

# Renal Pathology lab

تَبِيض

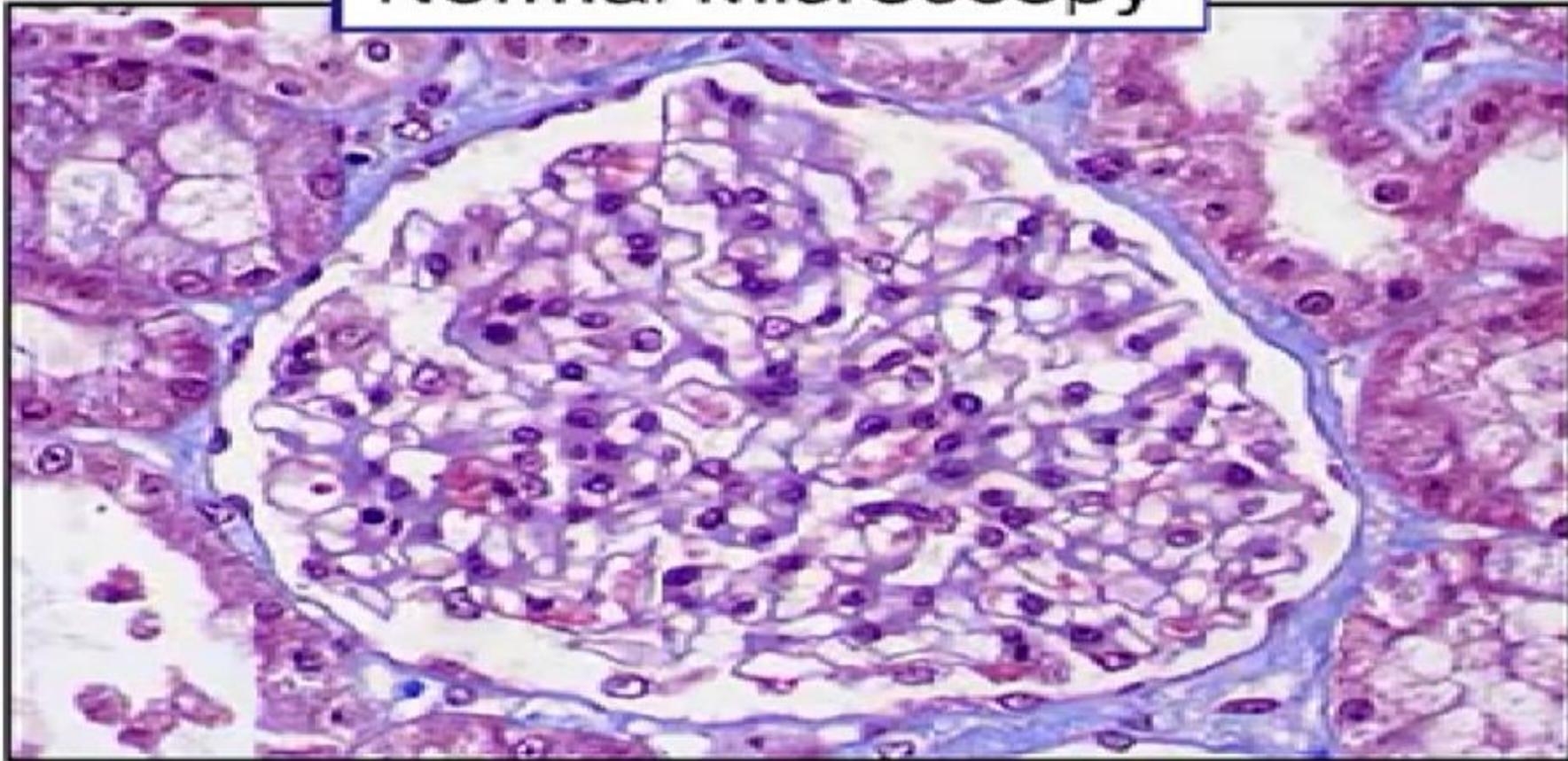
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May 2024

# Minimal Change Disease

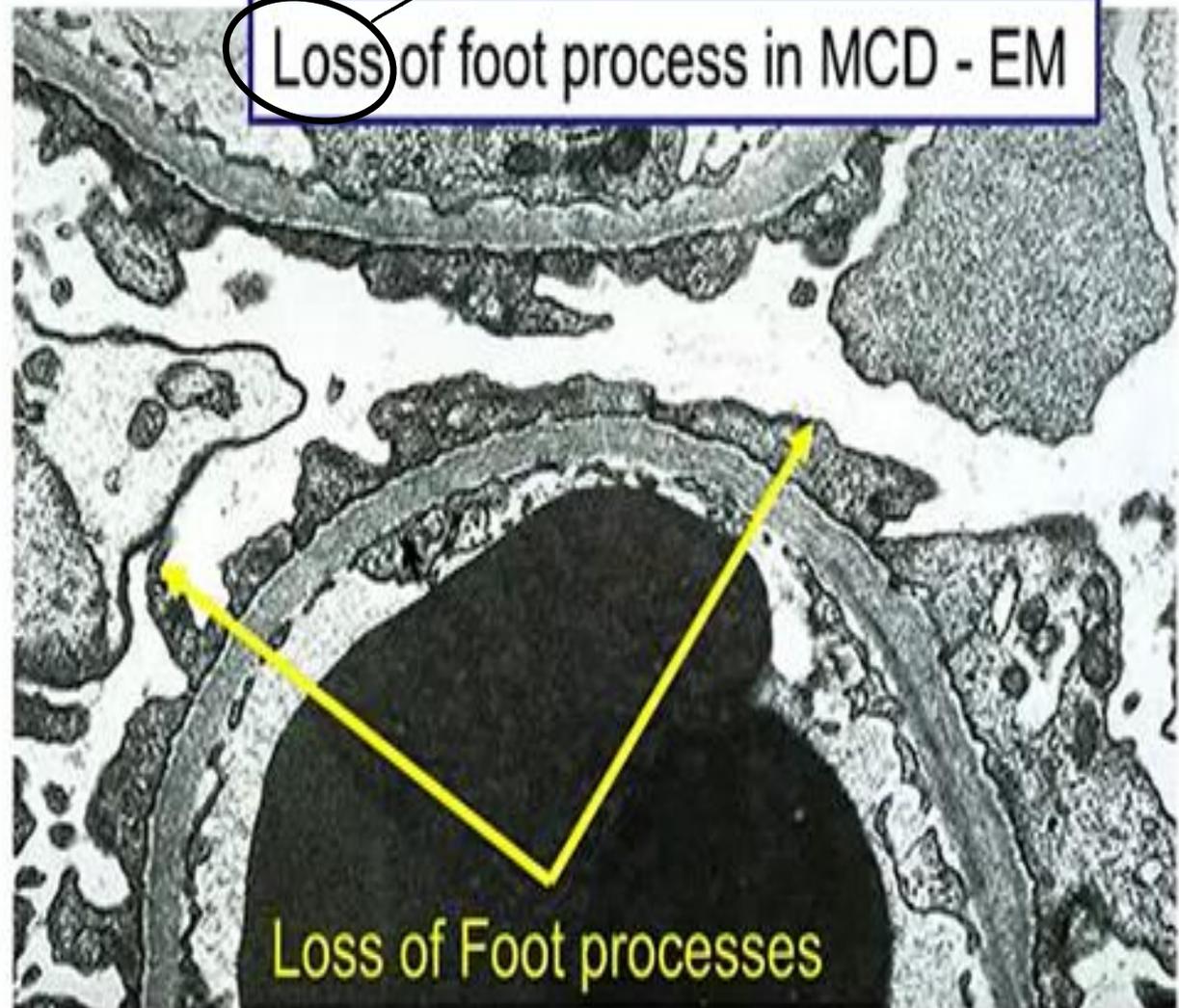
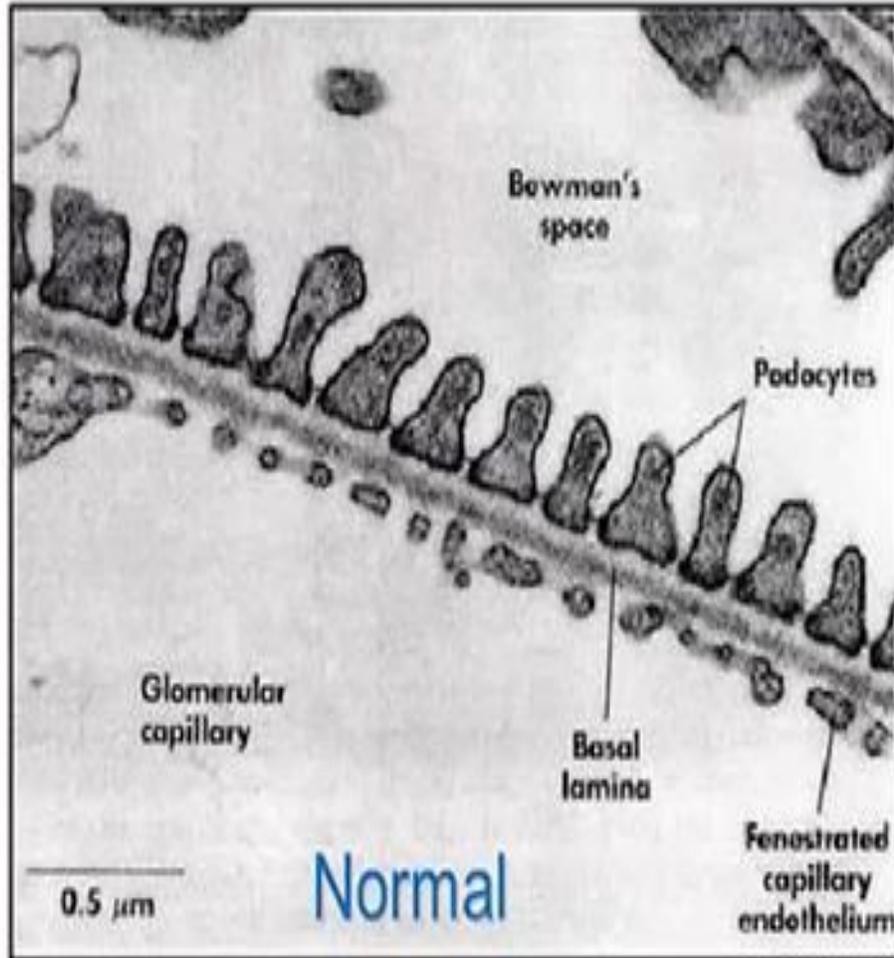
No change in LM ( normal)

Normal Microscopy

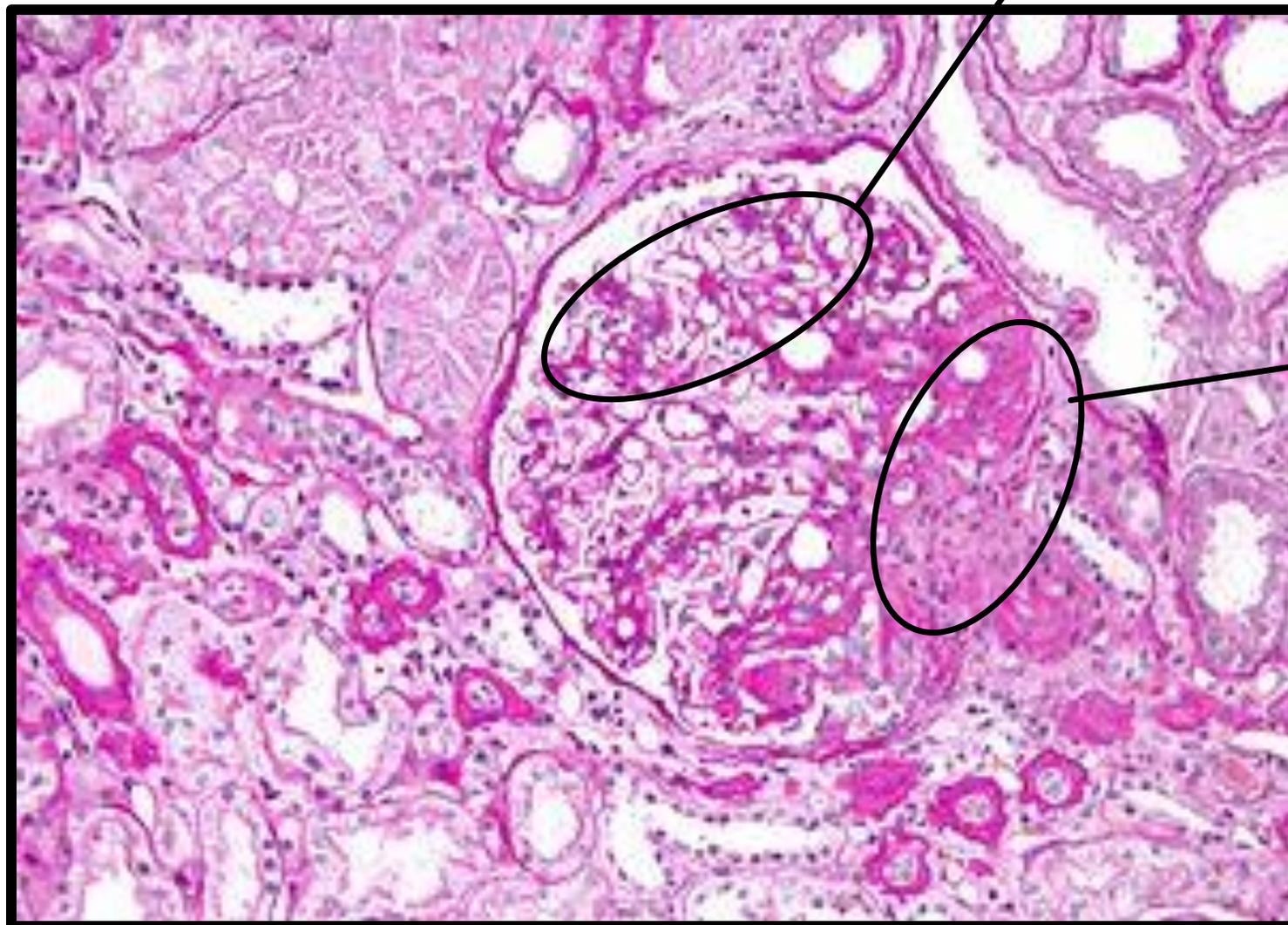


# Minimal Change Disease

Or effacement



Part of kidney affected  
**FOCAL SEGMENTAL GLOMERULOSCLEROSIS**  
(FSGS) Part of glomerulus affected



Site of normal part of glomerulus

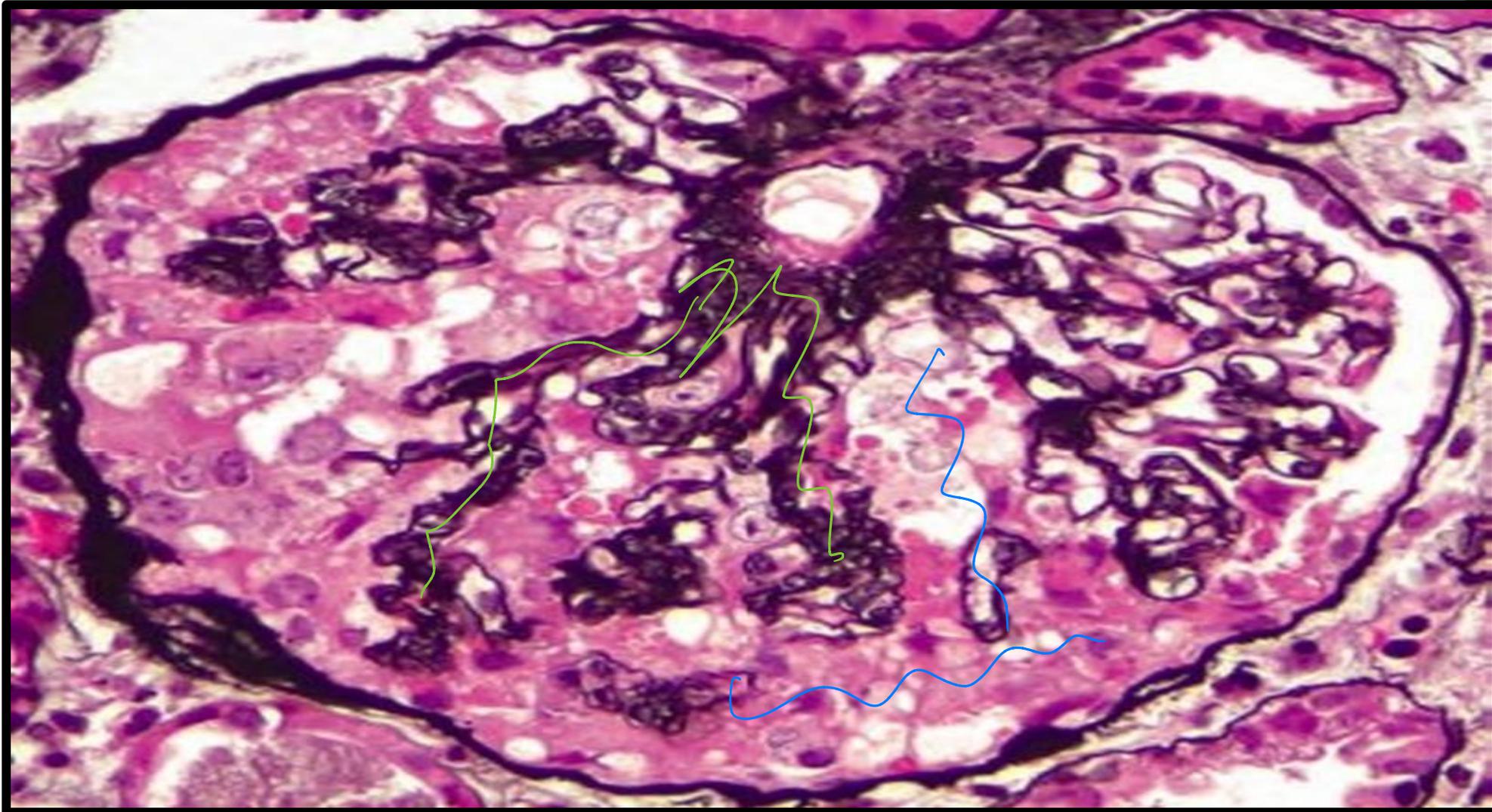
Site of sclerosis

Using silver stain for for glomerular capillary basement membrane

→ Normal portion is stained ( represented by green color )

→ sclerosed portion is not stained ( represented by blue color)

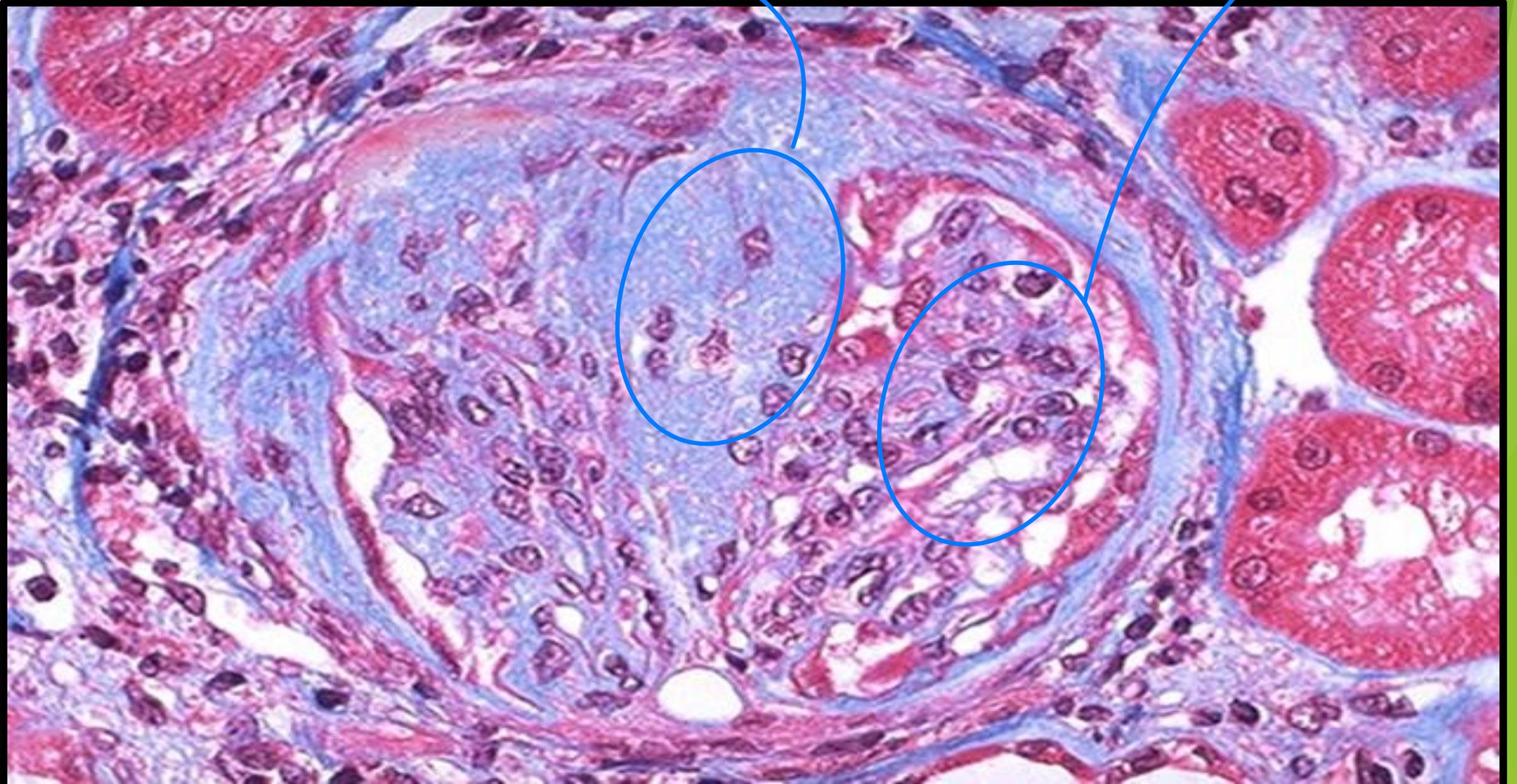
## FSGS - Morphology



# FOCAL SEGMENTAL GLOMERULOSCLEROSIS (FSGS)

Sclerosed

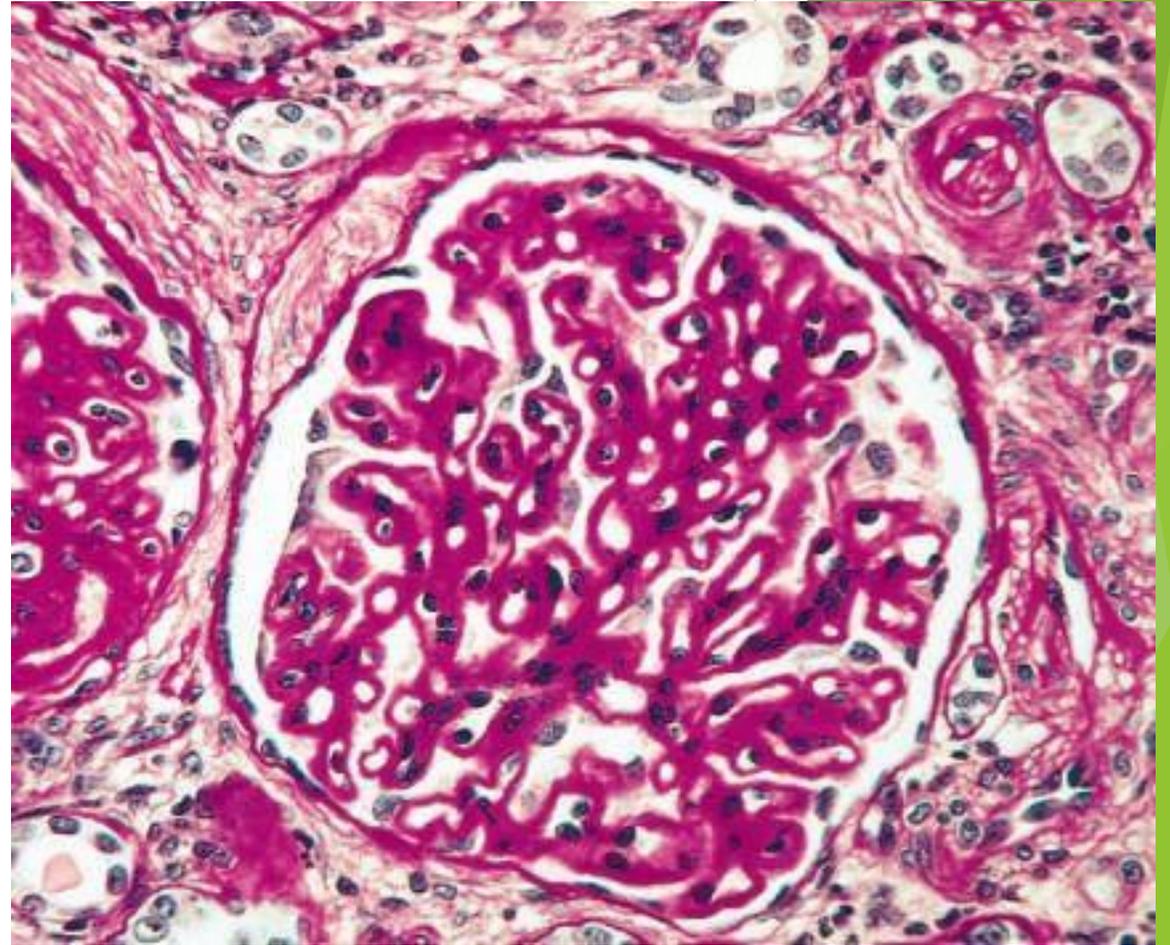
Patent part



# Membranous GN

The main histologic feature is **diffuse thickening** of the capillary wall (GBM) due to epithelial deposits  
PAS stain

Sometimes, no changes like MGD or diffuse membrane thickening



# Membranous GN

EM reveals that thickening is caused by **subepithelial** deposits, which nestle against the GBM & are separated from each other by small, spike-like protrusions of GBM matrix that form in reaction to the deposits (**spike & dome pattern**)

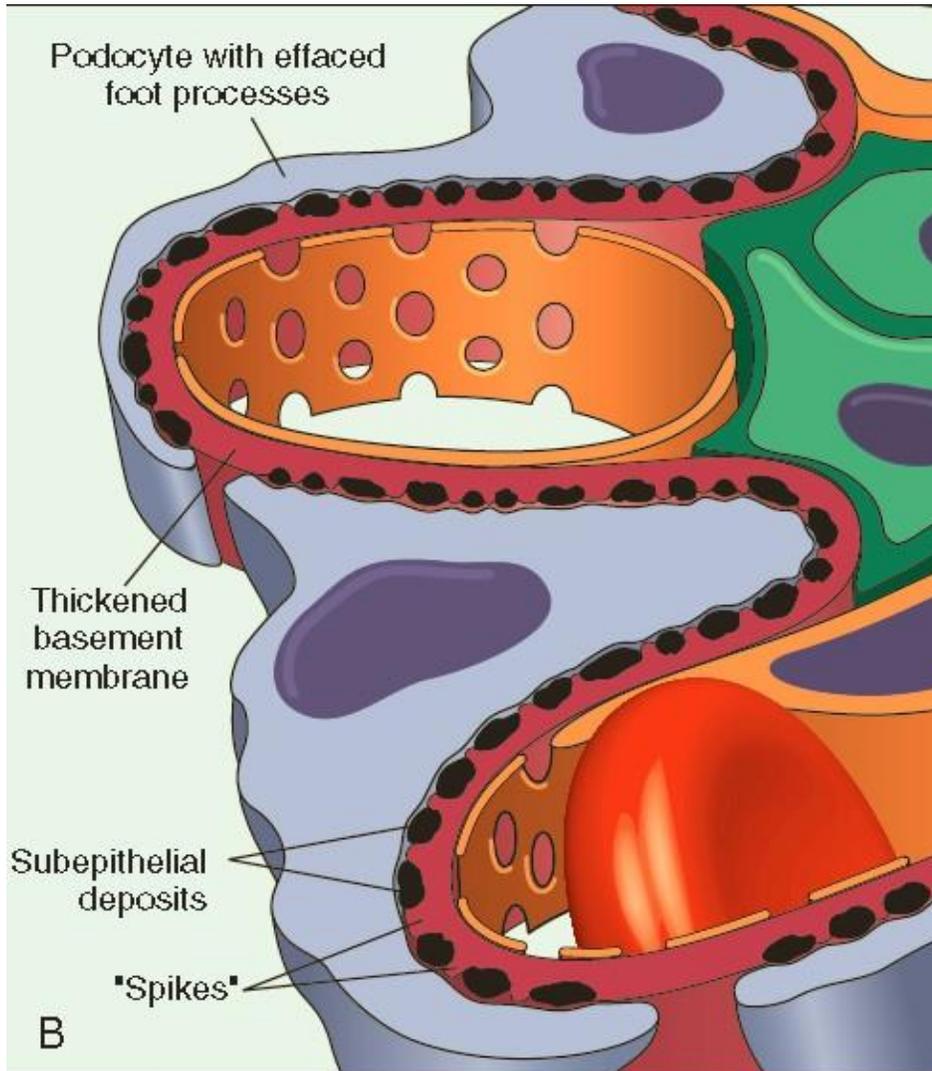


# Membranous GN

By silver stain

—> normal portion is stained

—> spike & dome site not stained



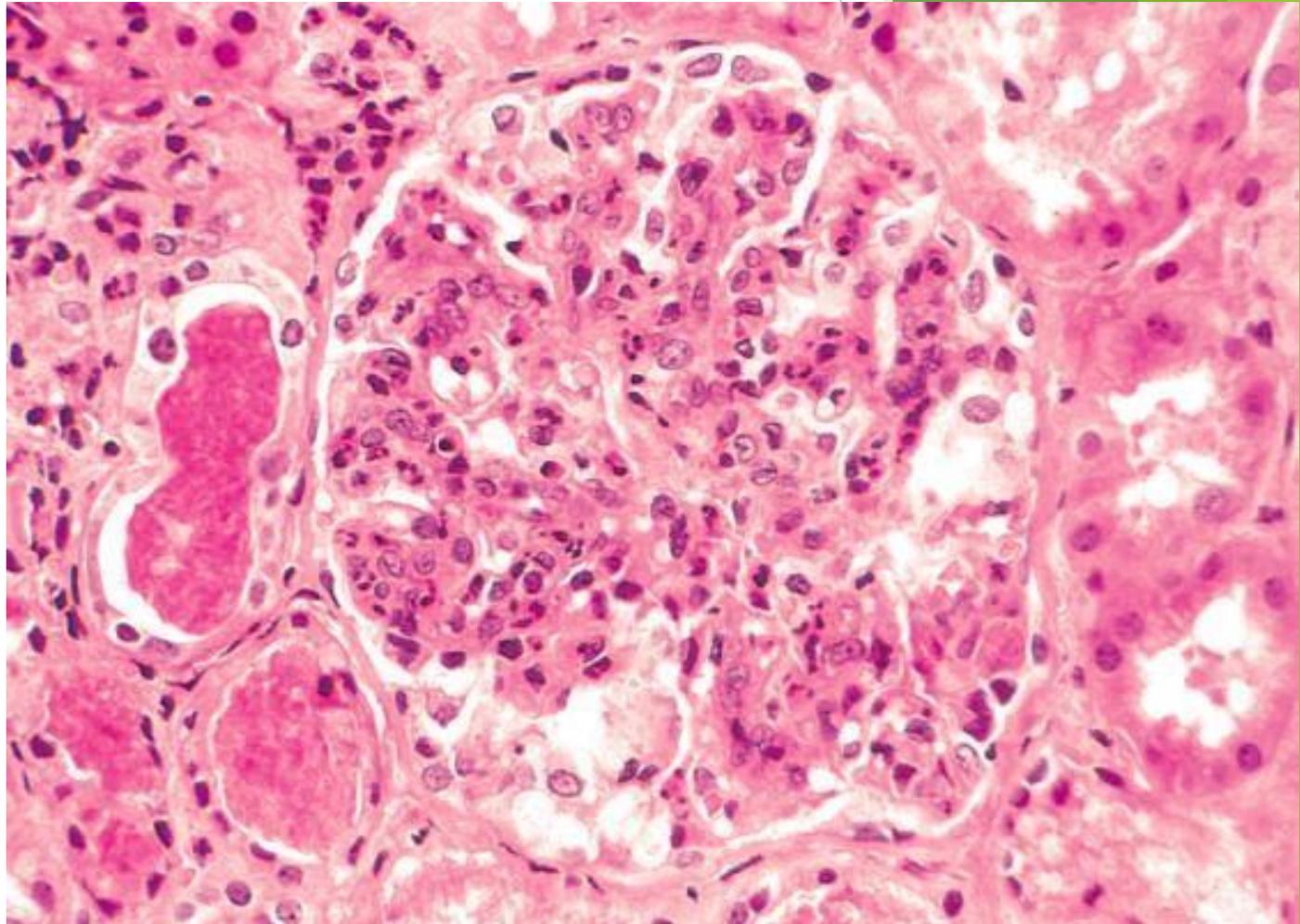
# Post infectious GN LM morphology

Its a proliferative glomerulonehritis

Most characteristic change □  
increased cellularity of all glomeruli  
(nearly all glomeruli) □ caused by

(1) proliferation & swelling of  
endothelial & mesangial cells

(2) by infiltrating **neutrophils** &  
**monocytes**.

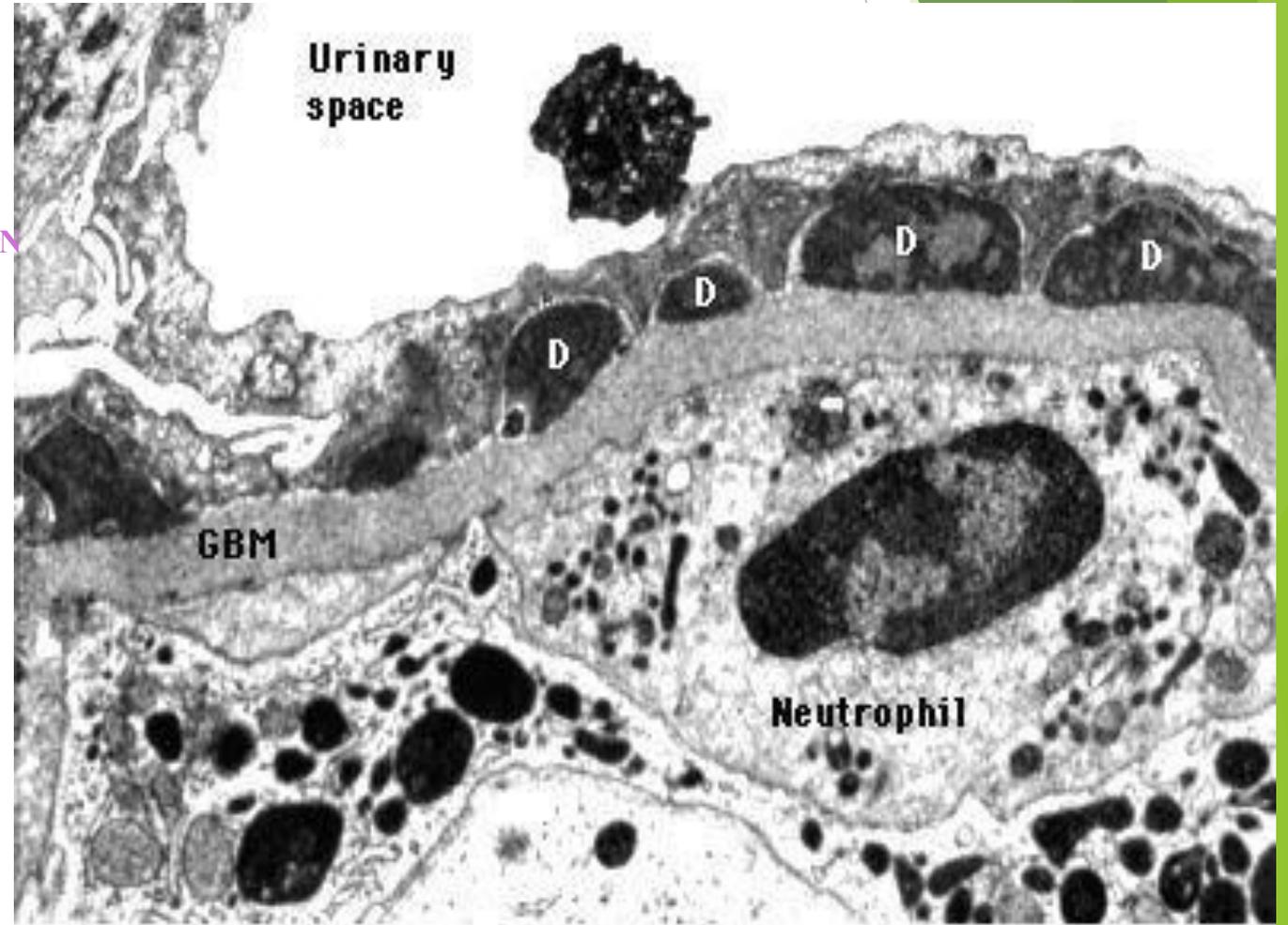


# Post infectious GN

## EM morphology

**EM:** shows deposited immune complexes as *Larger than membranous GN* **subepithelial "humps"** (on the epithelial side of GBM)

**IF:** scattered granular deposits of IgG & complement within the capillary walls



# Membranoproliferative (mesangiocapillary) GN MPGN

Glomeruli are large, have an **accentuated lobular** appearance; proliferation of mesangial & endothelial cells as well as infiltrating leukocytes

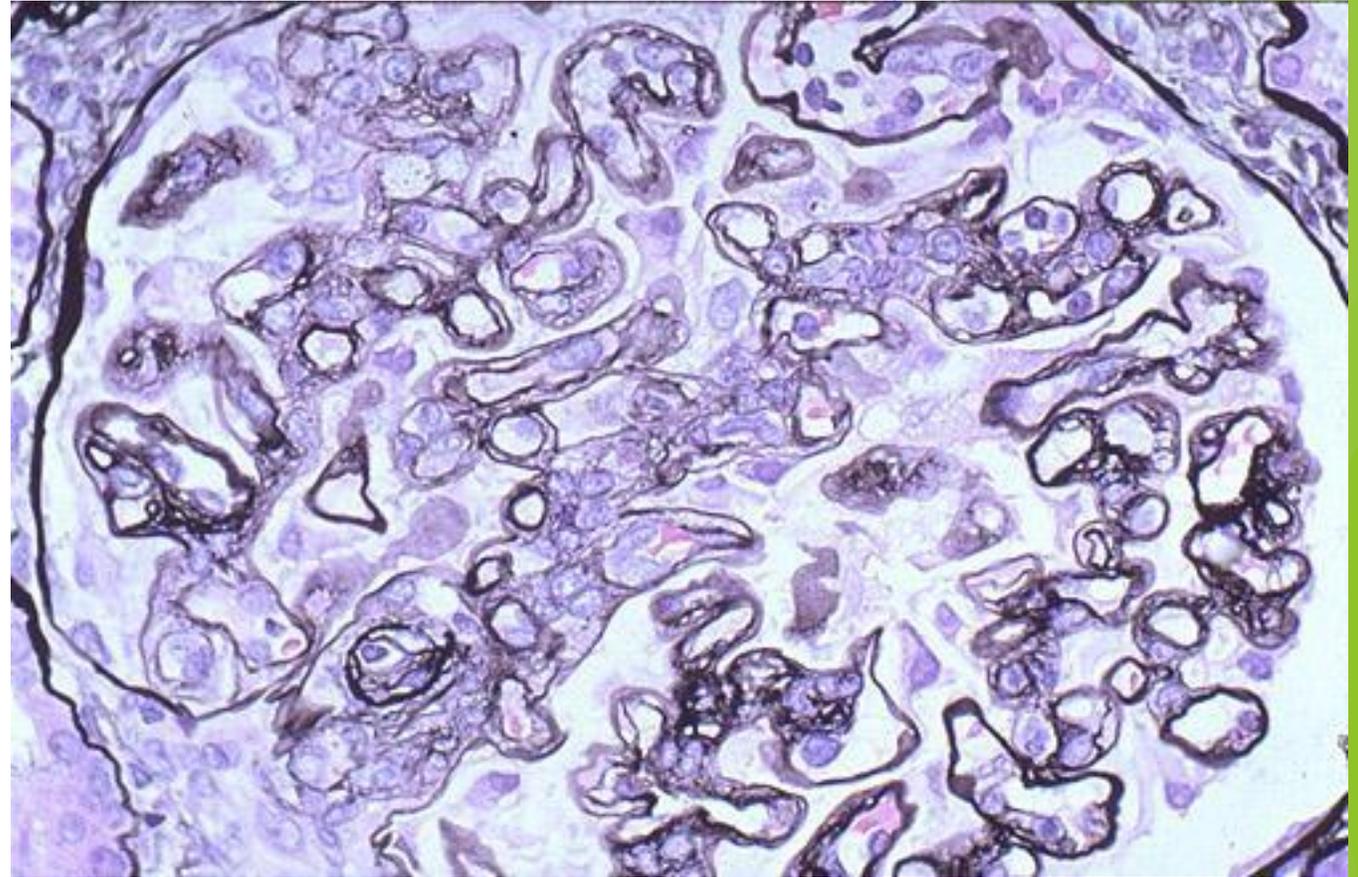
Due to proliferation of cells



# MPGN

## LM morphology

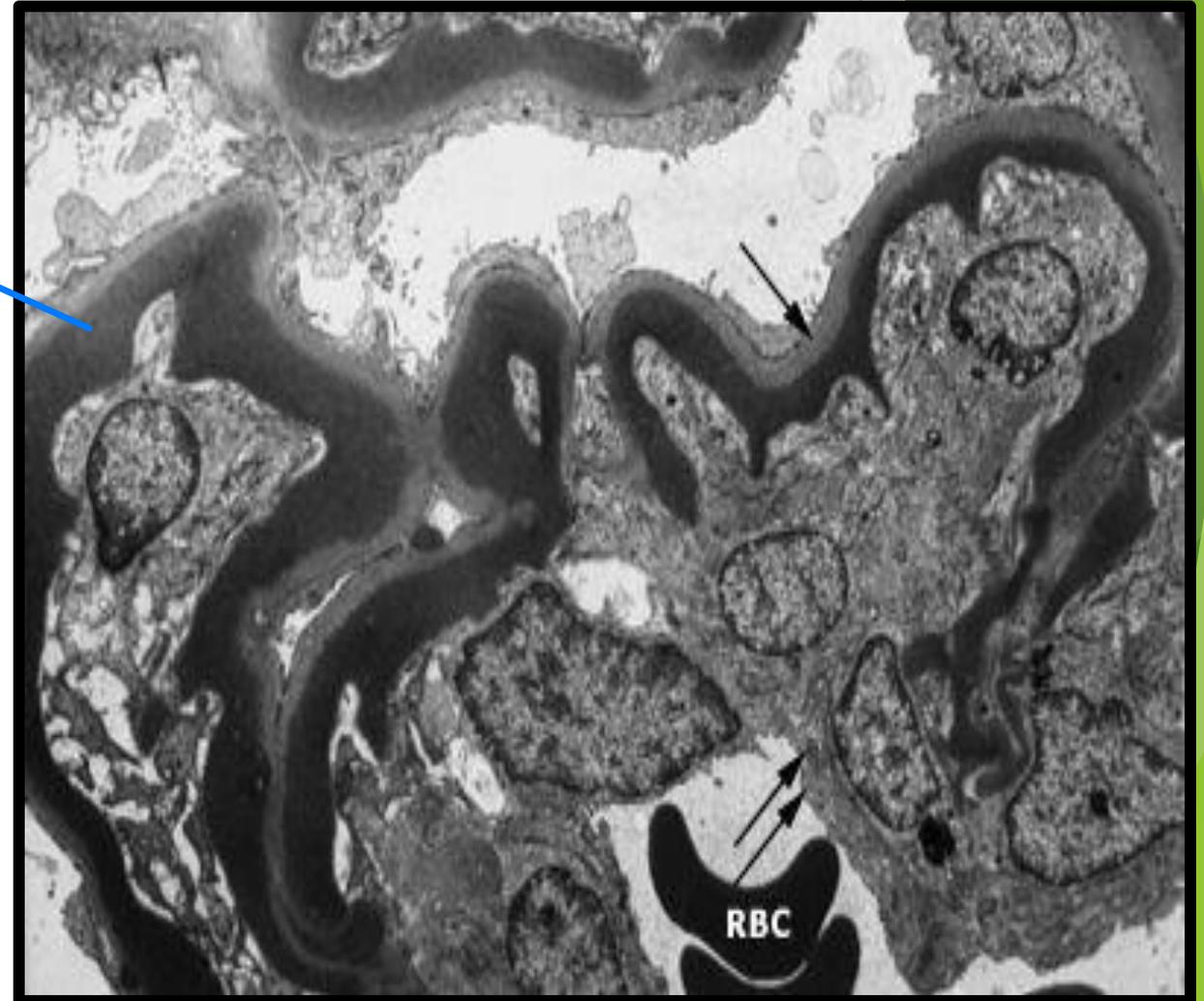
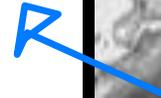
The GBM is thickened, and the glomerular capillary wall often shows a **double contour**, or “**tram track**,” appearance, especially evident with use of silver



## MPGN II/ DDD Dense deposit disease

There are dense homogeneous deposits within the basement membrane. **Ribbon-like appearance** of subendothelial & intramembranous material

غامقة مثل الحزام

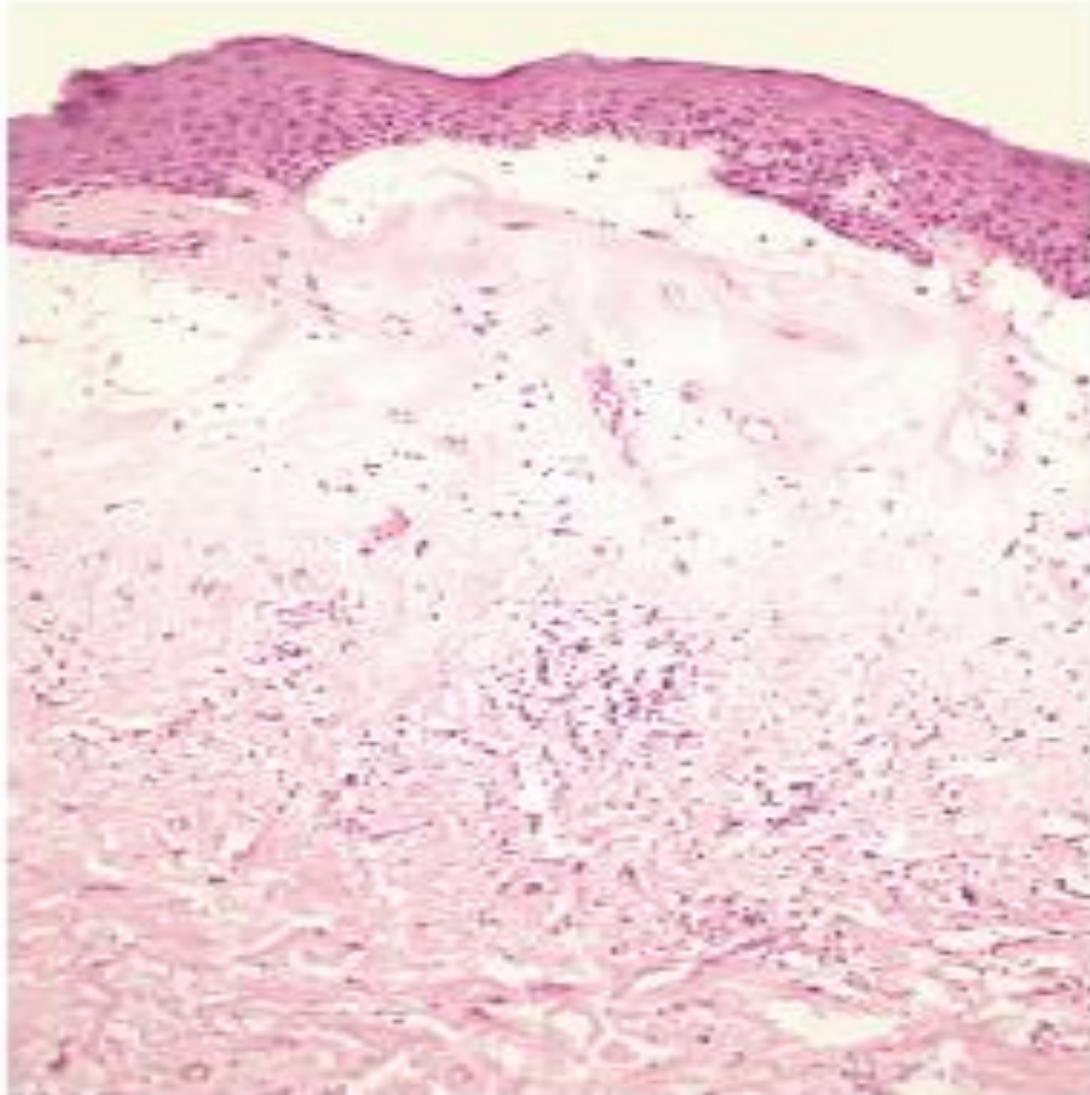


# Female Genital system

The slide features a white background with a decorative graphic on the right side. This graphic consists of several overlapping, semi-transparent green shapes in various shades, including light lime green, medium green, and dark forest green. These shapes are primarily triangular and polygonal, creating a layered, abstract effect that tapers towards the top right corner.

Lichen sclerosis is characterized by thinning of the epidermis, disappearance of rete pegs, hydropic degeneration of the basal cells, dermal fibrosis, and a scant perivascular mononuclear inflammatory cell infiltrate.

May give rise to SCC



Thinned epidermis

Hydropic degeneration  
at basal layer

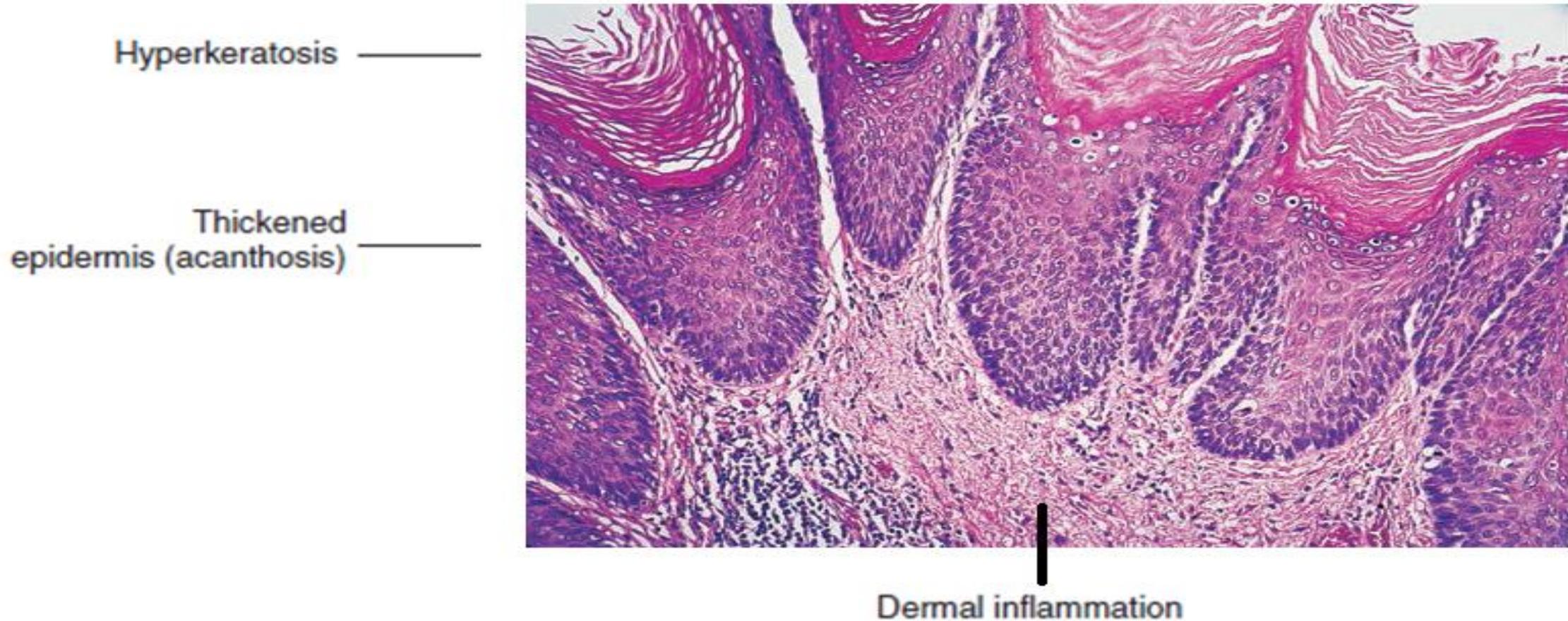
Sclerotic stroma

Dermal  
inflammation

### As chronic dermatitis in histology

- ▶ Lichen simplex chronicus is marked by epithelial thickening (particularly of the stratum granulosum) and hyperkeratosis.
- ▶ Increased mitotic activity is seen in the basal and suprabasal layers; however, there is no epithelial atypia.
- ▶ Leukocytic infiltration of the dermis is sometimes pronounced.

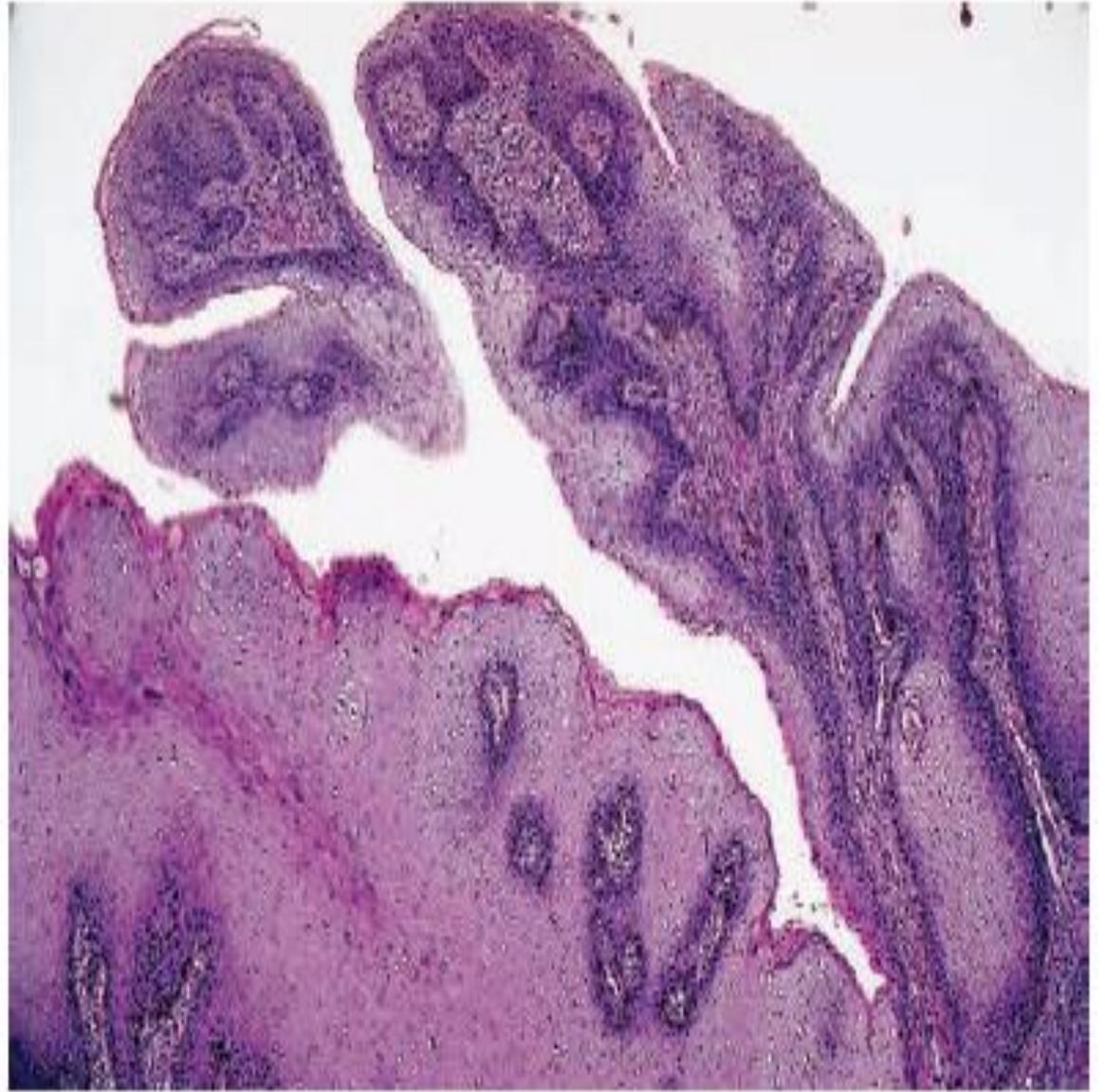
May appear in margin of previously organized SCC



# Chondyloma acuminatum → caused by HPV



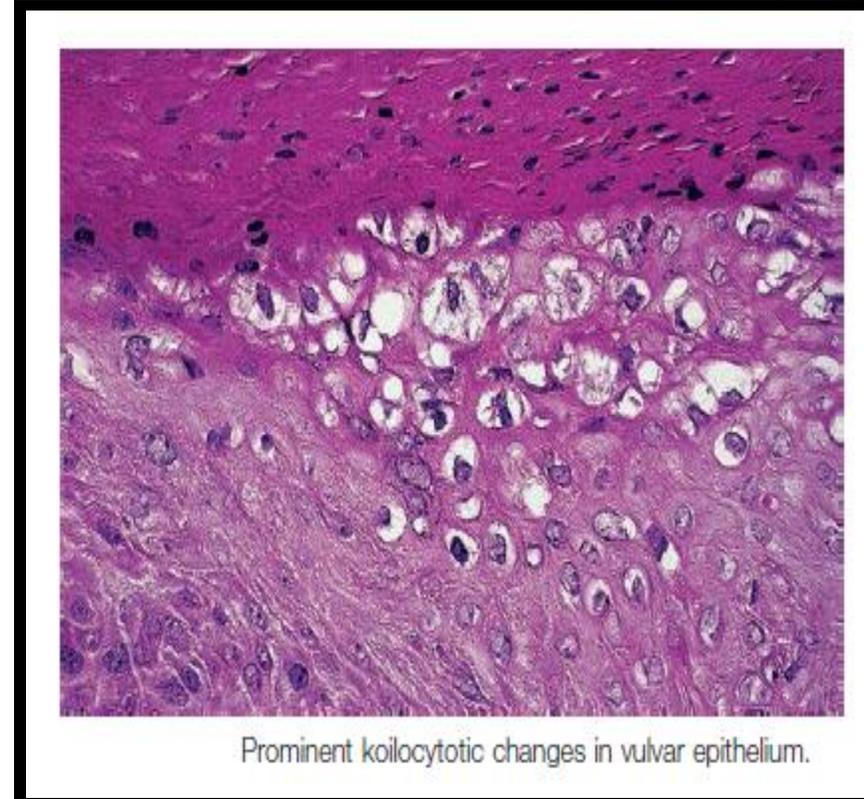
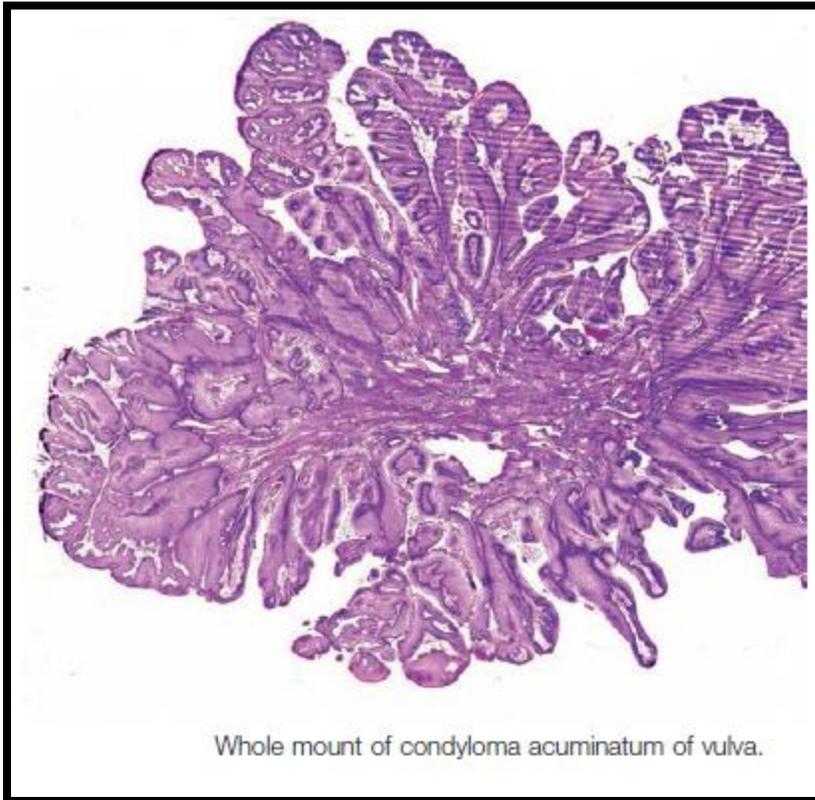
Large condyloma of vulva.



Papillomatous shape of vulvar condyloma.

Hallmark of viral cytopathic effect

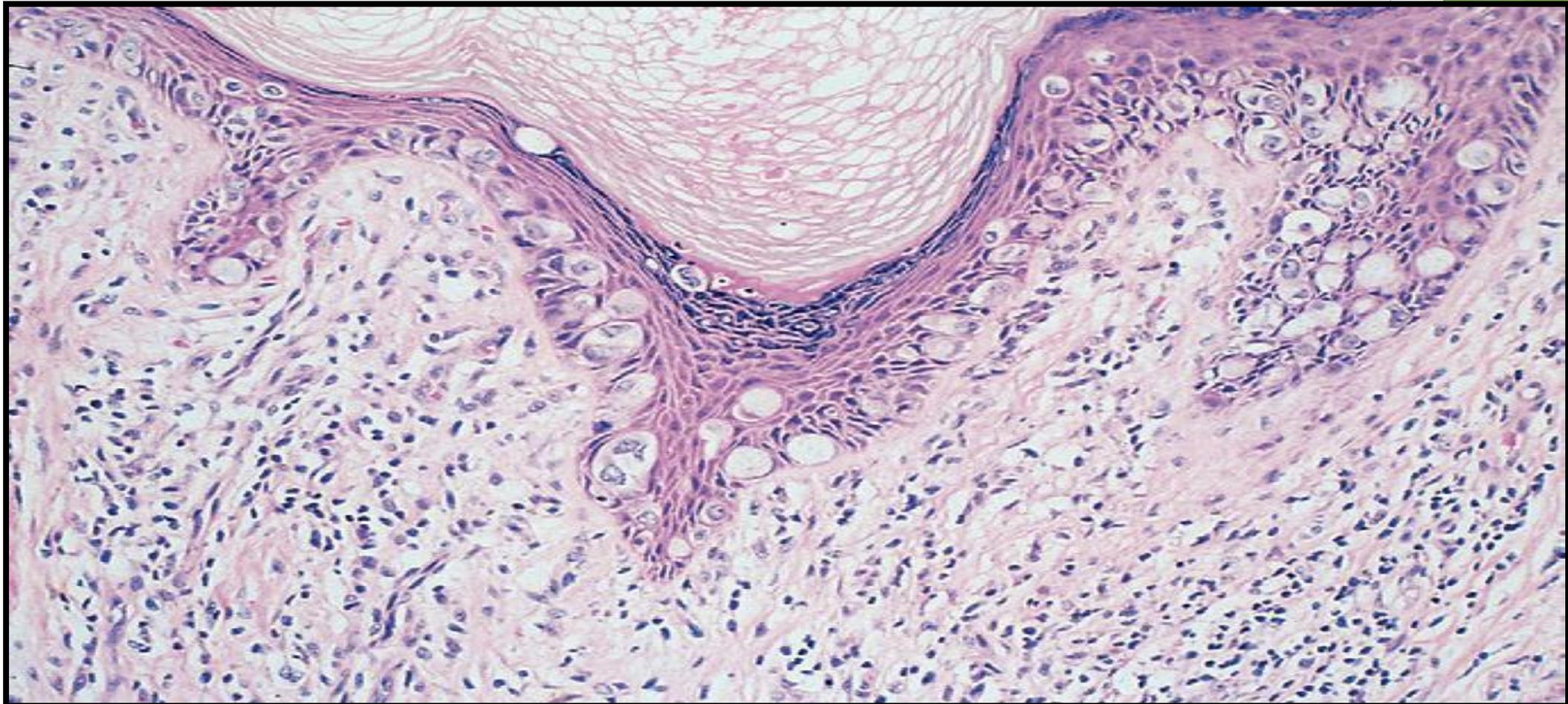
On histologic examination, the characteristic cellular feature is **koilocytosis**, a cytopathic change characterized by perinuclear cytoplasmic vacuolization and wrinkled nuclear contours that is a hallmark of HPV.



On histologic examination, large epithelioid cells with abundant pale, finely granular cytoplasm and occasional cytoplasmic vacuoles infiltrate the epidermis, singly and in groups.

The presence of mucin, as detected by periodic acid-Schiff (PAS) staining, is useful in distinguishing **Paget disease** from vulvar melanoma, which lacks mucin.

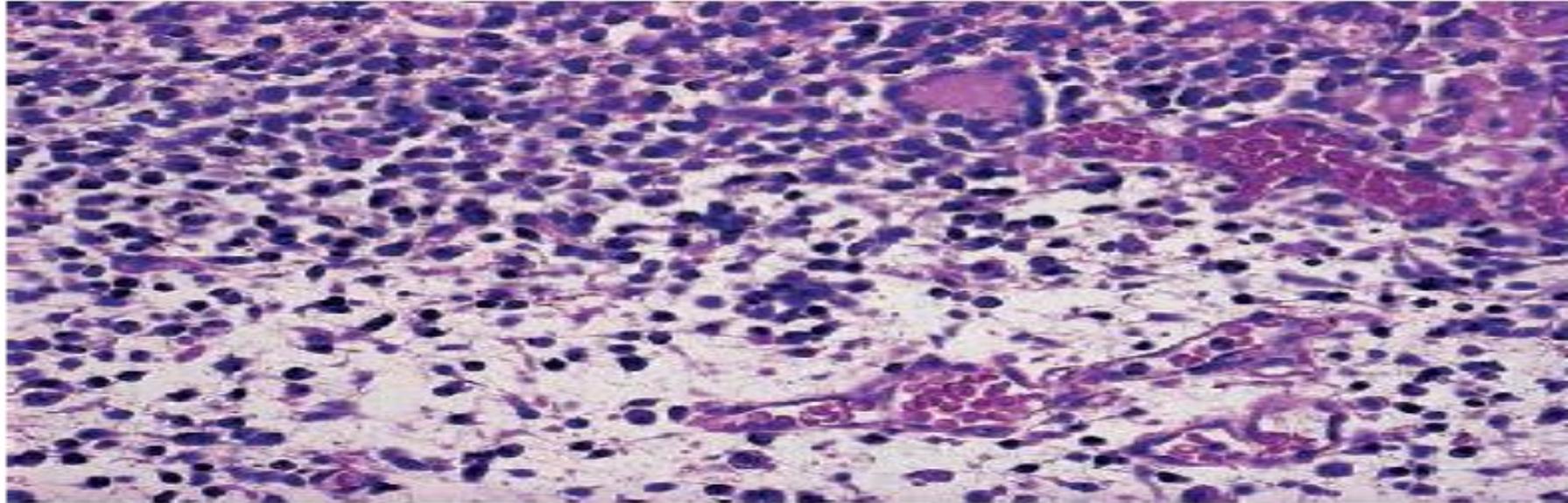
Without association of tumor — **Extramammary paget disease resembles mammary paget disease** — Usually associated with tumors



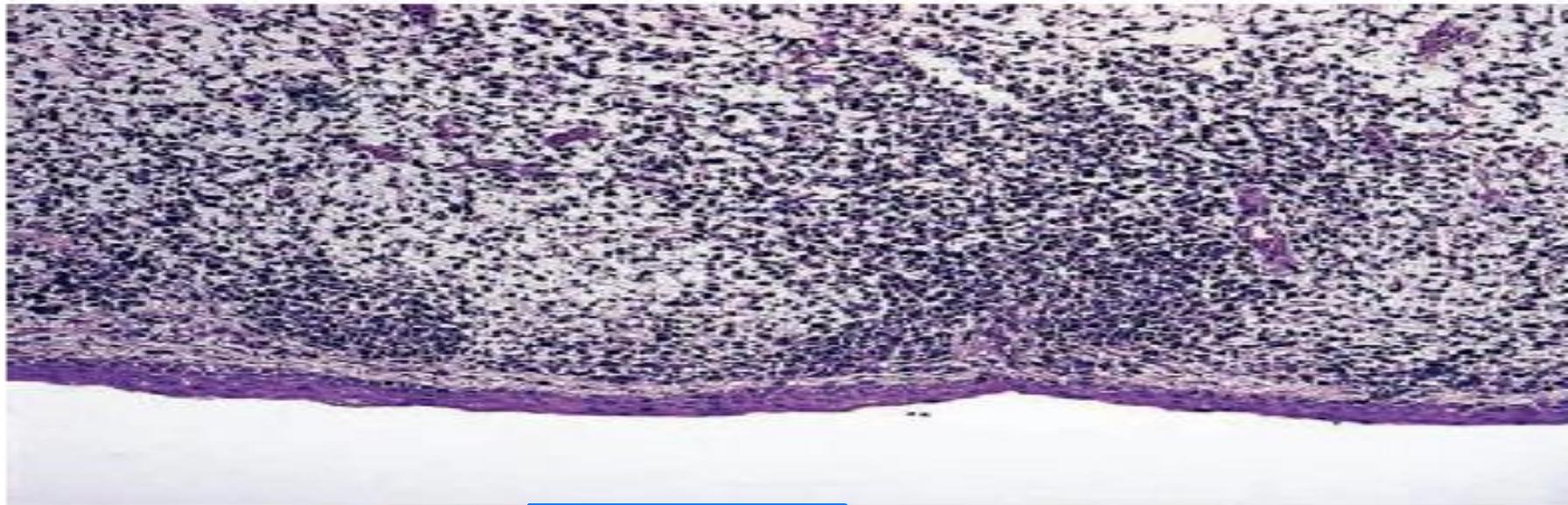
The grape-like configuration of Botryoid Embryonal Rhabdomyosarcoma of Vagina. is characteristic.

Most common of female mesenchymal tumor in children





Microscopic Appearance of Embryonal Rhabdomyosarcoma. The differential diagnosis is that of small round cell tumors.



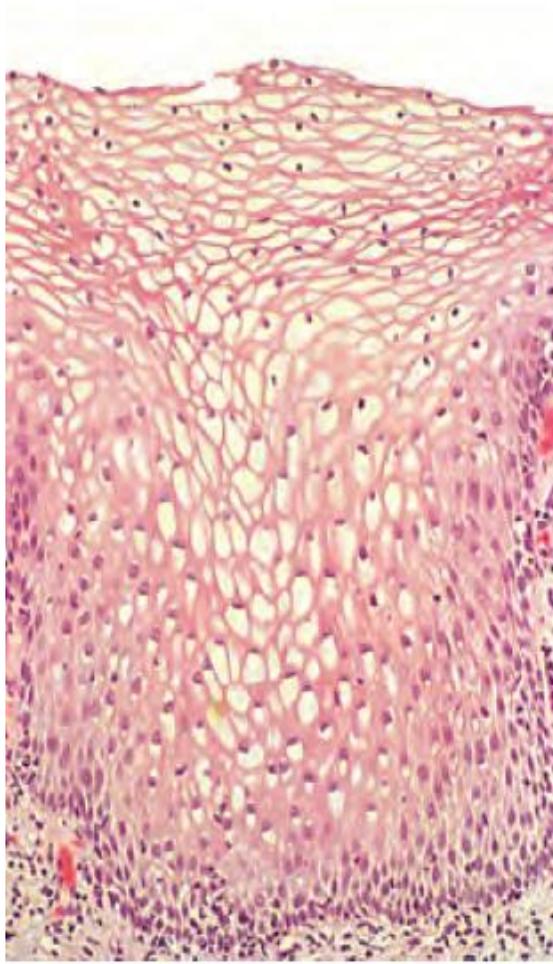
So-called cambium layer beneath non-neoplastic epithelium in embryonal rhabdomyosarcoma.

Characteristic

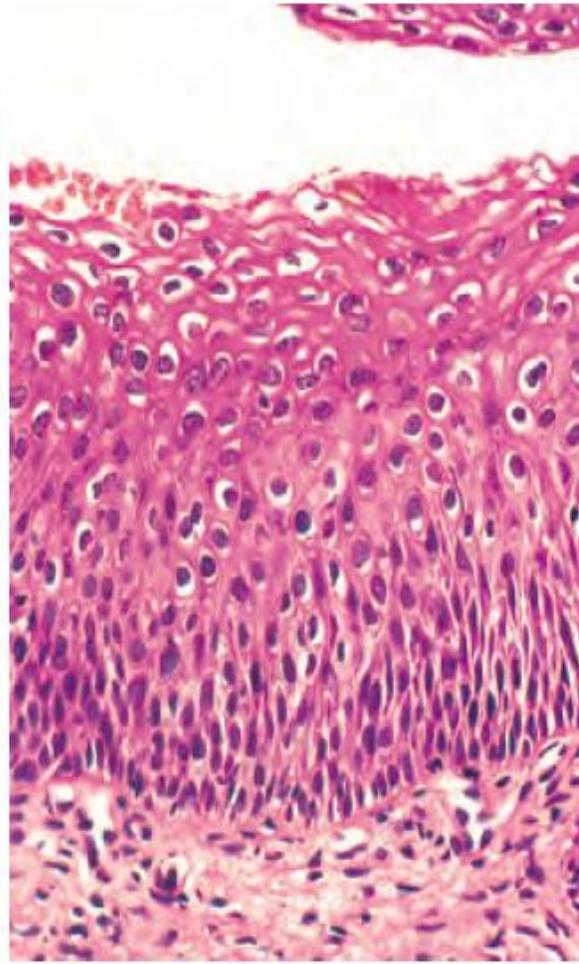
CIN → Dysplasia: nuclear enlargement, hyperchromasia (darker), coarse chromatin, & variation in nuclear size & shape

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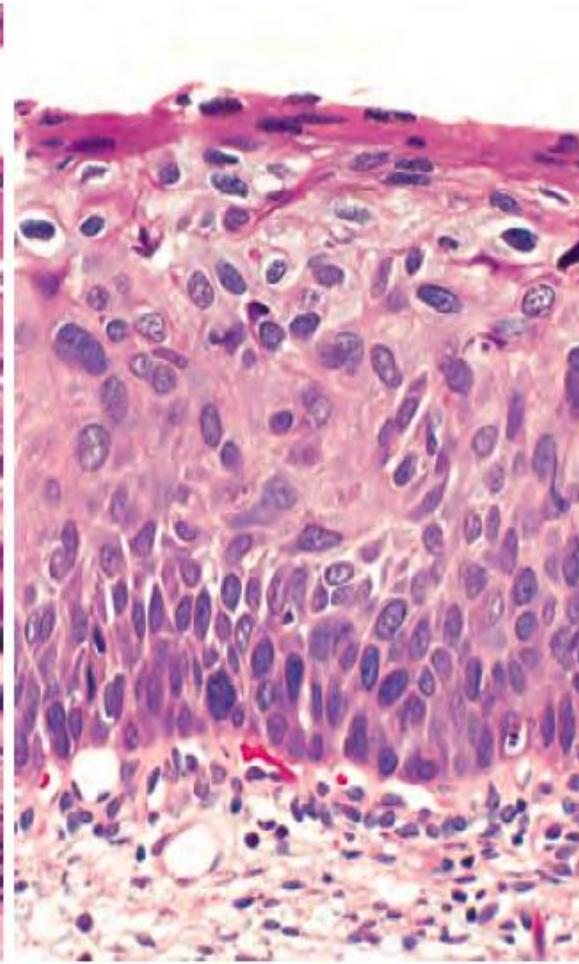
Complete involvement



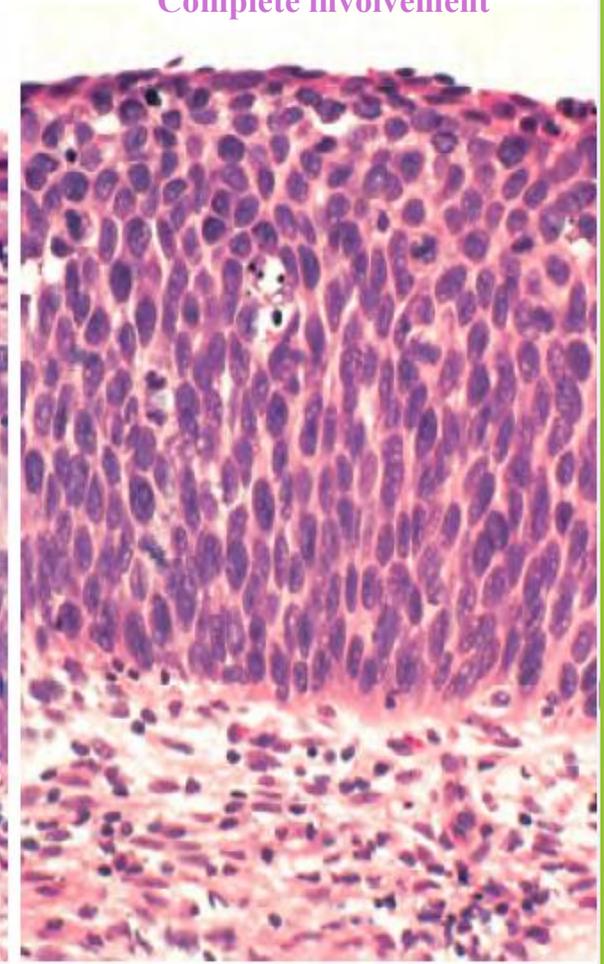
Normal



CIN I



CIN II

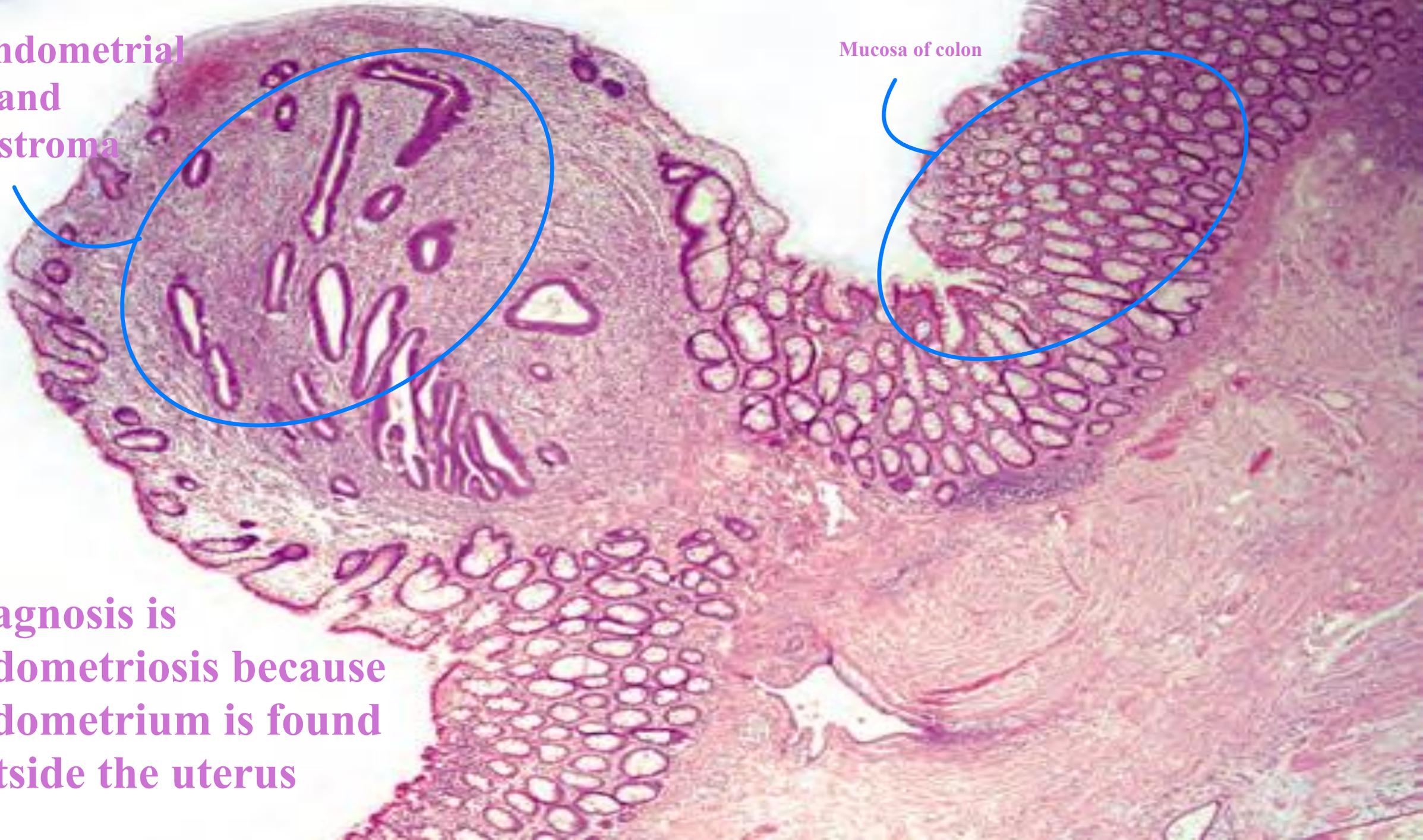


CIN III

**Endometrial  
gland  
& stroma**

**Mucosa of colon**

**Diagnosis is  
endometriosis because  
endometrium is found  
outside the uterus**

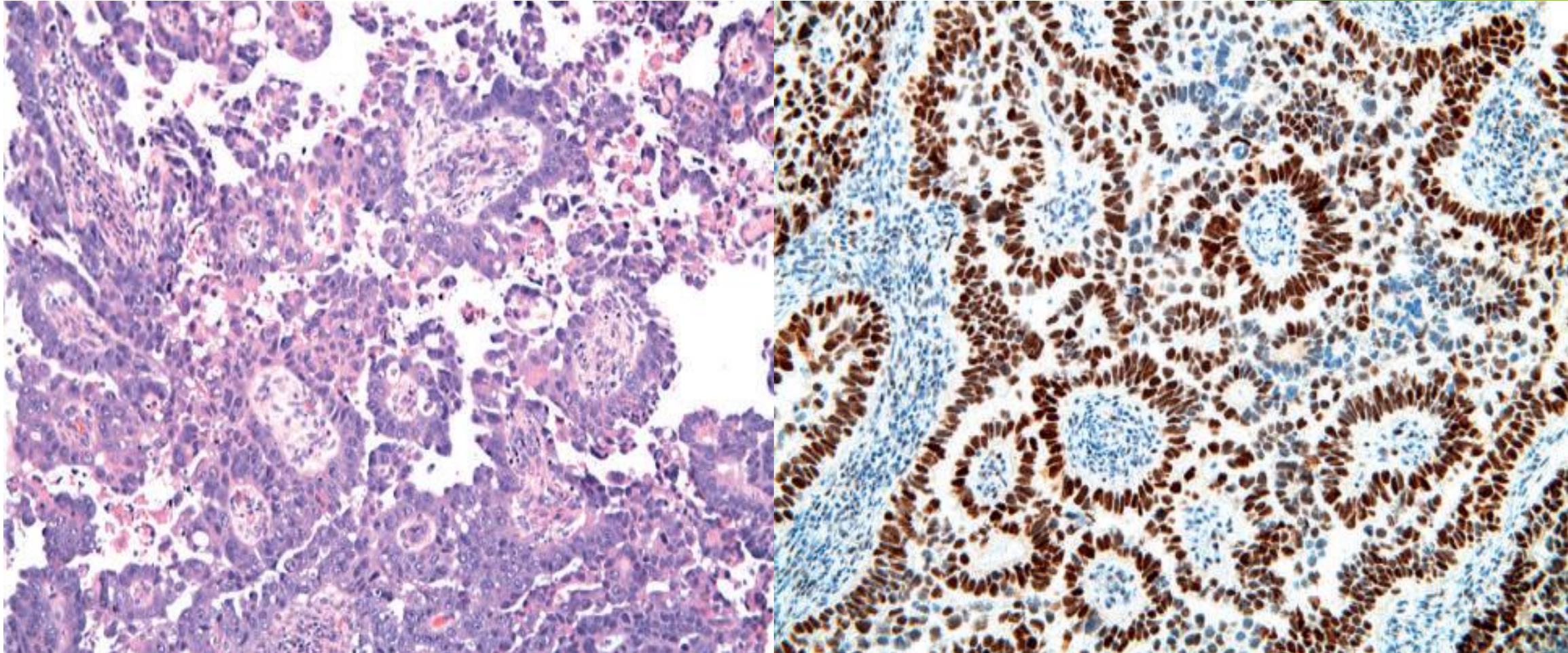


# Tumors of Endometrium - Serous carcinomas

Its less common than endometrioid

P53 -immunostain  
To stain serous carcinoma

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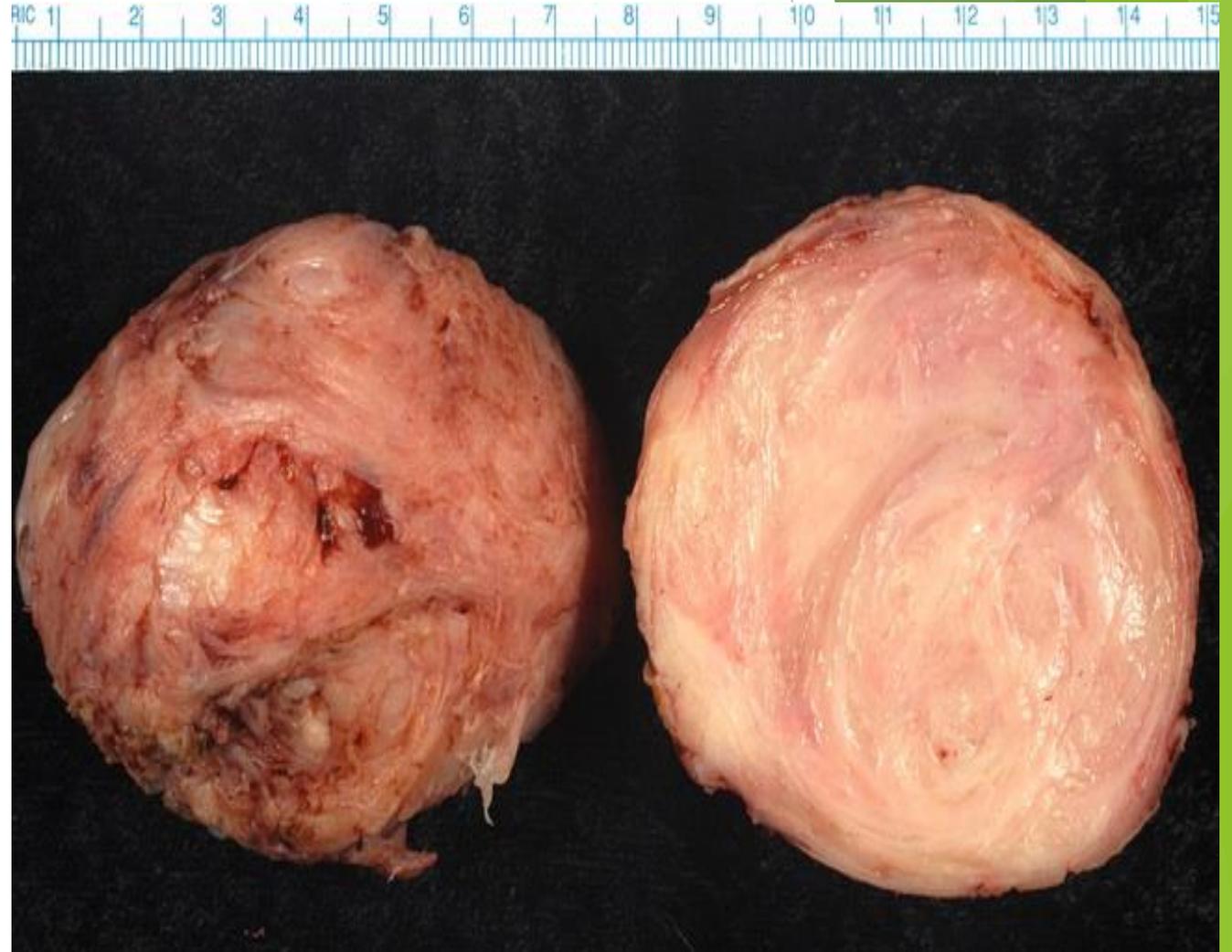


# Tumors of Myometrium - Leiomyomas (fibroids)

Normal histology

26

**Gross:** typically sharply circumscribed, firm gray white masses with a characteristic whorled cut surface, often occur as multiple tumors.

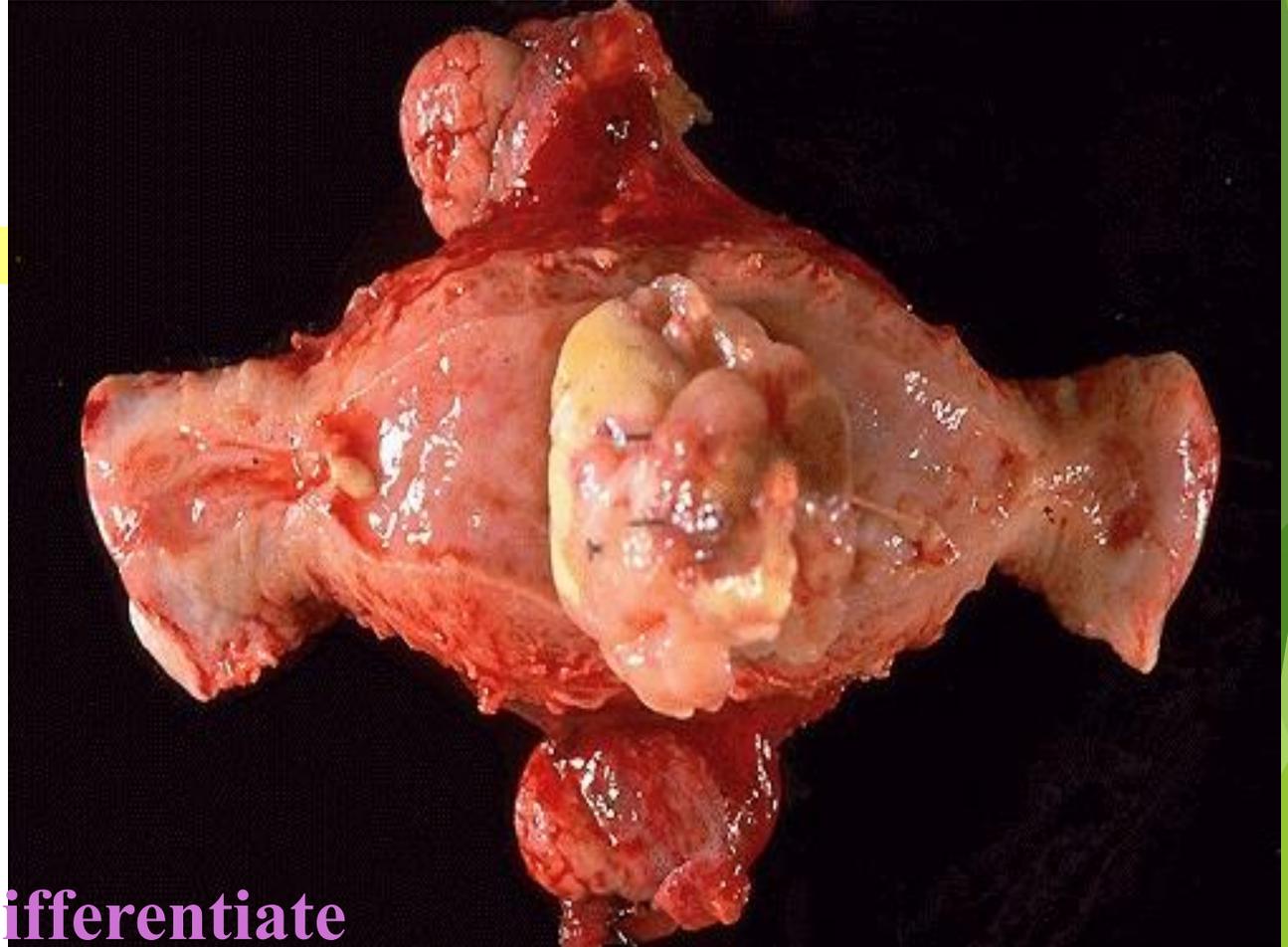


# Tumors of Myometrium - Leiomyosarcoma

**Gross:** soft, **Friable**  
hemorrhagic, **necrotic**  
**masses.**

Irregular borders.

└ Poorly circumscribed

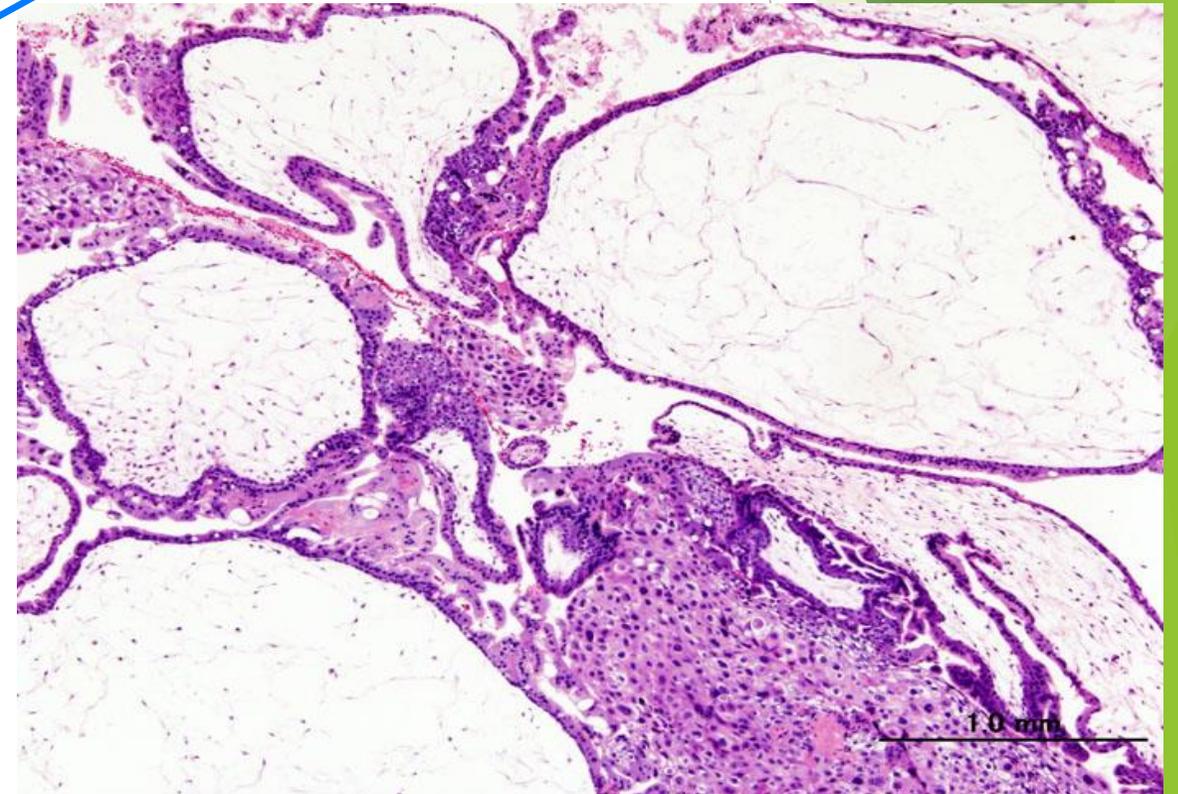
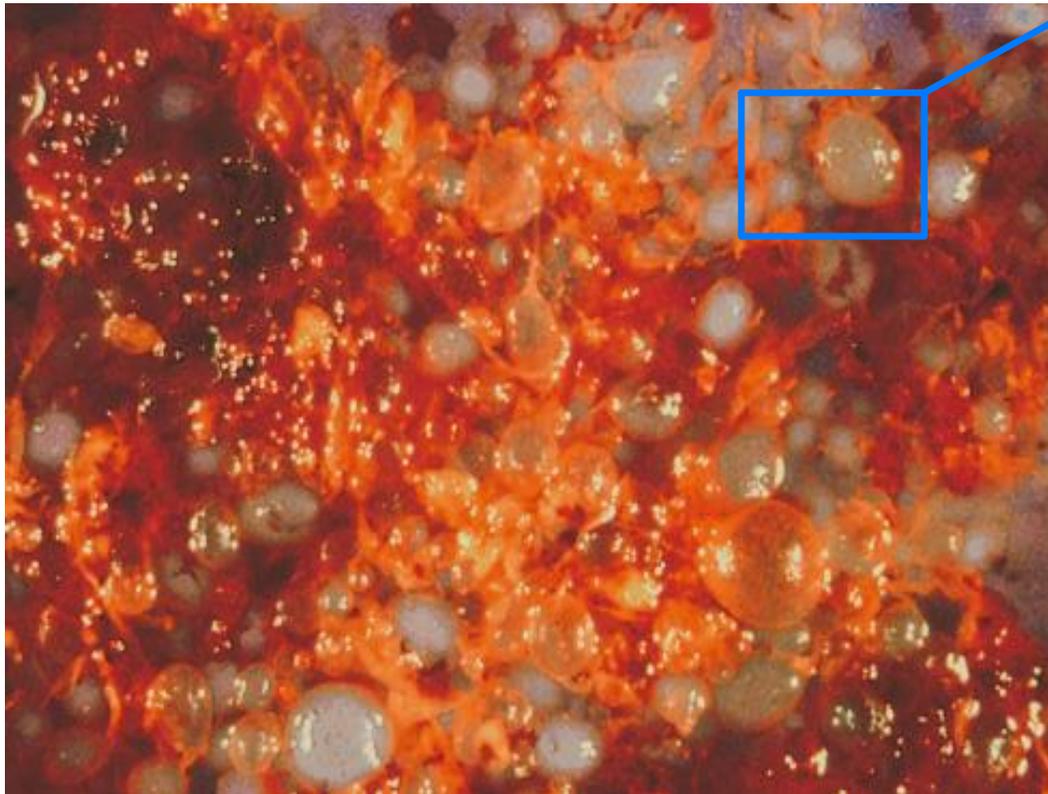


The most important feature to differentiate leiomyosarcoma from leiomyoma is necrosis

# Hydatidiform Mole - Morphology

Uterine cavity is expanded by friable mass (**Grape-like villi**) composed of thin-walled, cystically dilated chorionic villi covered by varying amount of atypical chronic epithelium.

Grape-like villi



The background features abstract, overlapping geometric shapes in various shades of green, ranging from light lime to dark forest green. These shapes are primarily located on the right side of the frame, creating a modern, layered effect. The rest of the background is plain white.

**Thank you**

**Good luck**