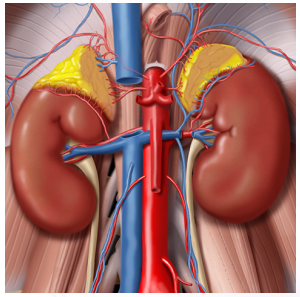


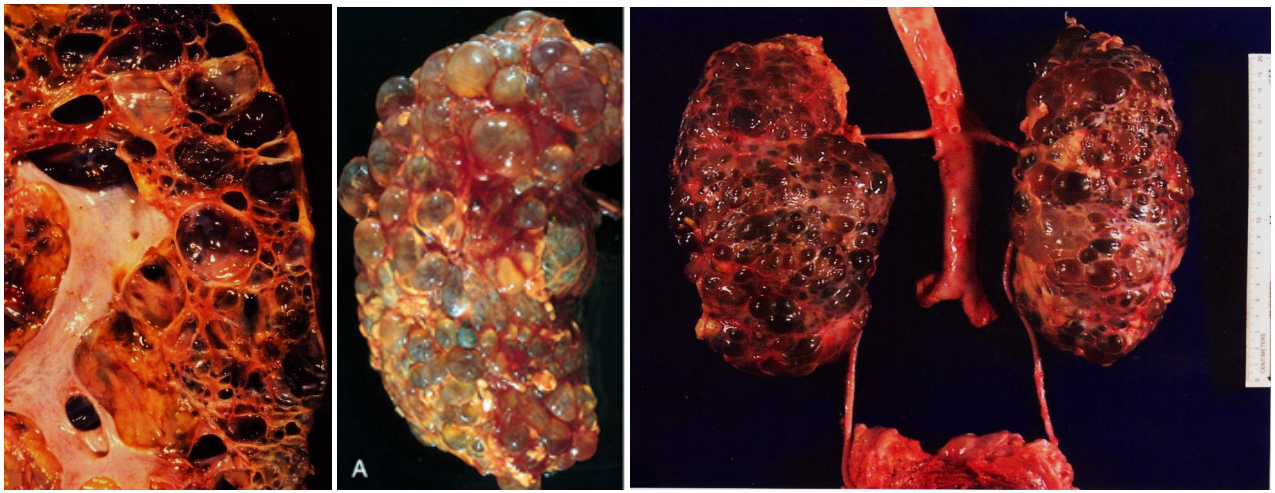
PRACTICAL PATHOLOGY

Renal block

Contents:
8 cases
4 stations in the exam

Color index:
Important
Additional note
Diagnosis

CASE 1



Gross:

1- Enlarged kidney
2- variable sized hemorrhagic cysts.
3- filled with fluid & blood.

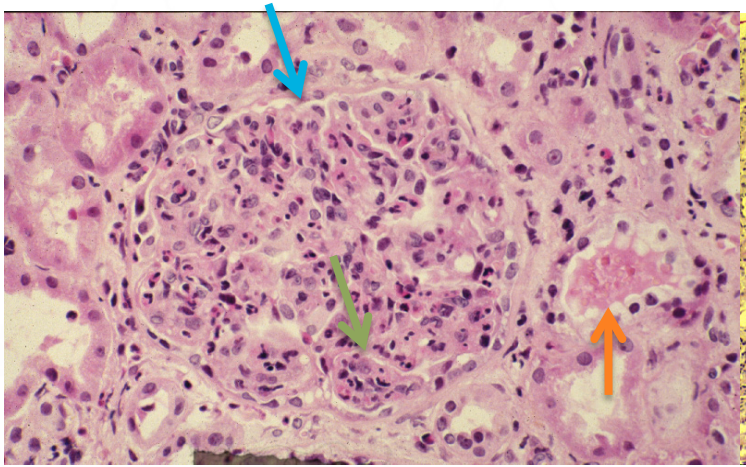
Notes:

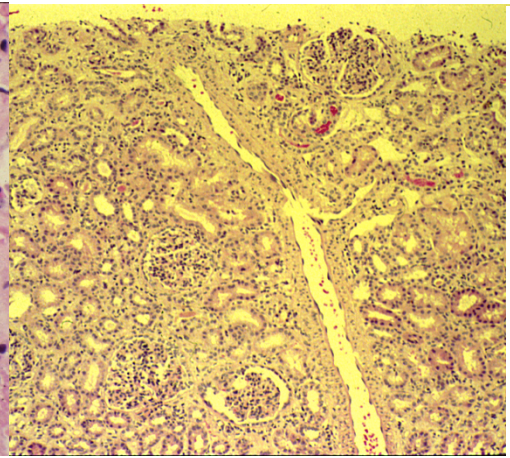
The pattern of inheritance :

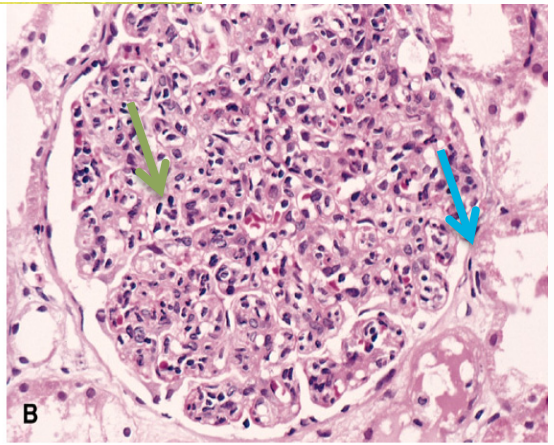
1. adult form is autosomal dominant
2. childhood form is autosomal recessive

Diagnosis: **Polycystic kidney disease**

CASE 2







Histology:

1- Enlarged glomerulus size

2- Hypercellularity increased number of cells especially

- Mesangial cells
- endothelial cells → obliteration

3- Infiltration of Neutrophilic cells.

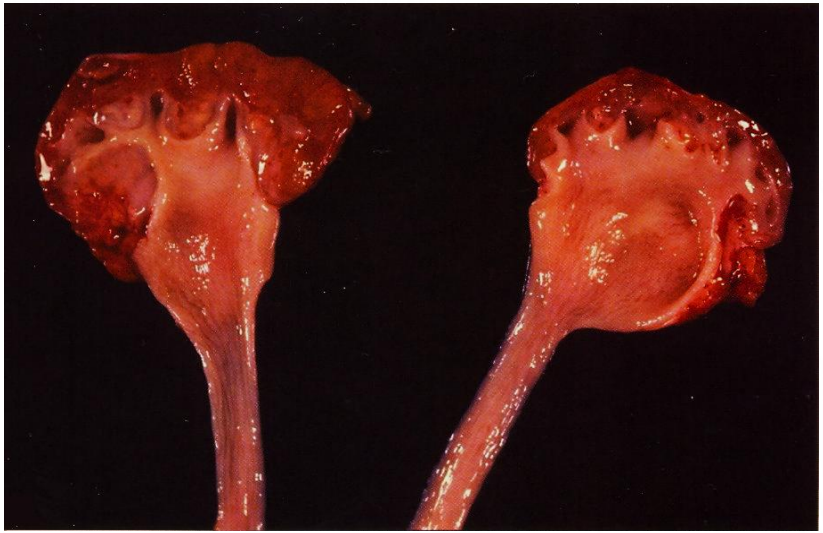
4- Tubules contain red blood casts.

Notes:

- The etiology is Infection by group A Beta-hemolytic streptococci.
- Patient have nephritic syndrome.
- **Serological test: There is usually increased titers of anti-streptolysin O.**
- **Effect children presented with**
  1. **Pharyngitis**
  2. **Smokey (dark) urine**

Diagnosis: Acute proliferative glomerulonephritis/ **Poststreptococcal glomerulonephritis****

CASE 3



Gross:

1- Dilation of pelvis & calyces
2- Atrophied (reduced) renal cortex & parenchyma

Notes:

Causes of Hydronephrosis:

1- calculi (Renal stones)
2- atresia of the urethra
3- Benign prostatic hyperplasia
4- carcinoma of the prostate
5- bladder tumors
7- spinal cord damage with paralysis of the bladder.

Diagnosis: **Hydronephrosis**

CASE 4

Extensive inflammatory reaction with focal Hydronephrosis and Pyonephrosis

Pyonephrosis with small abscesses in cortex.

Pyonephrosis in cortex with renal stone in calyx .

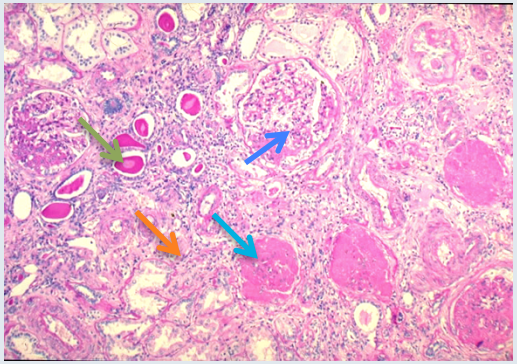
Notes: pyo- = pus
Patients present with :
1. **Fever**
2. **Chills**

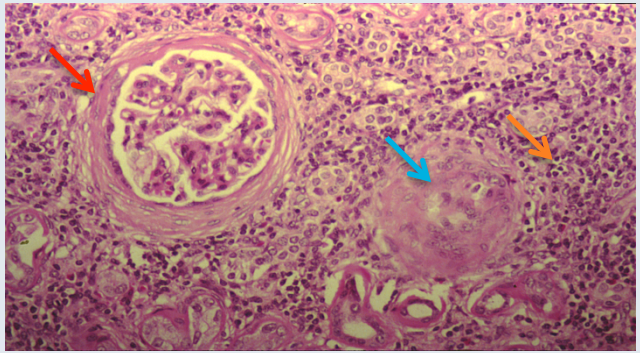
Diagnosis: Pyonephrosis

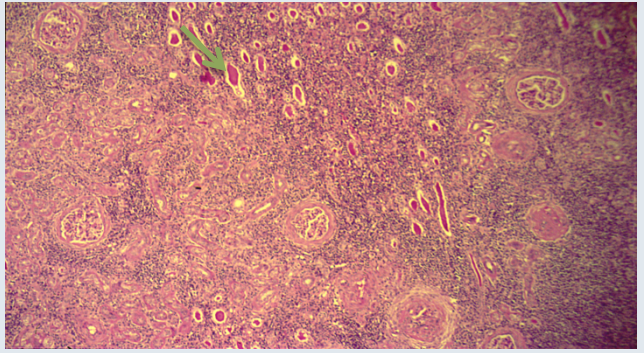
CASE 5

Gross:
1- Atrophic and
2- irregular deformed kidney surface
3- Showing some deep and coarse cortical scar (fibrosis) areas.

Histology:
1- Periglomerular fibrosis & sclerosis.
2- Thyroidization. (Tubules are filled with eosinophilic hyaline cast)
4-chronic inflammatory cells infiltration in the Interstitium.
5- Hyalinized and fibrotic glomeruli.(can be Global or segmental)



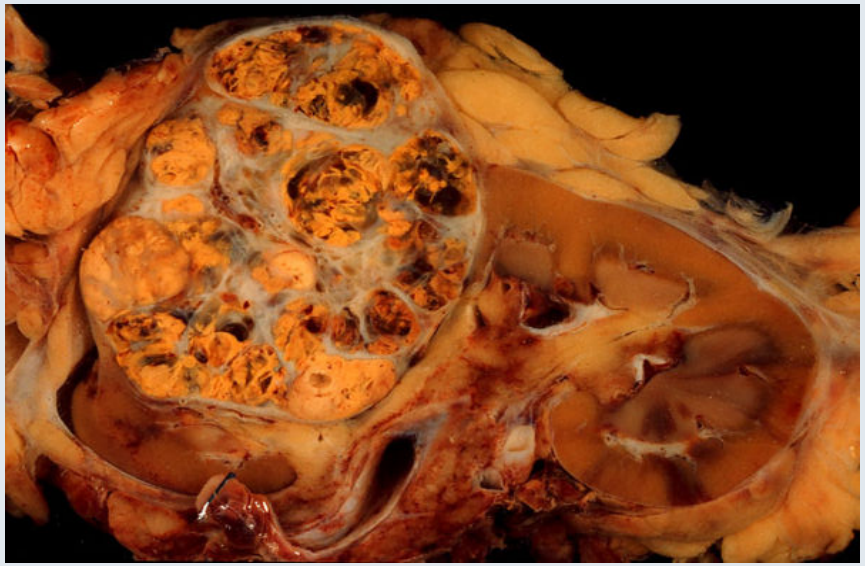




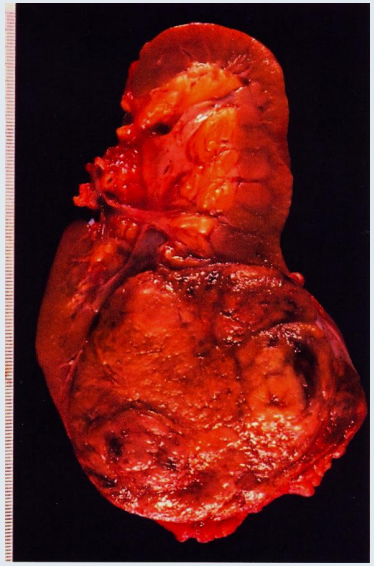
Notes: Deformed renal calyces and pelvis can be noted.

Diagnosis: **Chronic pyelonephritis**

CASE 6



Gross:
1- well-circumscribed cortical golden mass.
2- partly hemorrhagic and yellow.
3- Lobulated cut surface.



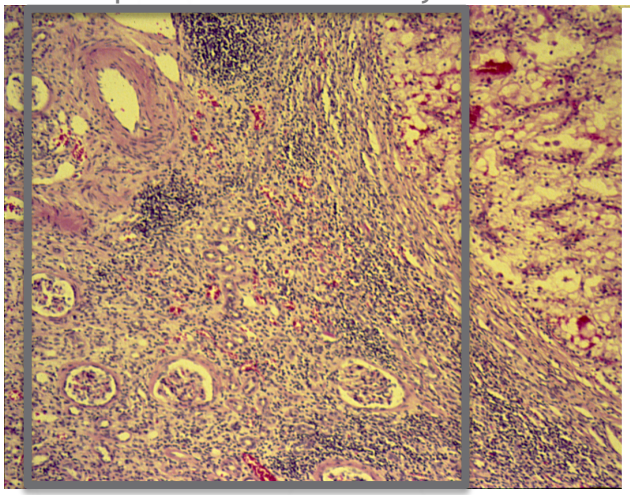
Abnormal mass located within the lower lobe of the kidney (and can be upper)

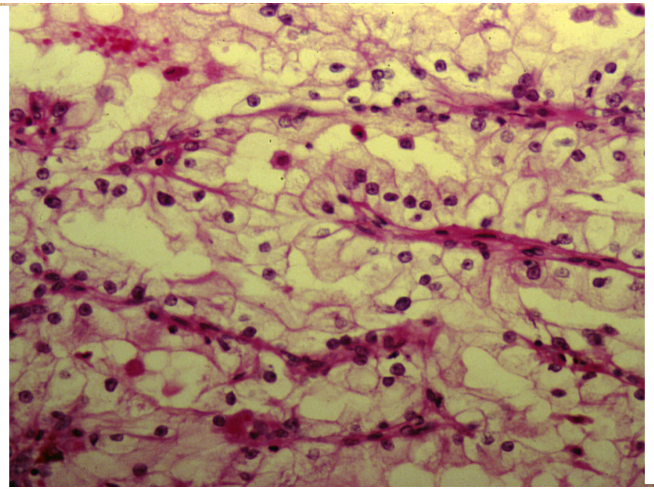
Notes:
Clinical and Lab features include :
1- Abdominal mass
2- Flank pain
3- Hematuria
4- Fever
5- Secondary polycythemia
6- Ectopic production of hormones
7- Hypercalcemia

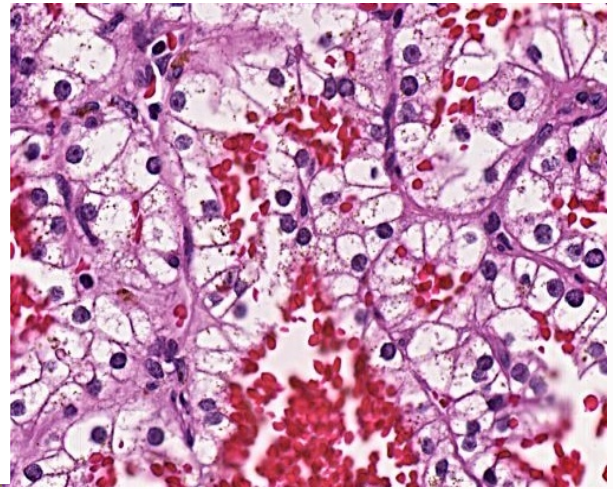
Diagnosis: **Renal cell carcinoma** (clear cell carcinoma of the kidney)

CASE 6

Compressed normal kidney







Histology:

1-Clear tumor cells with hyperchromatic nuclei

2. Areas of hemorrhage and necrosis

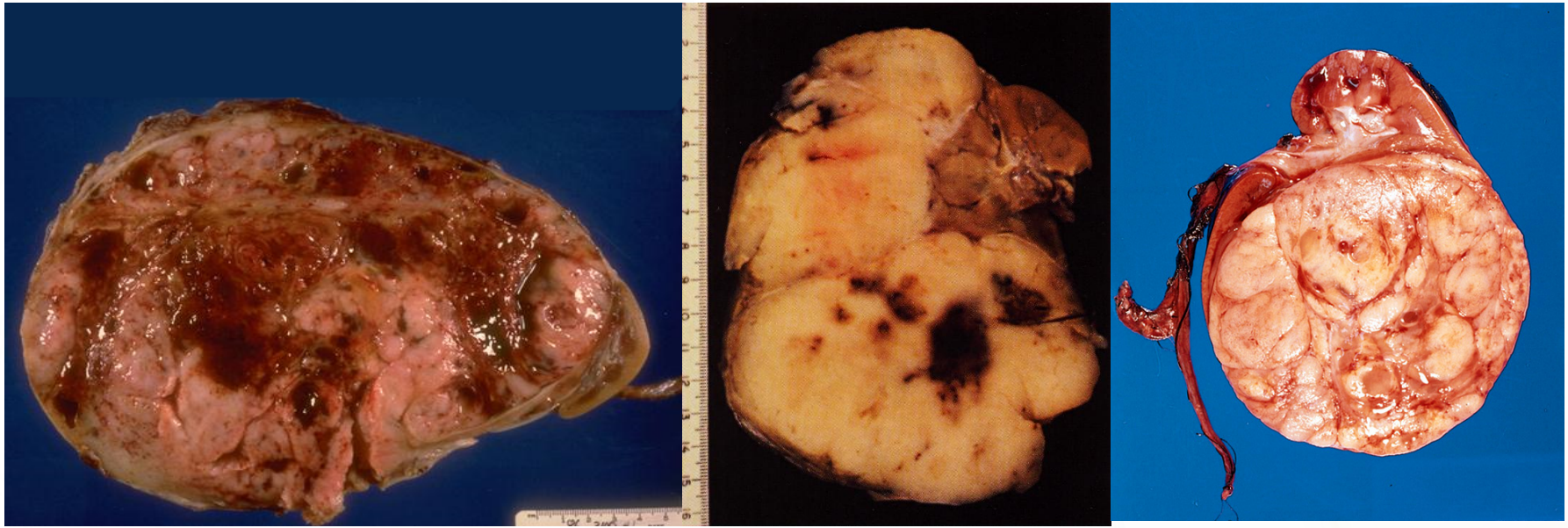
3- Mitosis & Pleomorphisom

5- Clear cytoplasm (some contain glycogen + lipid) and piknotic nuclei)

6- Cells are arranged as alveolar group separated by fibrovascular septae.

Diagnosis: **Renal cell carcinoma** (clear cell carcinoma)

CASE 7



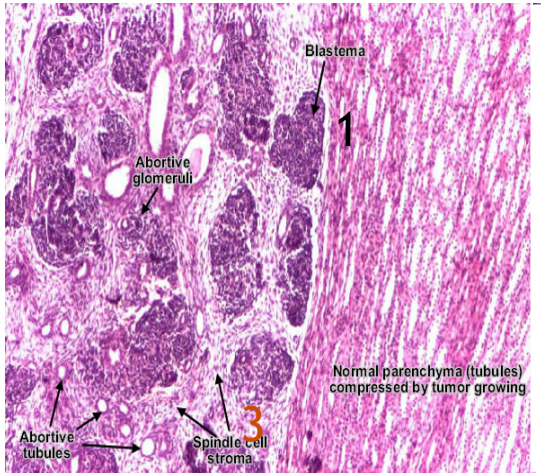
Gross:

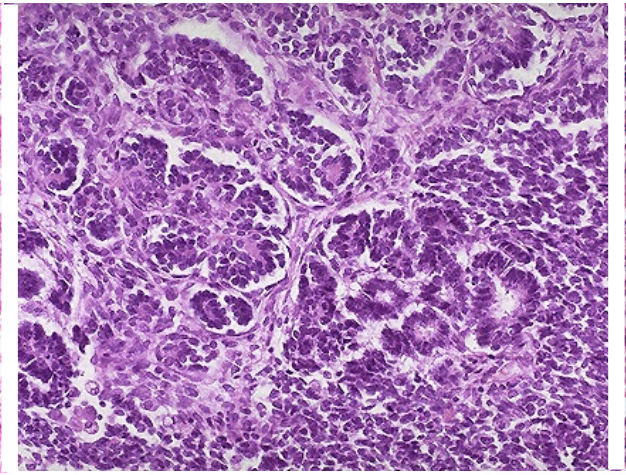
1- Hemorrhagic solid tumor involving the whole kidney,
2- It is pale in color
3- replacing almost all parenchyma
4- Areas of hemorrhage and necrosis

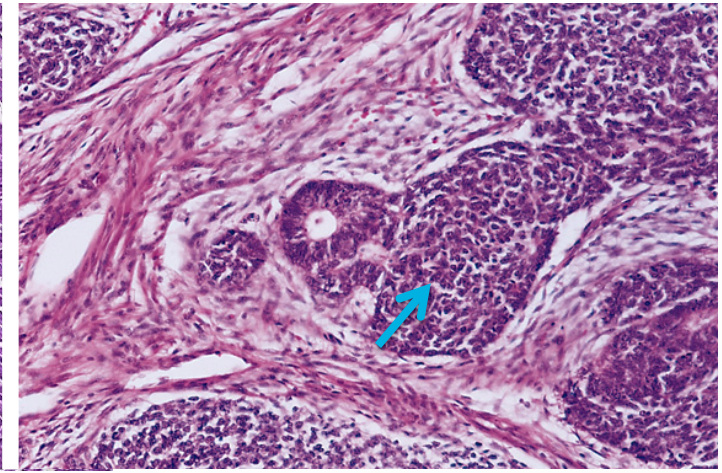
Diagnosis: **Wilm's tumor**

Notes:
Affects children usually

CASE 7







Histology: **It has 3 major elements:**

1- Blastemal element: Immature/primitive proliferative cells.

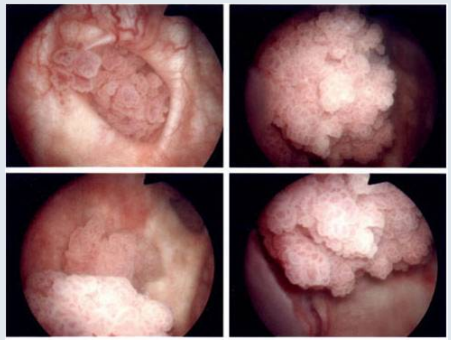
2- Epithelial tissue: showing attempts to form primitive glomerular and **tubular structures**.

3- Mesenchymal (stromal) tissue: fibrous component can be seen (bone/cartilage)

Diagnosis: **Wilm's tumor**

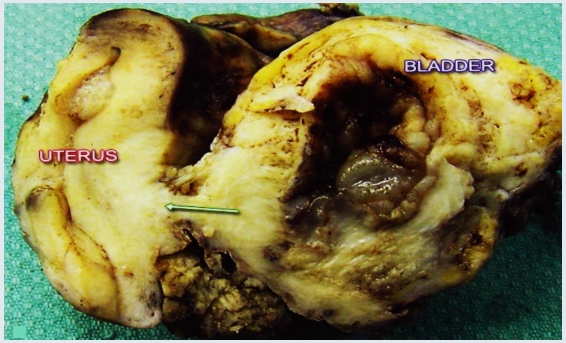
Notes:
Affects children usually

CASE 8



Endoscopic view of a **multifocal** papillary urinary bladder tumor

Malignant tumor of the urinary bladder. (Pale area)

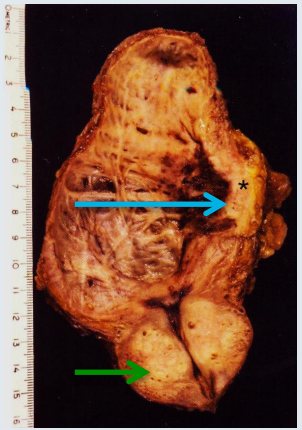


White mass extending to the uterus (showing finger-like projections)

Predisposing factors:

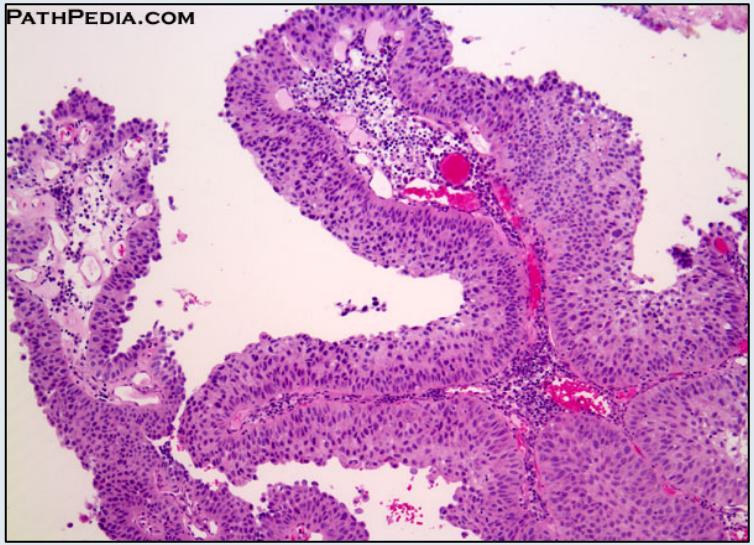
1- Cigarette smoking
2- Exposure to Aniline dyes
3- long term use of analgesics (e.g. *Phenacetin*)
4- Treatment with cyclophosphamide .

1- Benign prostatic hyperplasia
2- Mass arising from wall of the urinary bladder.



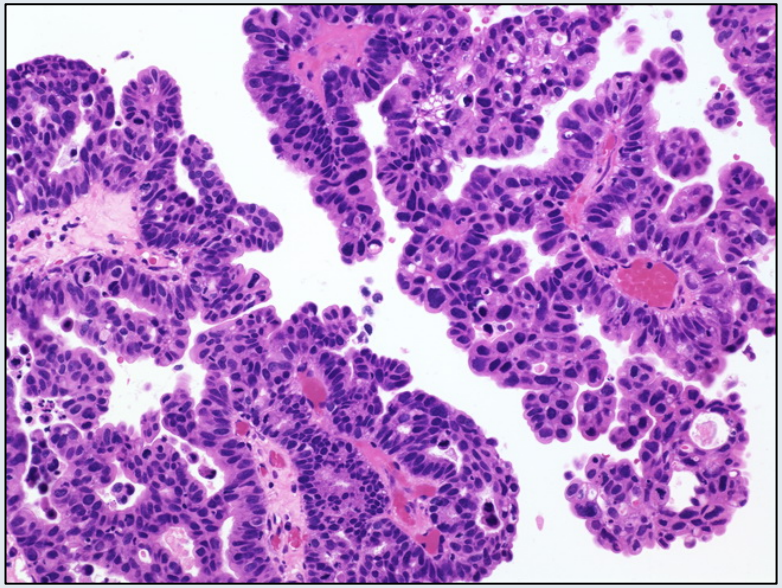
Diagnosis: **Transitional cell CARCINOMA OF THE URINARY BLADDER**

CASE 8



Low-grade papillary tumor

1- Multiple finger-like projections lined by urothelium
2- Preservation of cell polarity (organized because of its polarity
3-Few mitosis
4- Lack of significant atypia (atypical cells).

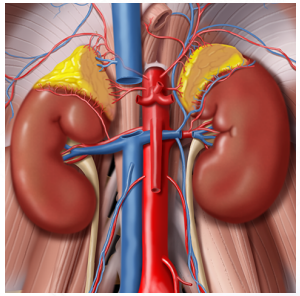


High grade papillary tumor

1. Nuclei are enlarged and hyperchromatic
2. pleomorphic.
3. Increase atypia and mitosis

Diagnosis: Transitional cell CARCINOMA OF THE URINARY BLADDER

Squamous cell carcinoma of urinary bladder may occur as a **COMPLICATION** to schistosoma hematobium infection



GOOD LUCK ☺

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