades para-vaginal tissues but not to the pelvic wall.

**Stage III:-** Extension to the pelvic wall.



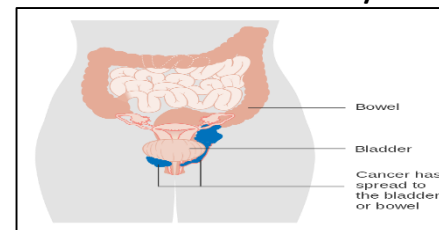
## Stage IVB

Pelvic or inguinal lymphadenopathy or distant metastases.



## Stage IVA

Extension beyond the true pelvis or invasion of bladder/rectum.



THANK YOU  
FOR YOUR  
ATTENTION