

# Female Genital System-I vulva and vagina

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DR.EMAN KREISHAN, M.D.

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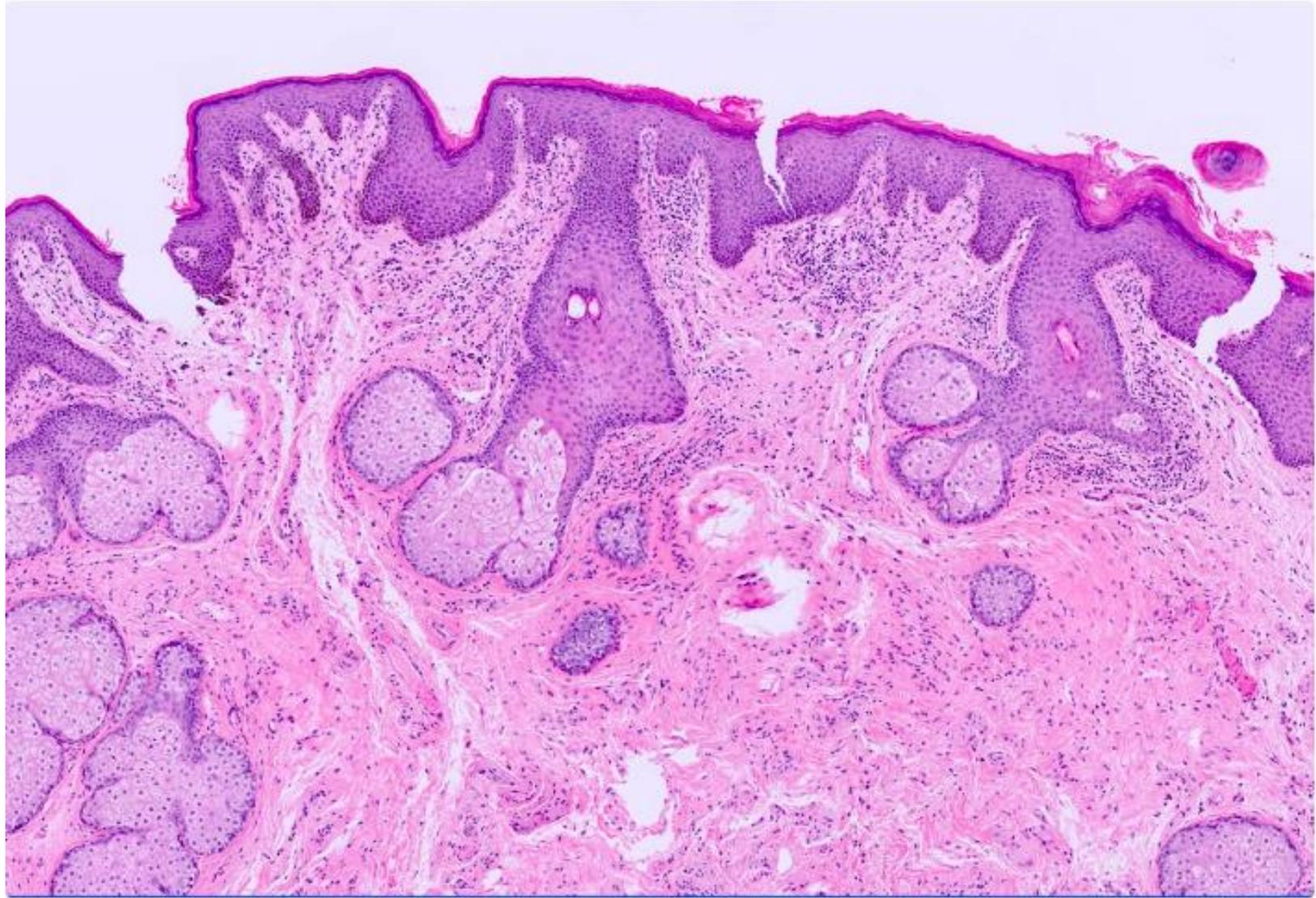
# VULVA

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- The vulva is the external part of female genital system and includes the moist hair-bearing skin and mucosa in that region.
- Vulva constitutes the portion of female genitalia that is external to the hymen

# Vulva can be affected by many pathology like:

- inflammation.
- Non-neoplastic epithelial disorders.
- Neoplastic lesions.

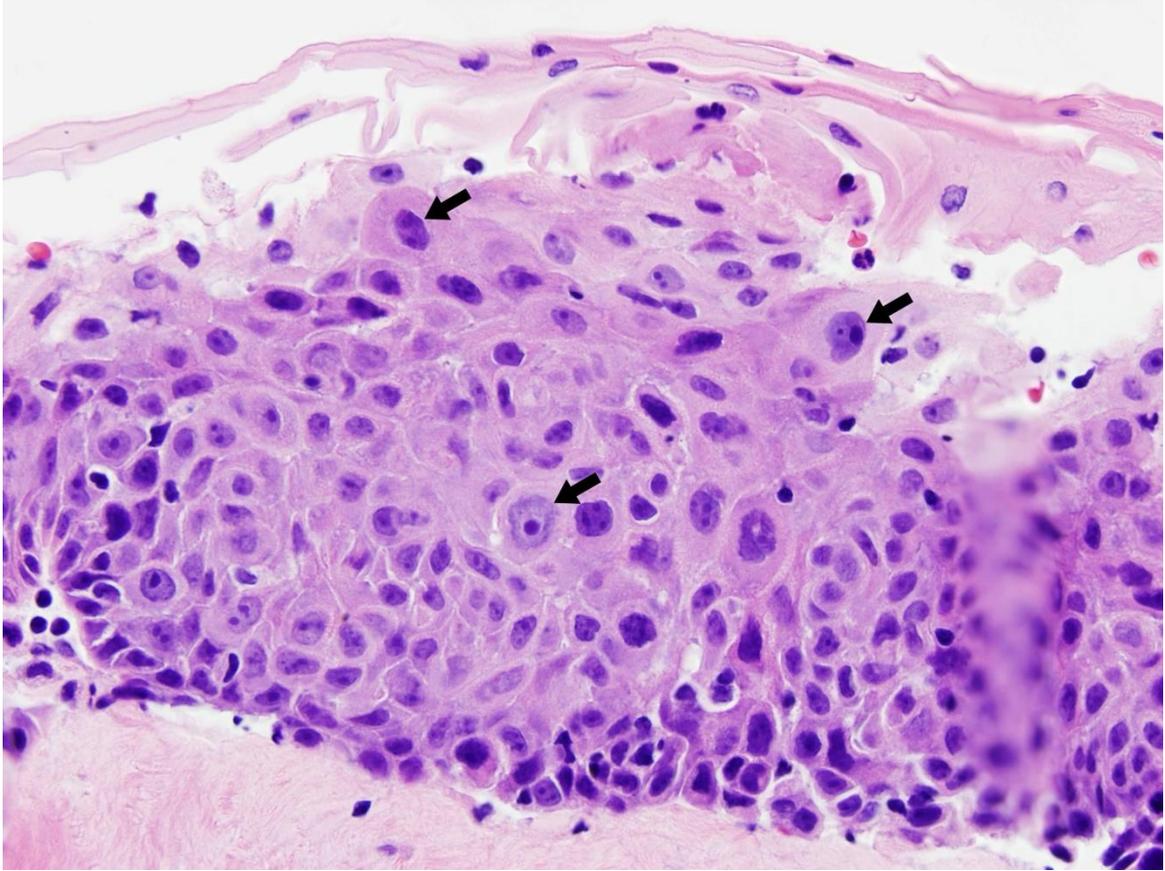
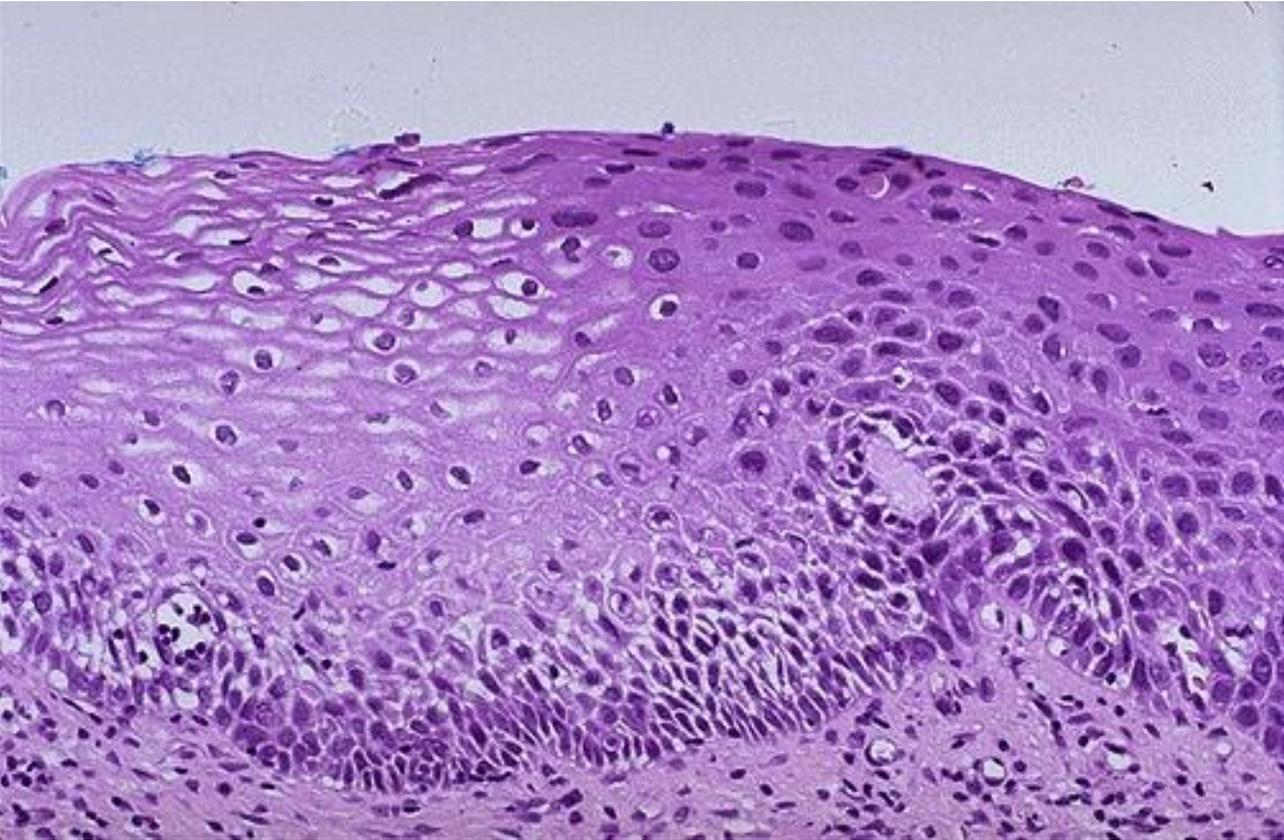


Labia majora showing keratinized stratified squamous epithelium with hair follicles and sebaceous glands.



# Normal vs abnormal

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# I. VULVITIS

➤ Usually it represent a reactive inflammatory response secondary to:

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- exogenous stimulus: contact irritant dermatitis, contact allergic dermatitis.
- Infection: like sexually transmitted disease (STD):
  - Human papillomavirus (HPV): the causative agent of condyloma acuminatum and vulvar intraepithelial neoplasia.
  - Herpes simplex virus (HSV-1 or -2): Characterized by vesicular eruption.
  - *N. gonorrhoeae*, a cause of suppurative infection of the vulvovaginal glands.
  - *Treponema pallidum*, the syphilis pathogen.
  - *Candida*.

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## II. NON-NEOPLASTIC EPITHELIAL DISORDERS

# 1-Lichen Sclerosus:

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- Clinically presented as white plaques (termed *leukoplakia*) .
- Lichen sclerosus commonly affects postmenopausal women.
- The pathogenesis is uncertain, may related to autoimmune disorders (genetic predisposition).
- Lichen sclerosus is benign; however, a small percentage of women (1% ) with symptomatic lichen sclerosus develop squamous cell carcinoma of the vulva.

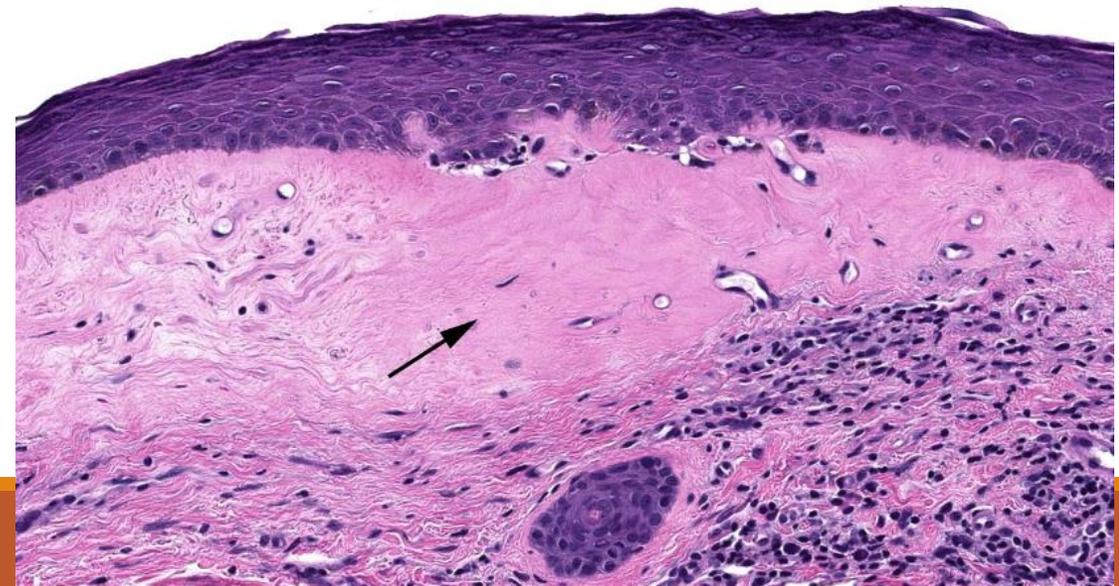
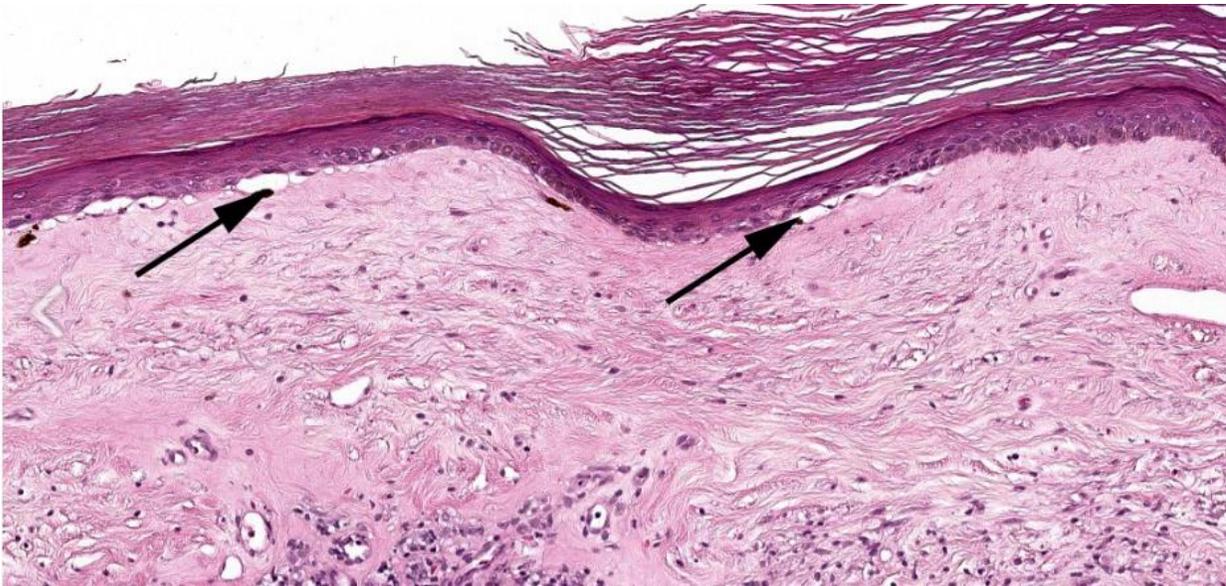
# Microscopic features

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epidermal atrophy.

hydropic degeneration of the basal cells.

progressive sclerosis / homogenization of papillary dermal collagen fibers



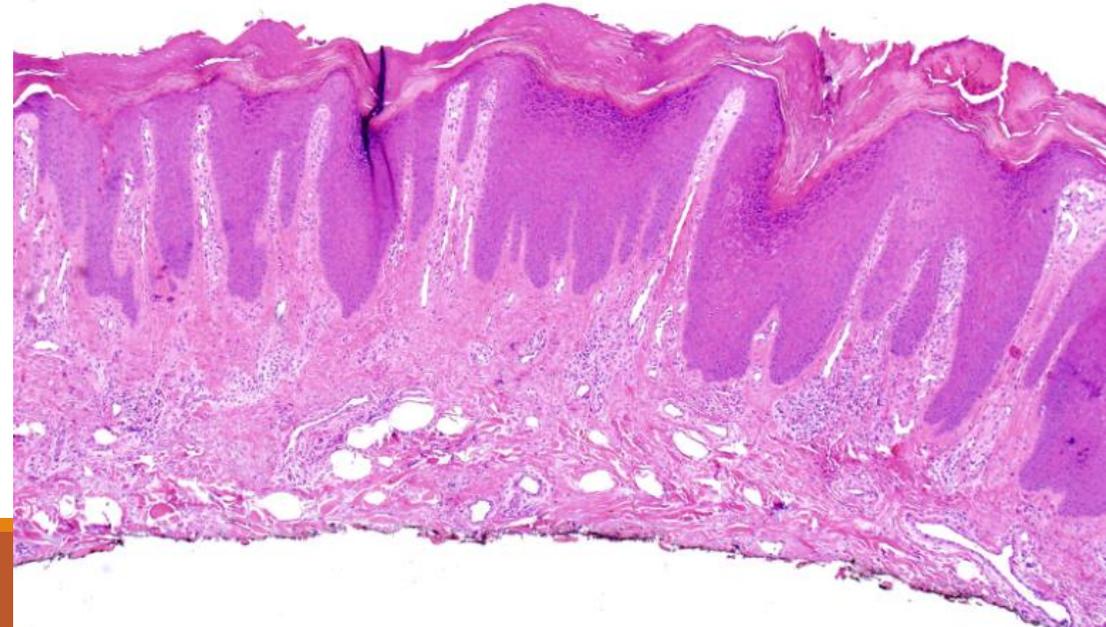
# 2-Lichen Simplex Chronicus

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- Lichen simplex chronicus appears as white patches or plaques.
- It represent a consequence of chronic irritation, often caused by pruritus related to an underlying inflammatory dermatosis.
- With isolated lesions, no increased predisposition to cancer has been found, but lichen simplex chronicus often is present at the margins of established vulvar cancer, raising the possibility of an association with neoplastic disease.

# Microscopic features

- Epithelial thickening (acanthosis).
- Hypergranulosis
- Hyperkeratosis.
- Increased mitotic activity is seen in the basal and suprabasal layers; however, there is no epithelial atypia.



# 3. condyloma acuminatum

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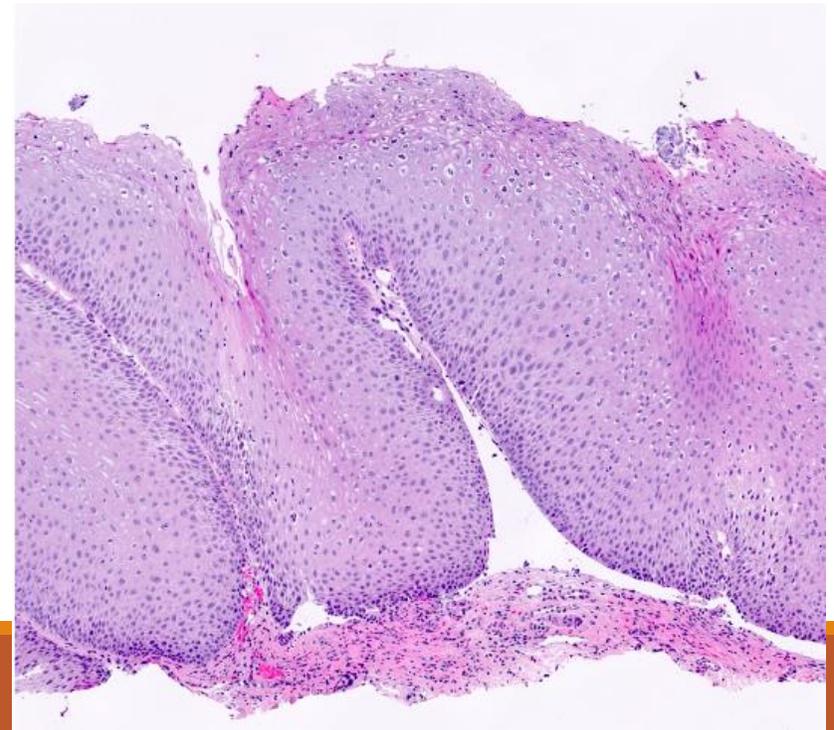


- Benign papillomatous squamous proliferation with a fibrovascular core, caused by human papillomavirus (HPV) infection.
- Caused by HPV serotypes 6 and 11.
- Clinically: usually asymptomatic but it may cause discomfort, pruritis, bleeding, eczematous rash or Painless mass.
- They can occur anywhere on the anogenital surface, sometimes as single but more often as multiple lesions.

# Miceoscopic features

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- Hyperplastic papillary squamous epithelium.
- Marked acanthosis
- Koilocytosis (irregular nuclei, bi and multinucleation, perinuclear vacuolization)



# Carcinoma of the Vulva

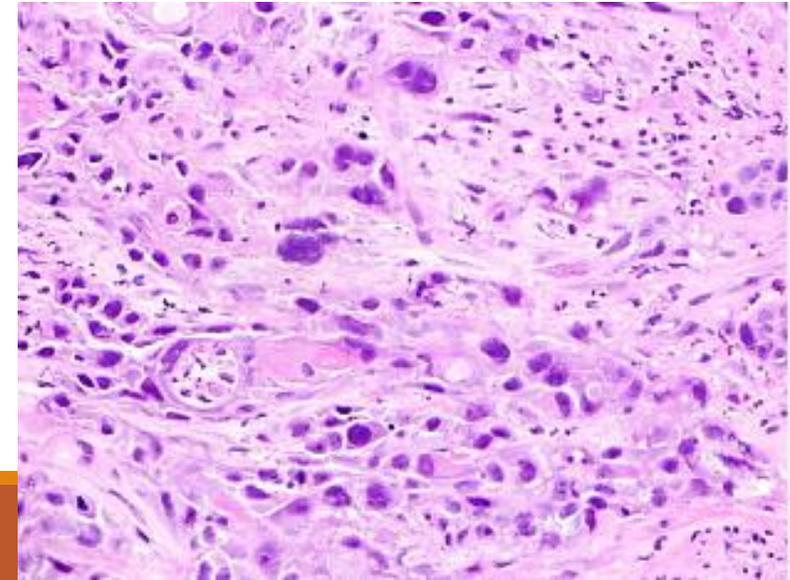
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- Represents about 3% of all female genital tract cancers, occurring mostly in women older than age 60.
- 90% of carcinomas are squamous cell carcinomas; the other tumors are mainly adenocarcinomas or basal cell carcinomas.
- **two** distinct forms of vulvar squamous cell carcinoma were found:

# 1. HPV-related vulvar SCC

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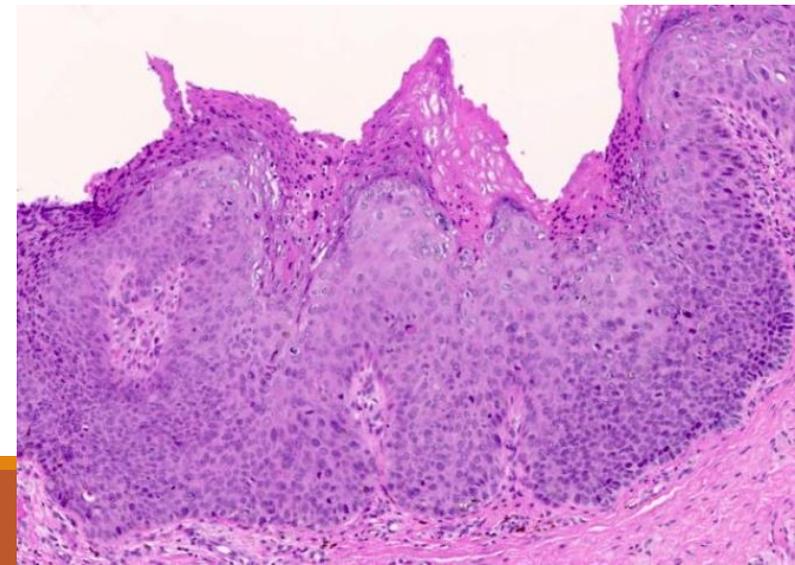
- Associated with high risk HPV subtypes 16 and 18.
- - occurs in middle-aged women, particularly cigarette smokers.
- - associated with *vulvar intraepithelial neoplasia* (VIN).
- tend to be **poorly differentiated squamous cell carcinomas**



# *vulvar intraepithelial neoplasia (VIN).*

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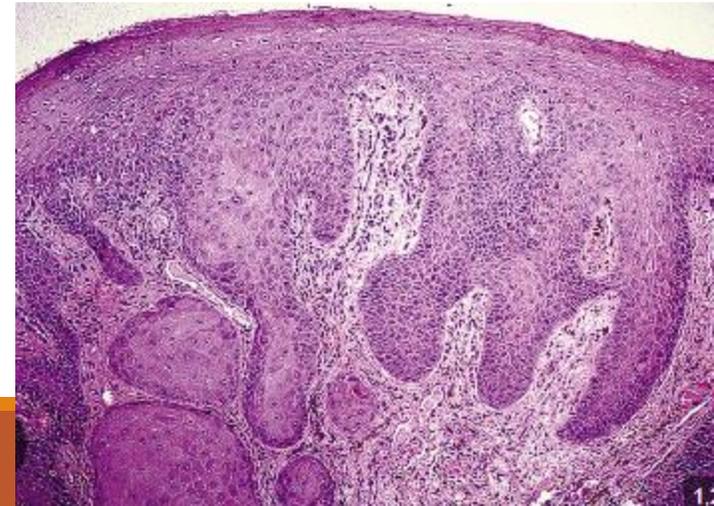
- Precursor lesion of HPV associated vulvar carcinoma
- Usually manifested as areas of leukoplakia in the form of whitish patches .
- Over time, these areas are transformed into overt exophytic or ulcerative endophytic tumors.
- Environmental factors such as cigarette smoking and immunodeficiency appear to increase the risk of such progression.



## 2. Non-HPV related SCC:

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- occurs in older women.
- not associated with HPV and preceded by years of reactive epithelial changes, principally lichen sclerosus.
- Not associated with *vulvar intraepithelial neoplasia* (VIN).
- typically manifest as **well-differentiated keratinizing squamous cell carcinomas**.



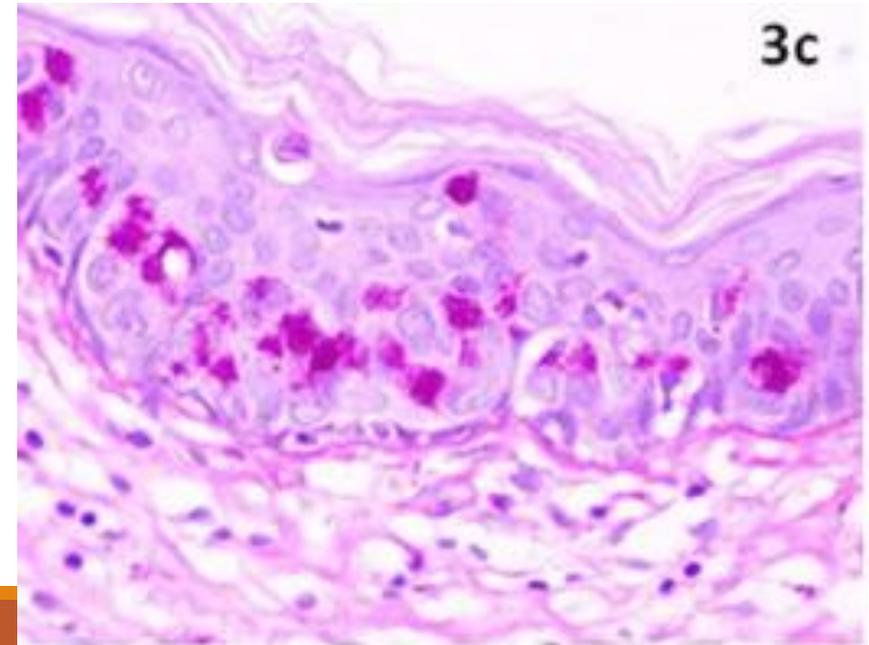
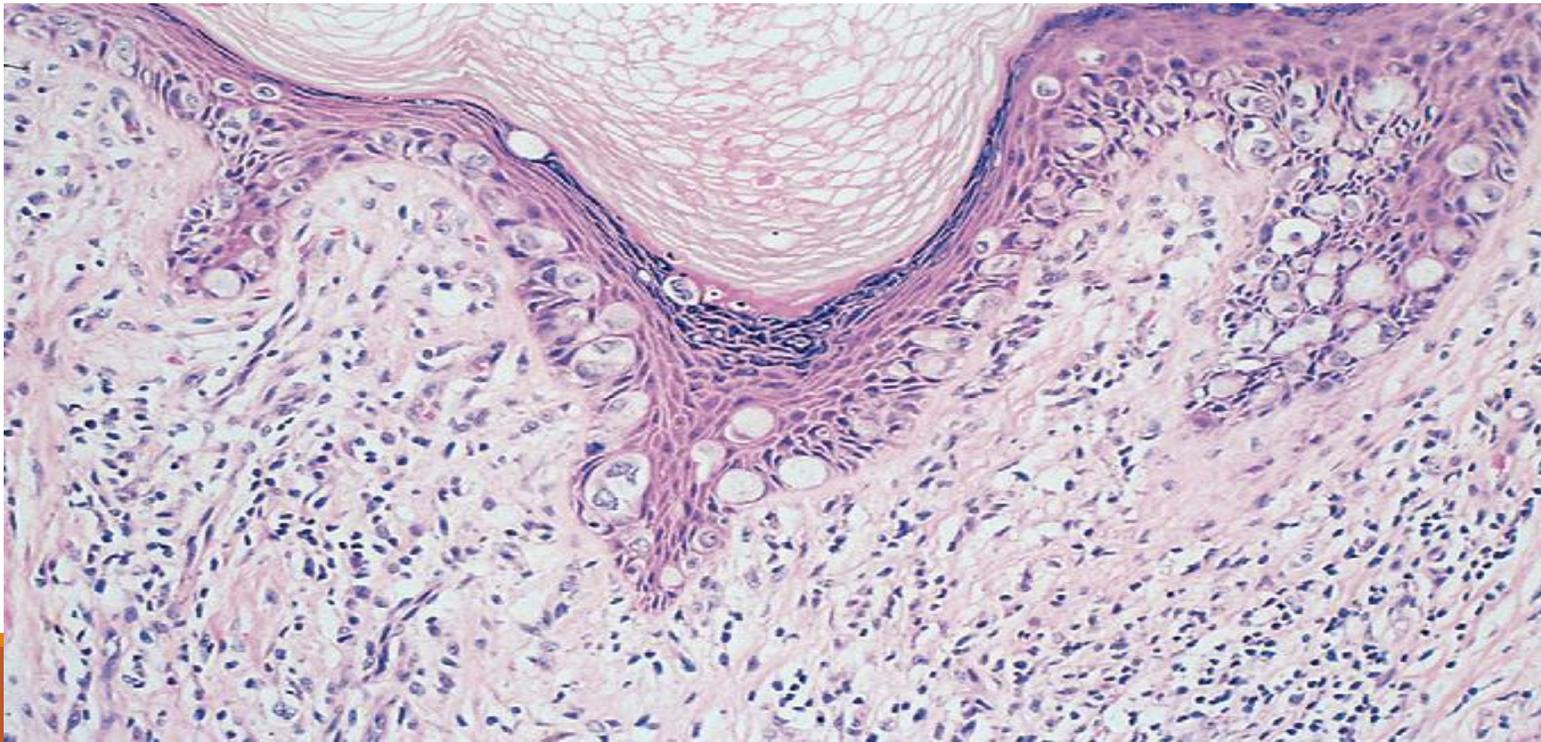
# Extramammary Paget Disease

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- intraepidermal proliferation of malignant epithelial cells that can occur in the skin of the vulva or nipple of the breast.
- A majority of cases of vulvar (extramammary) Paget disease have no demonstrable underlying tumor.
- Paget disease manifests as a red, scaly, crusted plaque that may mimic the appearance of an inflammatory dermatitis.

## Microscopic:

- Large epithelioid cells with abundant pale, finely granular cytoplasm and occasional cytoplasmic vacuoles infiltrate the epidermis.
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- The presence of mucin, as detected by periodic acid–Schiff (PAS) staining, is useful in distinguishing Paget disease from vulvar melanoma, which lacks mucin.



# vagina

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- Vagina is a fibromuscular tube that extends from the vestibule of vulva to uterine cervix.
- The vagina is seldom a site of primary disease.
- More often, it is involved secondarily by cancer or infections arising in adjacent organs (e.g., cervix, vulva, bladder, rectum).

# Congenital anomalies of the vagina

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Congenital anomalies of the vagina fortunately are uncommon and include entities such as:

- total absence of the vagina.
- septate or double vagina (usually associated with a septate cervix and, sometimes, septate uterus).
- lateral Gartner duct cysts arising from persistent wolffian duct rests.

# VAGINITIS

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- Vaginitis is a relatively common condition that is usually transient and of no clinical consequence. It is associated with leukorrhea.
- May be caused by bacteria, fungi, and parasites. Many are normal commensals that become pathogenic only in the setting of diabetes, systemic antibiotic therapy, immunodeficiency, pregnancy.

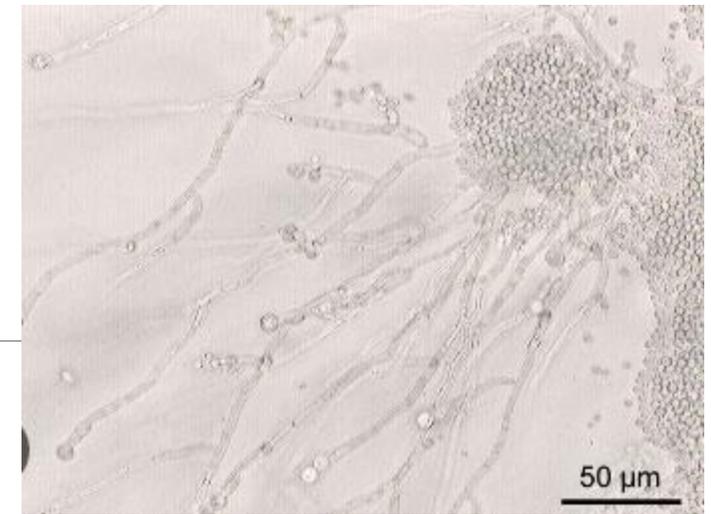
# Common vaginitis

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## # Candidiasis:

is a fungal infection caused by *Candida albicans* :

Typical clinical features include vulvar and vaginal erythema, excoriations, thick white adherent discharge, and swelling.



## # Trichomonas vaginalis:

produces a watery, copious gray-green discharge in which parasites can be identified by microscopy.



# MALIGNANT NEOPLASMS

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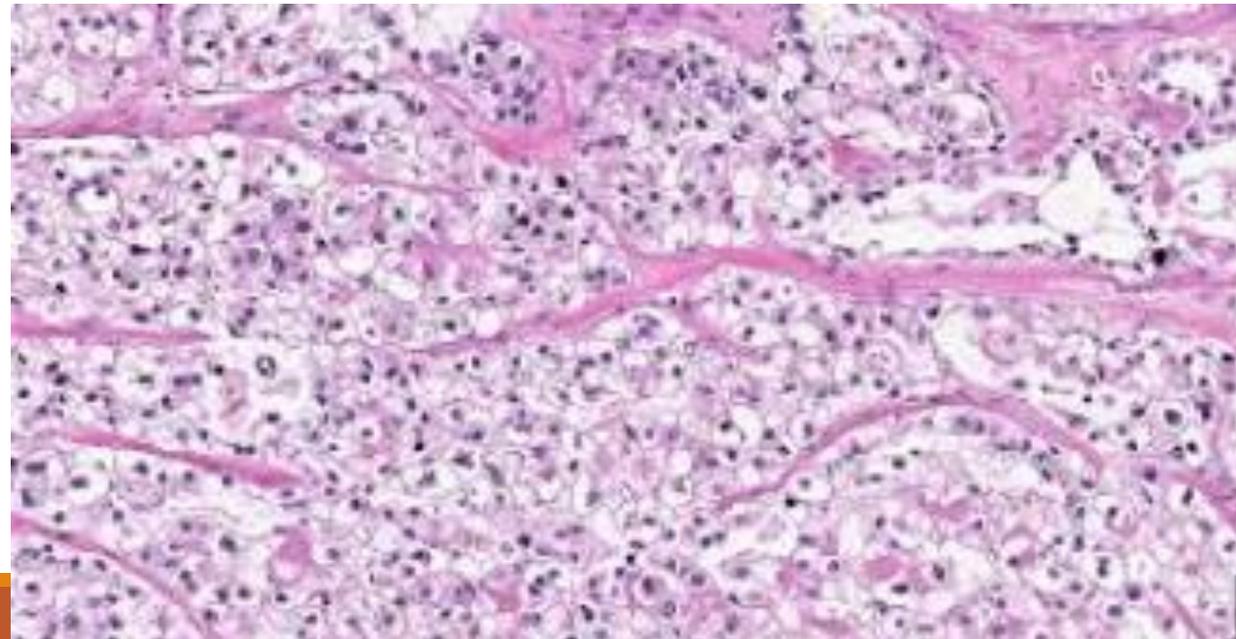
## ➤ 1. Squamous Cell Carcinoma

- Squamous cell carcinoma of the vagina is an extremely uncommon cancer that usually occurs in women older than 60 years of age.
- Vaginal intraepithelial neoplasia VAIN is a precursor lesion that is nearly always associated with HPV infection.

## 2. Clear Cell Adenocarcinoma

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- very rare tumor usually identified in a cluster of young women whose mothers took diethylstilbestrol DES during pregnancy to prevent threatened abortion. Now, Clear cell adenocarcinoma is very rare.



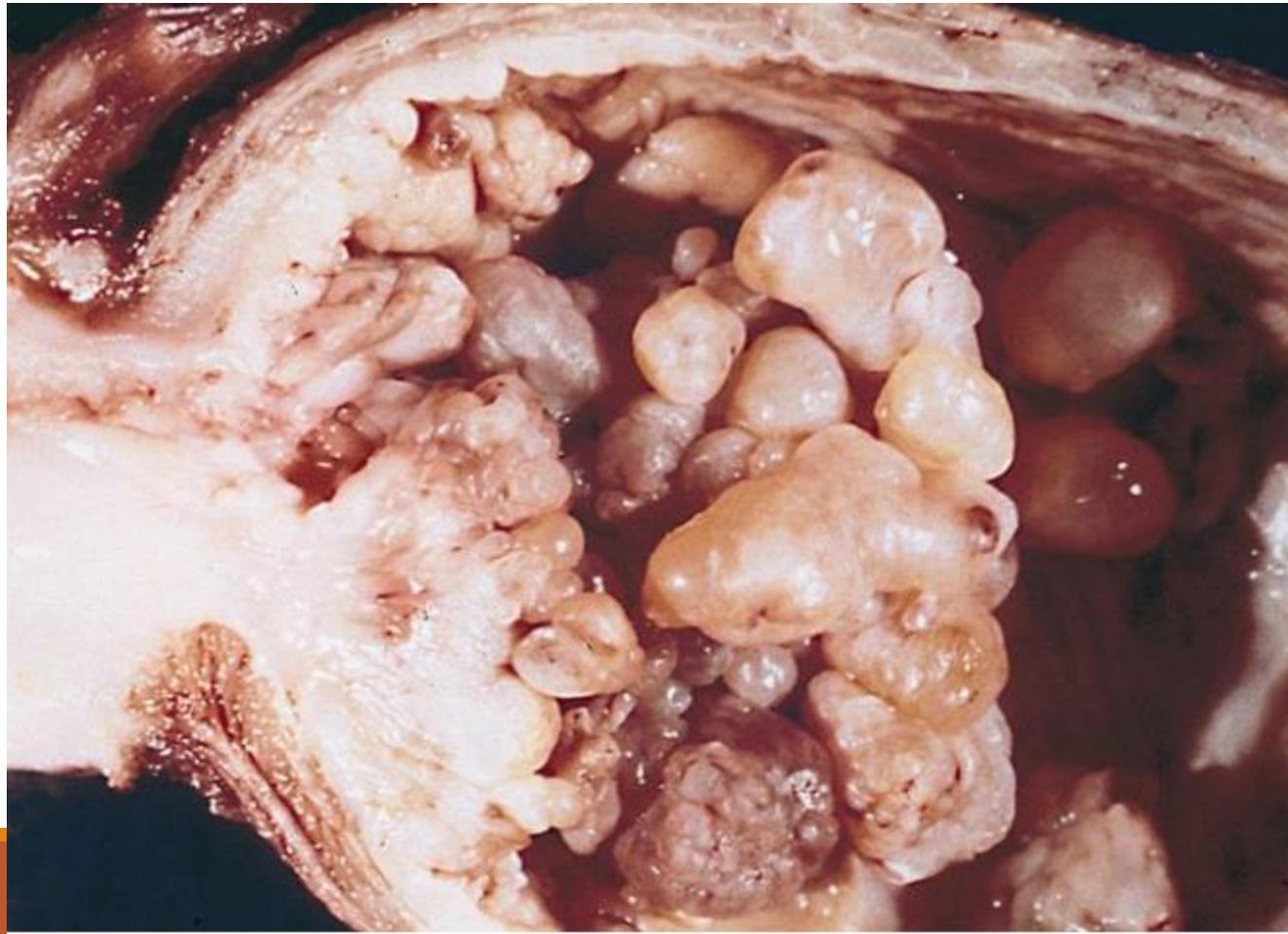
# 3. Sarcoma Botryoides

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- Sarcoma botryoides (embryonal rhabdomyosarcoma) is a rare form of primary vaginal cancer.
- It usually is encountered in infants and children younger than 5 years of age. It also may occur in other sites, such as the urinary bladder and bile ducts.
- Grossly, it presents as a conglomerate of soft polypoid masses resembling a bunch of grapes—hence its designation as “botyroid.”

# Gross features:  
clusters of edematous, grape-like masses that protrude into lumen of hollow organs.

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➤ Microscopically:

- myxoid stroma containing spindle cells. Some of these cells contain a bright eosinophilic granular cytoplasm suggestive of rhabdomyoblastic differentiation.
- An important diagnostic feature is the crowding of the tumor cells around blood vessels and beneath the squamous epithelium (the “cambium layer”).

