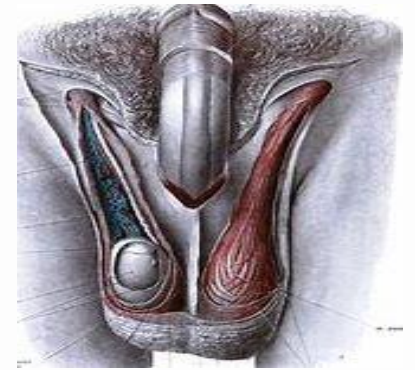


# Male Genital System Pathology Lec. 1



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# Male Genital System??

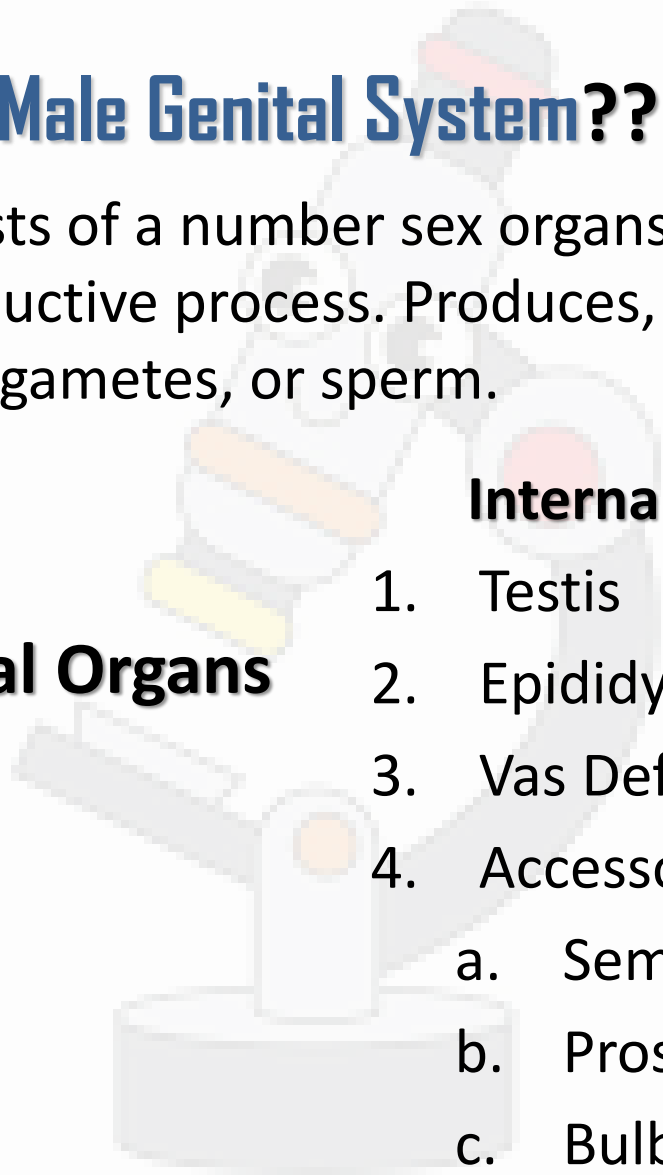
- System that consists of a number sex organs that are a part of the human reproductive process. Produces, stores and releases the male gametes, or sperm.

## External Genital Organs

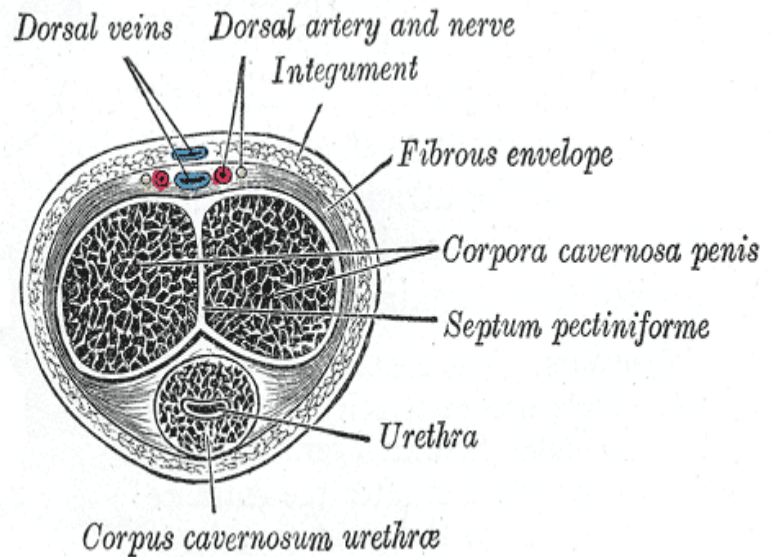
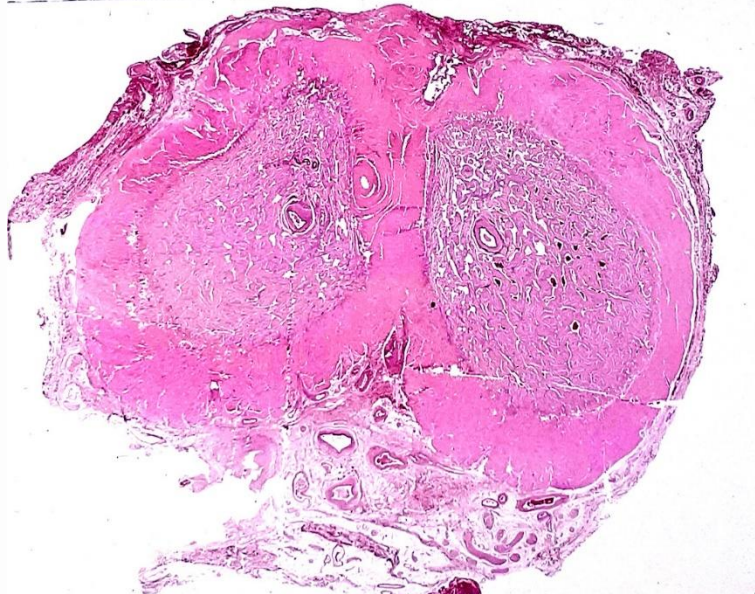
1. Penis
2. Scrotum

## Internal Genital Organs

1. Testis
2. Epididymis
3. Vas Deferens
4. Accessory Glands
  - a. Seminal Vesicles
  - b. Prostate Gland
  - c. Bulbourethral Glands



# Penis pathological disorders



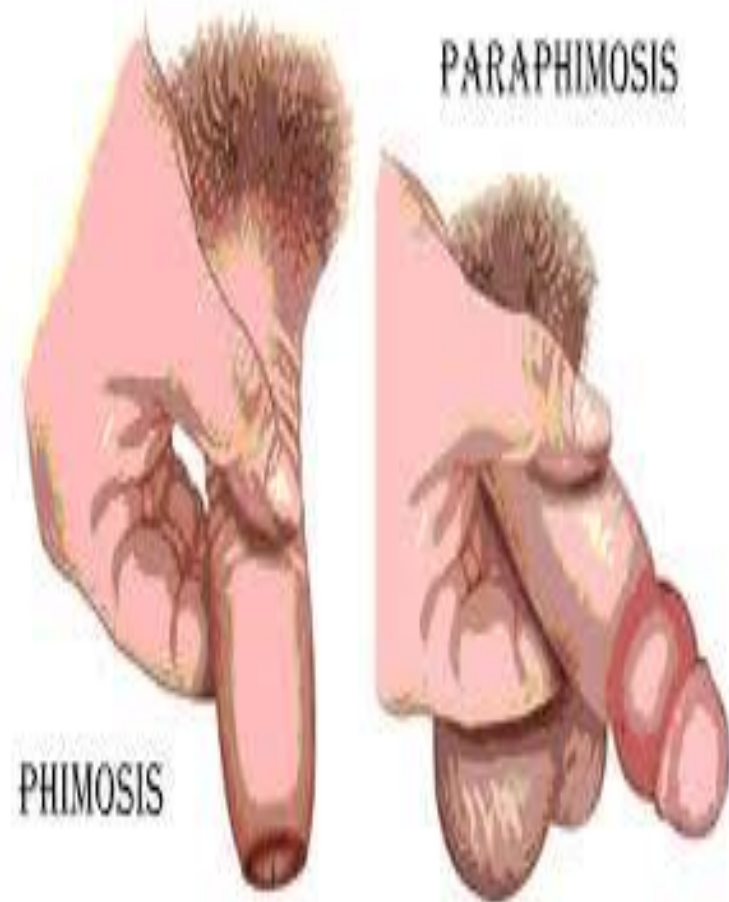
## A-- Malformations of the Penis

### **1- Phimosis :-**

Is when a foreskin can't be pulled down (retracted) from the tip of penis (**Orifice of the prepuce is too small**).

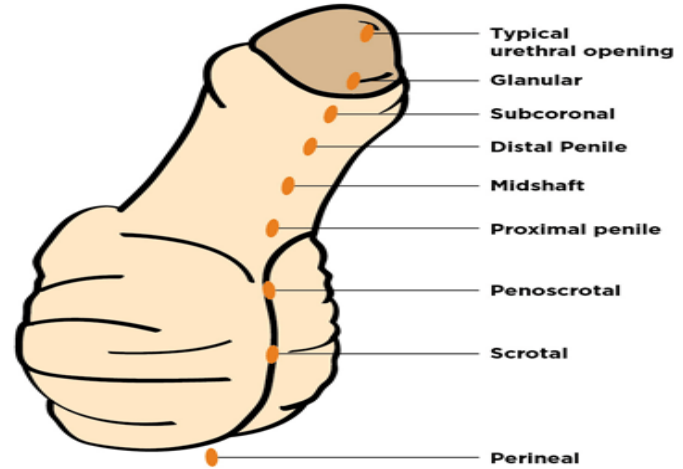
It is congenital but in many cases could be acquired from scarring of the prepuce secondary to previous balanitis inflammation, trauma or oedema leading to narrowing opening.

**2- Paraphimosis** when the foreskin is retracted but can't move back up , is a condition in which the phimotic prepuce is forcibly retracted resulting in constriction over the glans penis and subsequent swelling. .



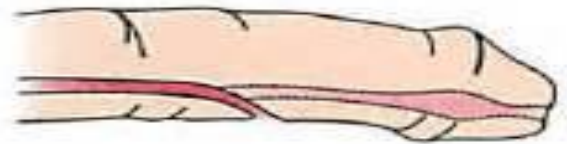
- **3 Hypospadias** Congenital condition, is the most common malformation (1 in 250 live male births). Abnormal location of the distal urethral orifice along the ventral aspect of the penis.

### Types of hypospadias



- **4- Epispadias:** the urethral orifice is situated on the dorsal aspect of the penis.
- **Both associated with undescended testis.**

### Hypospadias



### Epispadias



## B- Inflammatory Lesions of the penis

- Inflammations characteristically involve both the glans penis and the prepuce.
- The sexually transmitted causes of inflammation (e.g., syphilis, gonorrhoea, chancroid, lymphopathia venereum, genital herpes, granuloma inguinale) .
- Balanitis or Balanoposthitis refers to non-specific infection by other organisms (e.g., Candida, anaerobic or pyogenic bacteria and Gardnerella).
- Most are a consequence of poor local hygiene in uncircumcised males due to accumulated smegma ( desquamated epithelial cells , sweat and debris) causing local irritant and can lead to phimosis.

# C- Penile Neoplasms

Benign Tumors:-

## ***CONDYLOMA ACUMINATUM***

- is a benign sexually-transmitted epithelial proliferation caused by human papillomavirus (HPV), especially types 6 and 11. After excision it tends to recur, but it rarely transforms to malignancy.
- Grossly: Single or multiple sessile or pedunculated red papillary excrescences 1 to 5 mm in size, often involving the coronal sulcus or inner prepuce.
- Microscopically: Branching papillae covered by hyperplastic (but orderly) stratified squamous epithelium, often with hyperkeratosis; epithelial cell vacuolation (koilocytosis) is common.



The tumour consists of solitary or multiple, warty, cauliflower-shaped lesions of variable size with exophytic growth pattern

# (CARCINOMA IN SITU)

## CIS

- Mucosa replaced by atypical hyperplastic cells with disorientation, vacuolation, multiple hyperchromatic nuclei and mitotic figures.
  - Three major variants, all strongly associated with HPV sp. 16
  - **Erythroplasia of Queyrat** – velvety bright red patches on mucosal surfaces of penis.
  - **Bowen disease** - solitary or multiple thickened, gray-white or red shiny plaques over the penile shaft. , often with crusting ulceration.
- Over the span of years transition to invasive squamous cell carcinoma occurs in approximately 10% of cases.



Bowen disease

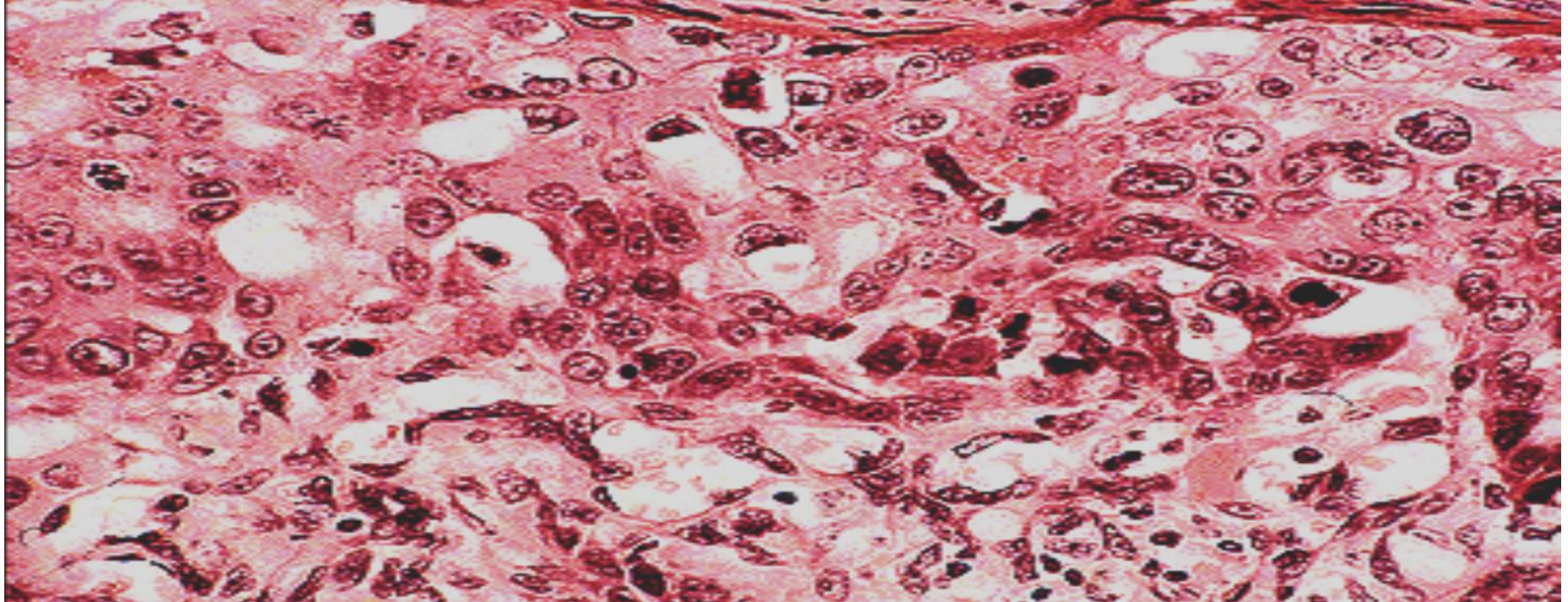


– **Bowenoid papulosis** presents as multiple, pigmented papular lesions on external genitalia in younger, sexually active patients.

The lesions are histologically indistinguishable from Bowen disease, **but evolution into invasive carcinoma is rare, and they frequently spontaneously regress.**



**Histology reveals marked epithelial atypia with no invasion.**



**Bowen's disease (C in situ): the epidermis is completely disorganized. Note the nuclear pleomorphism**

# • Squamous cell carcinomas

- Relatively uncommon.
- Most cases occur in uncircumcised patients older than 40 years of age (40 and 70 years).

## **Etiological factors include:-**

- Poor hygiene that expose the area to potential carcinogens in smegma,
- Smoking
- Infection with human papillomavirus (HPV), particularly types 16 and 18.
- Dysplastic changes *carcinoma in situ*.

**Clinical Features:- an abnormal penile ulcer or mass in uncircumcised patients older than 40 years of age (40 and 70 years).**

- The clinical course is characterized by slow growth; metastases can occur in regional (inguinal and iliac) lymph nodes, but distant metastases are uncommon.
- Regional metastases are present in the inguinal lymph nodes in approximately 25% of patients at the time of diagnosis.
- The 5-year survival rate is 66% for lesions confined to the penis and 27% with regional node involvement.

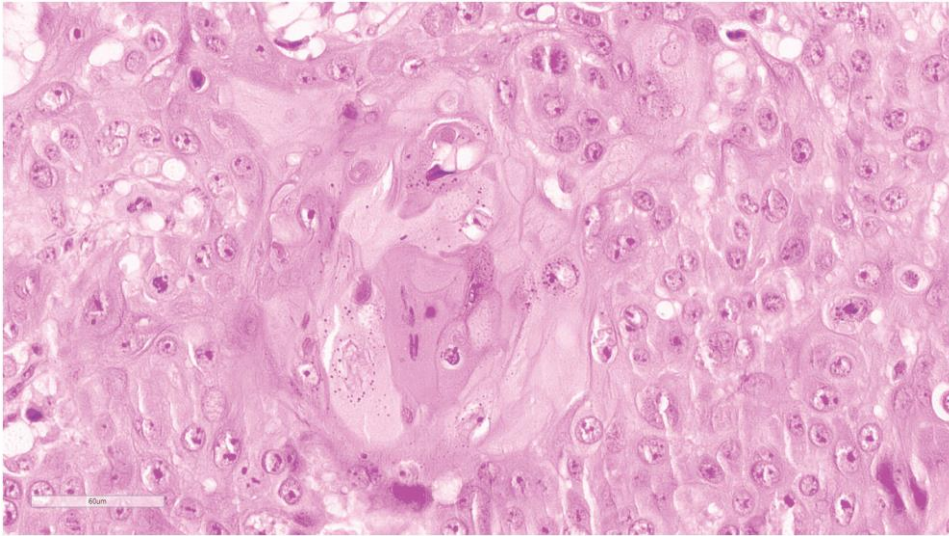
- ***Invasive Squamous cell carcinoma***
- Grossly appears as a gray, crusted, papular lesion, most commonly on the glans penis or prepuce.
- Infiltrates the underlying connective tissue to produce an indurated, ulcerated lesion with irregular margins



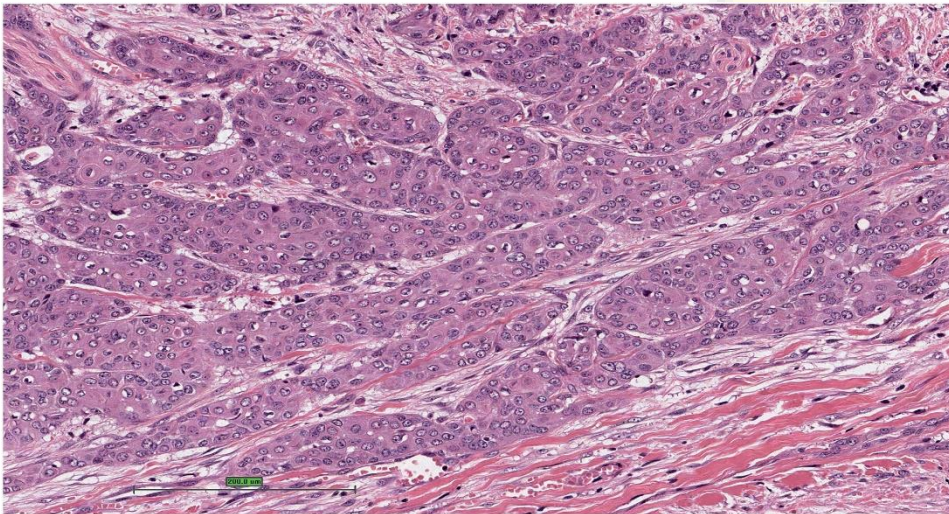
**This is a squamous cell carcinoma of the penis (penectomy specimen) that is a larger reddish brown fungating mass.**



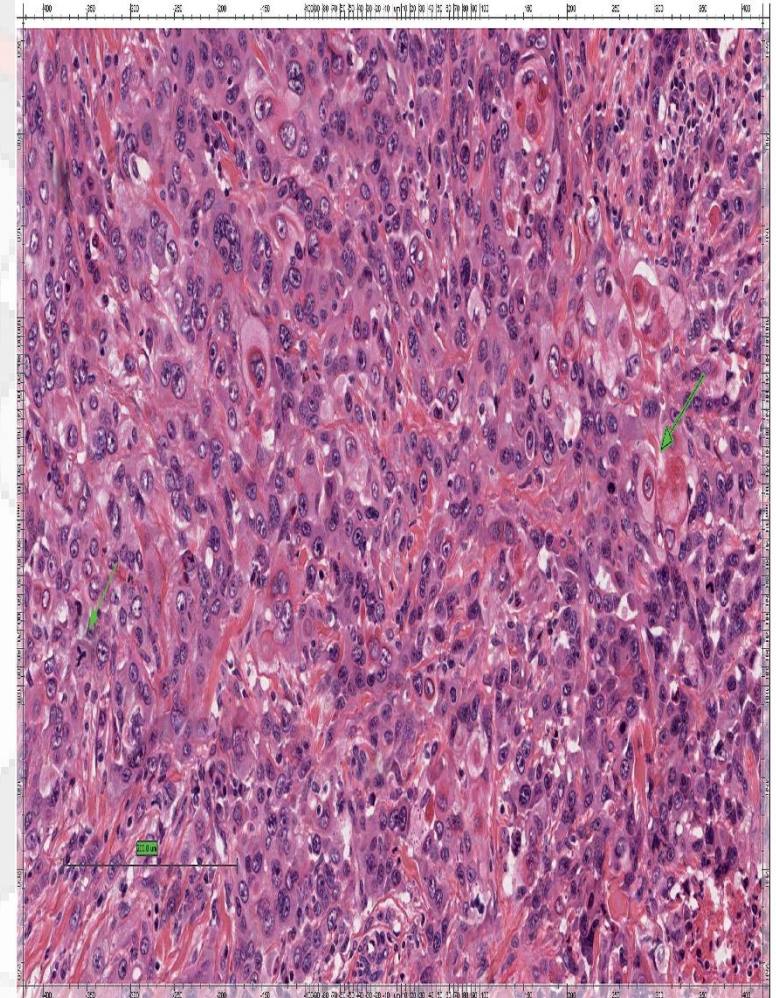
**Here is a squamous cell carcinoma of the head of the penis. Note the uncircumcised state, which increases the risk for such carcinomas. The neoplasm is reddish-tan with an ulcerated surface.**



**Squamous cell carcinoma of low grade penile. Identifies minimum basal atypia or parabasal. Hematoxylin and eosin. 200x magnification.**



**Squamous cell carcinoma moderately differentiated**



**Squamous cell carcinoma high grade penile. dense nuclear membrane, nuclear pleomorphism, aggregated chromatin, prominent nucleoli and numerous mitoses. Hematoxylin and eosin.**



**THANK YOU  
FOR YOUR  
ATTENTION**