Slide section 3
Kidney, Urinary Bladder And Male Genital Tract Diseases

Slides:

- Chronic pyelonephritis.
- Renal cell carcinoma (Grawitz tumor).
- Urotelial (transitional cell) carcinoma.
- Benigne prostate hyperplasia.
- Carcinoma of the prostate.

Stain: HE for all slides

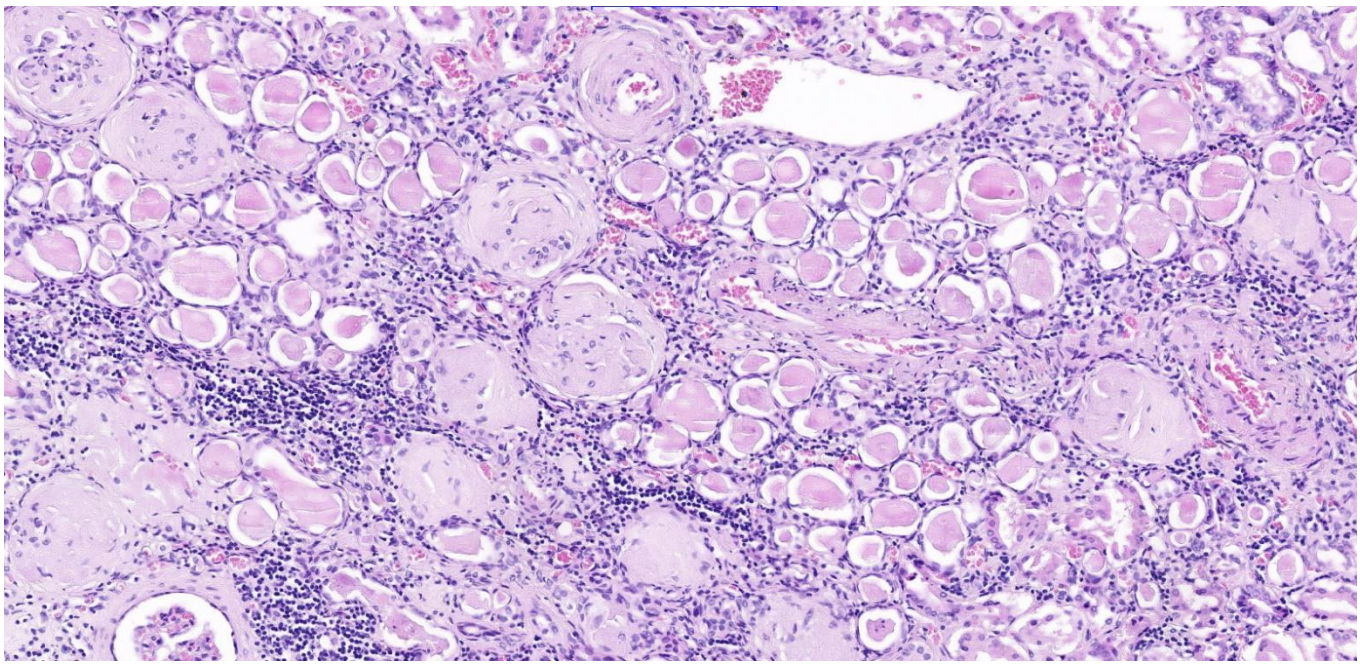
Organ: **Kidney**

Lesion : **Chronic pyelonephritis**

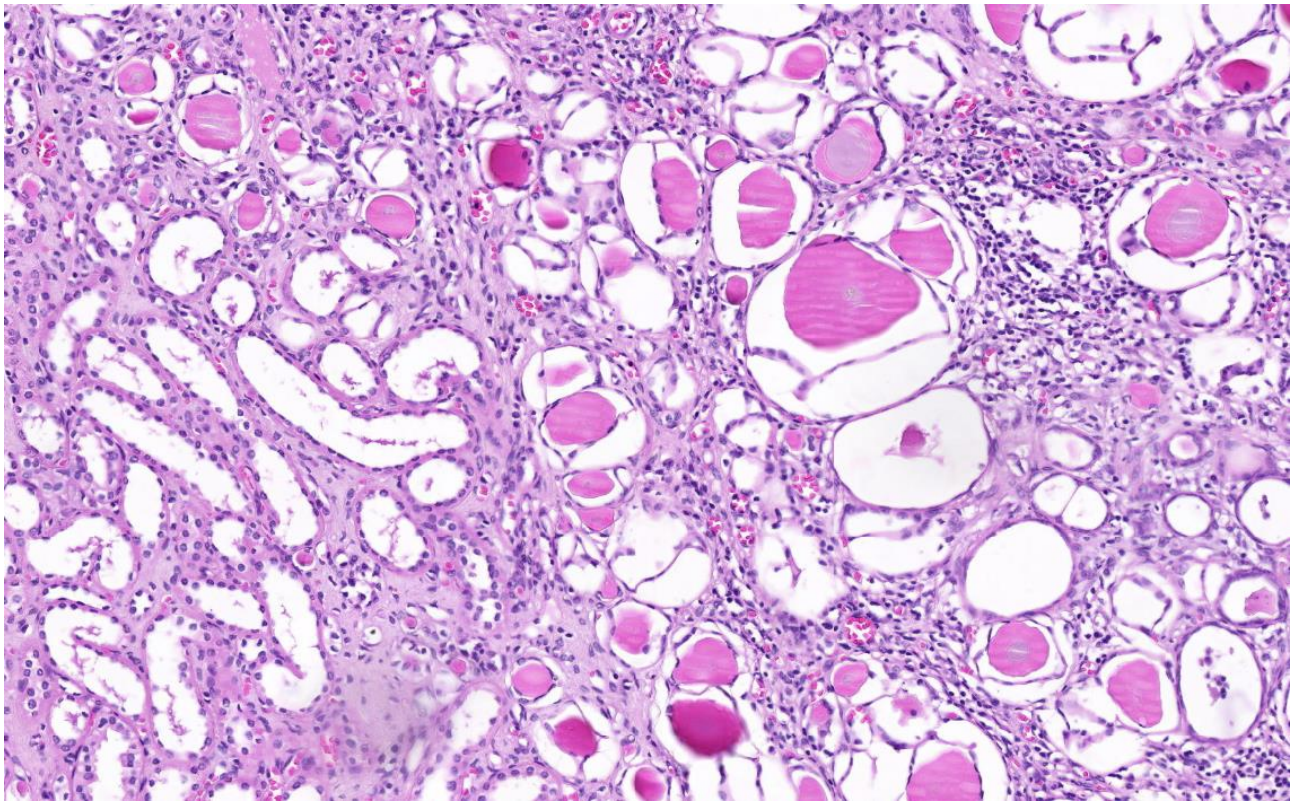
Definition: a chronic interstitial renal disorder, in which chronic inflammation and renal scarring are associated with pathologic involvement of the calyces and pelvis.

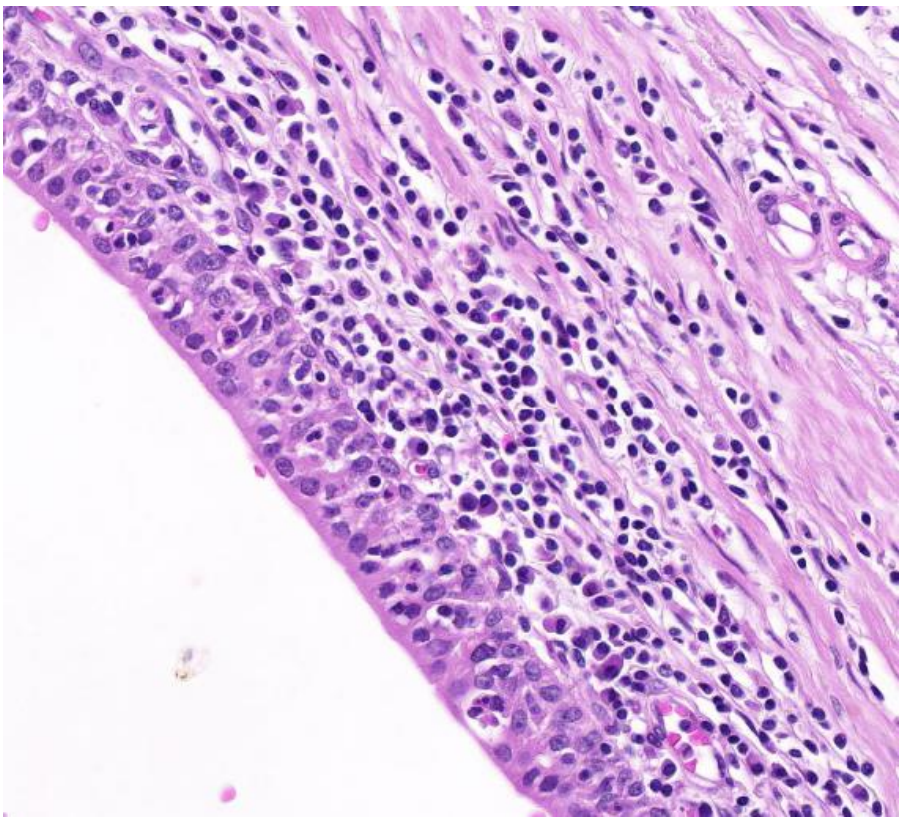
The microscopic changes involve predominantly and primary the interstitium:

- Heavy round cell (lymphocyte) infiltration diffuse or nodular as lymph node + fibrosis.
- The tubules show atrophy in some areas (or complete absence) and hypertrophy or dilatation in others. Dilated tubules may be filled with colloid (eosinophilic casts), resembling thyroid tissue (pseudothyroidization).
- Some of the glomeruli may appear normal, some with changes ranging from periglomerular fibrosis to complete sclerosis.
- Blood vessels disclose obliterative endarteritis and hyalinosis.



Obsolete glomeruli, dense inflammatory infiltrate and pseudothyroidization. Notice the narrow blood vessels (look for RBCs inside the lumen)





Chronic inflammatory infiltrate involving the renal pelvis. Notice the urothelial lining.

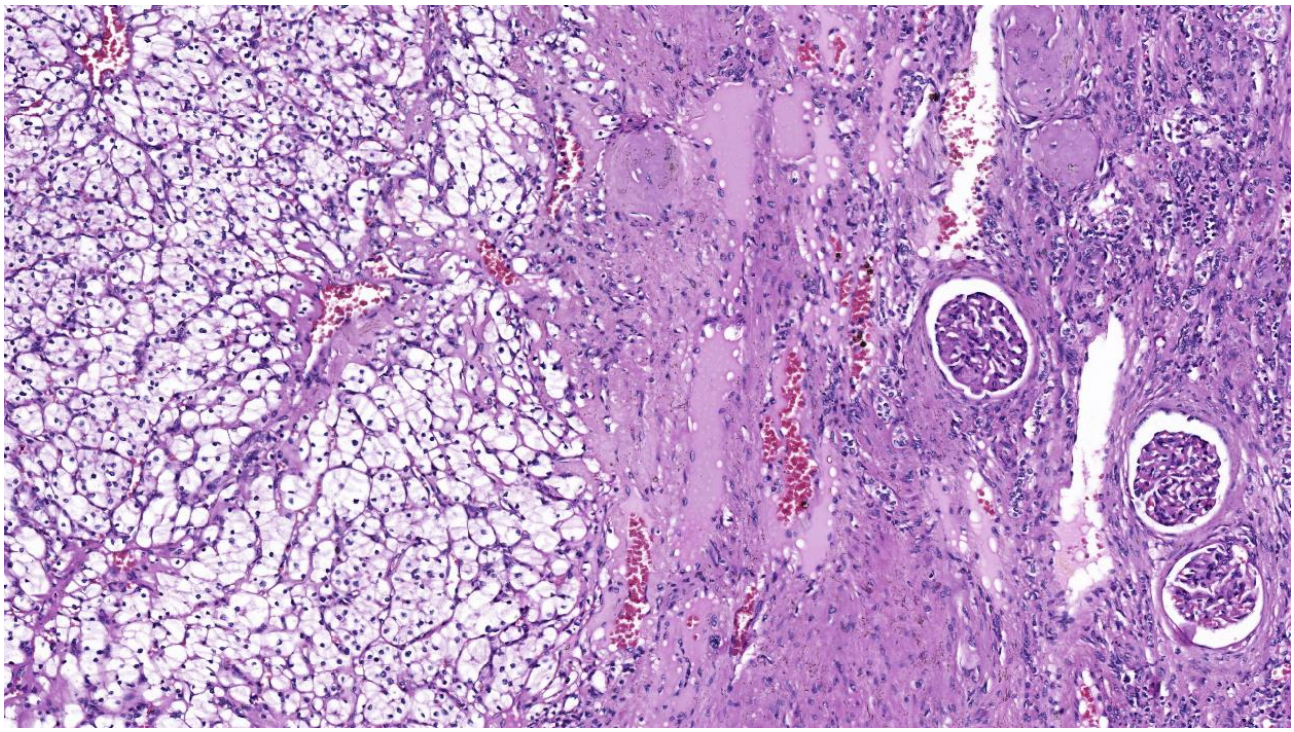
Organ: **Kidney**

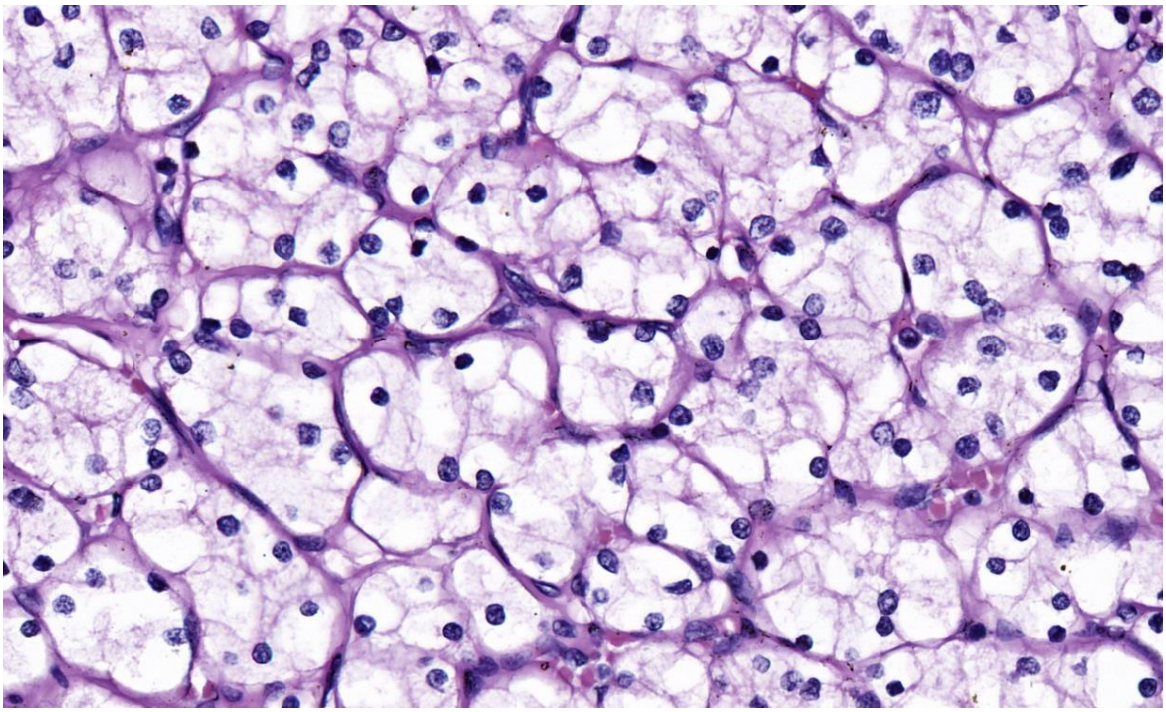
Lesion : **Renal cell carcinoma (Grawitz tumor).**

Renal cell carcinoma (Grawitz tumor) is the commonest primary malignant renal tumor.

Histologically, the tumor is composed, in most cases (over 70%), by clear cells having a rounded shape and abundant clear cytoplasm, the latter because of glycogen and lipids content.

They are disposed as solid masses, cords or acini in a delicate branching connective tissue and vascular stroma.



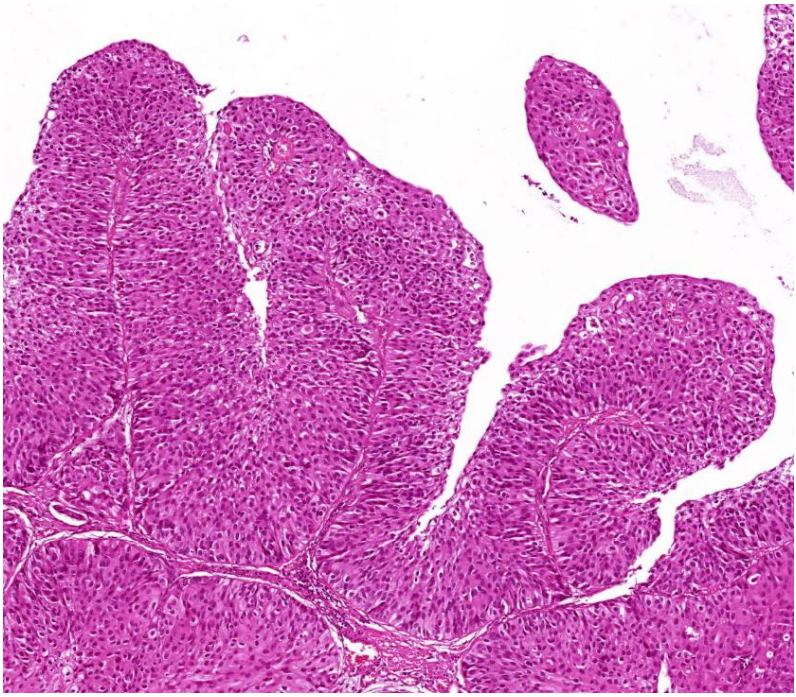


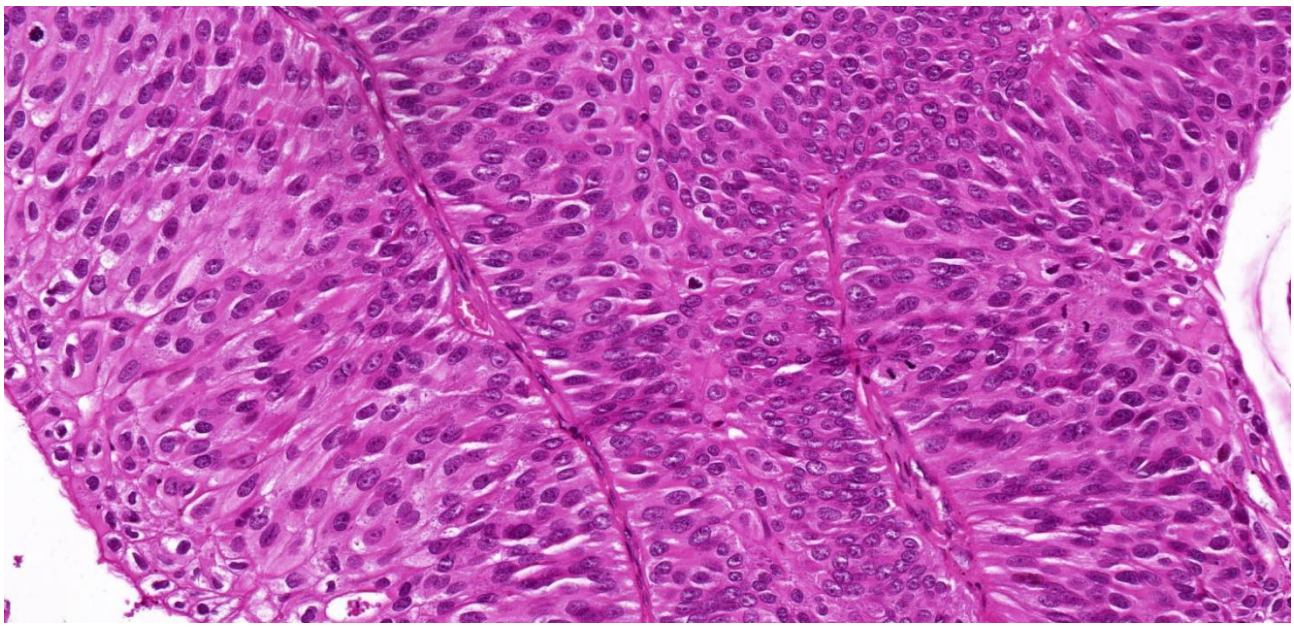
Organ: **Urinary bladder**

Lesion : **Urotelial (transitional cell) carcinoma.**

It represents the great majority (90%) of urinary bladder cancers.

- **Microscopically** the tumor is formed by cells that are still recognizable as of transitional origin.
- The number of layers of cells is increased (often more than ten), as is the number of mitoses.
- There is a great variability in cell size and shape (pleomorphism) and nuclear hyperchromasia.
- Thin stromal branching fronds of connective tissue sustain the neoplastic



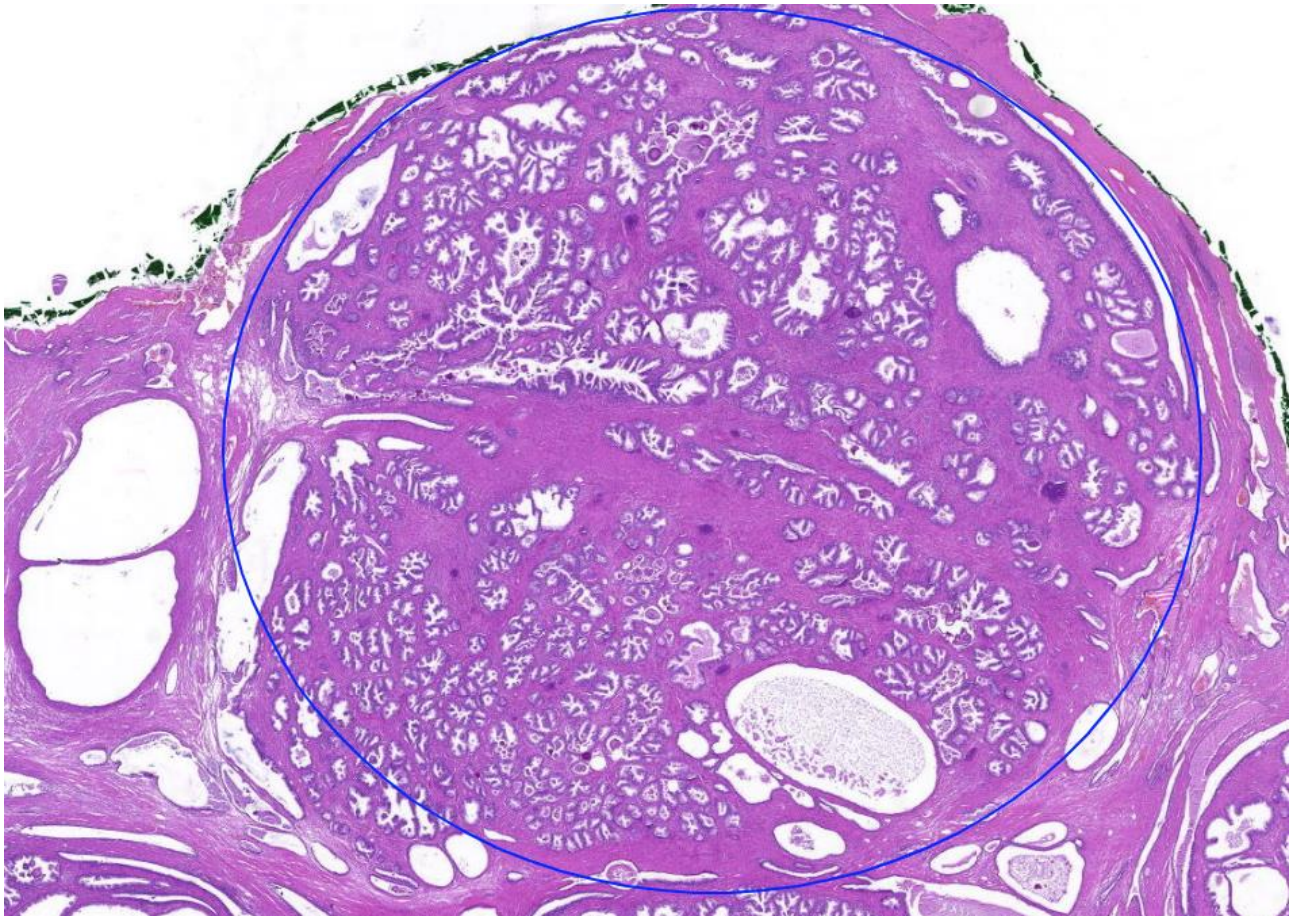


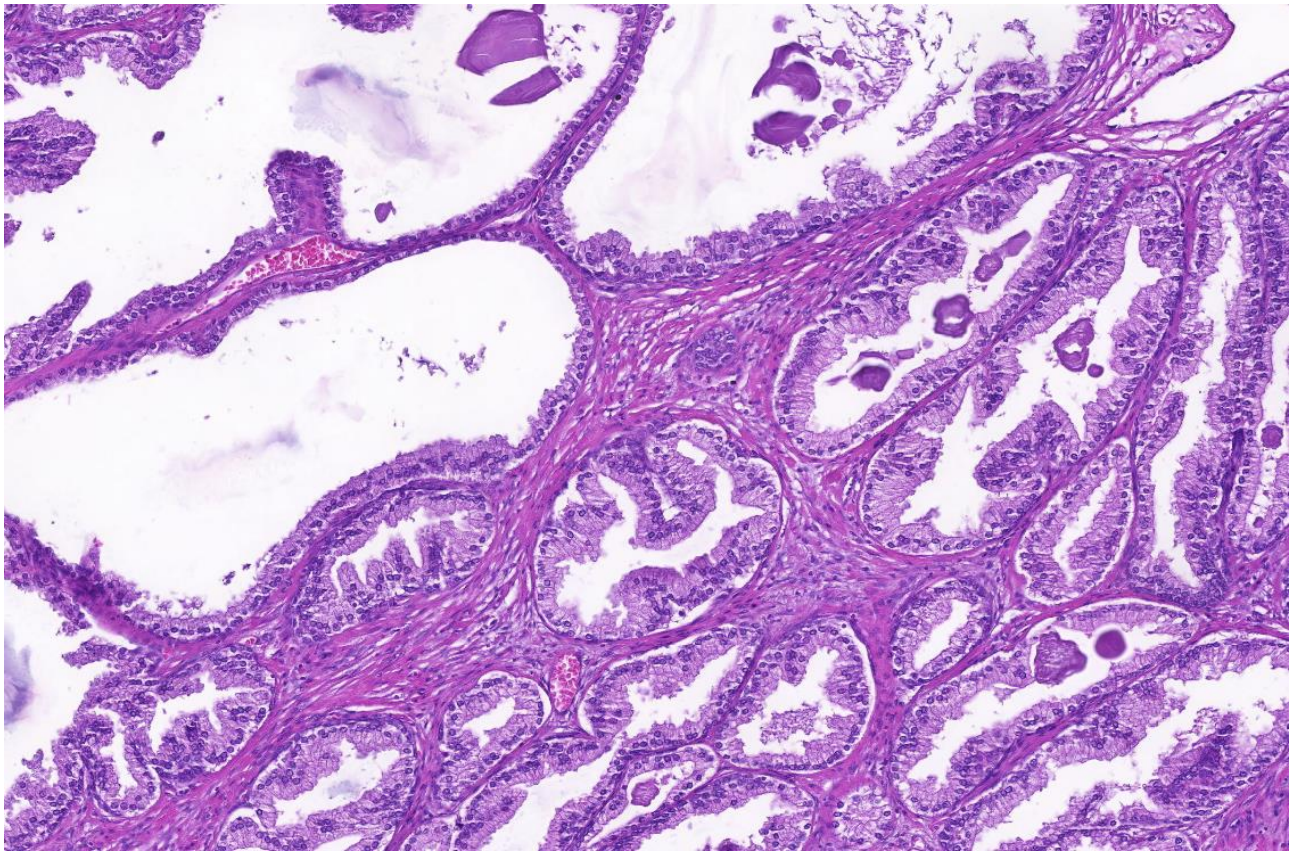
Organ: **Prostate**

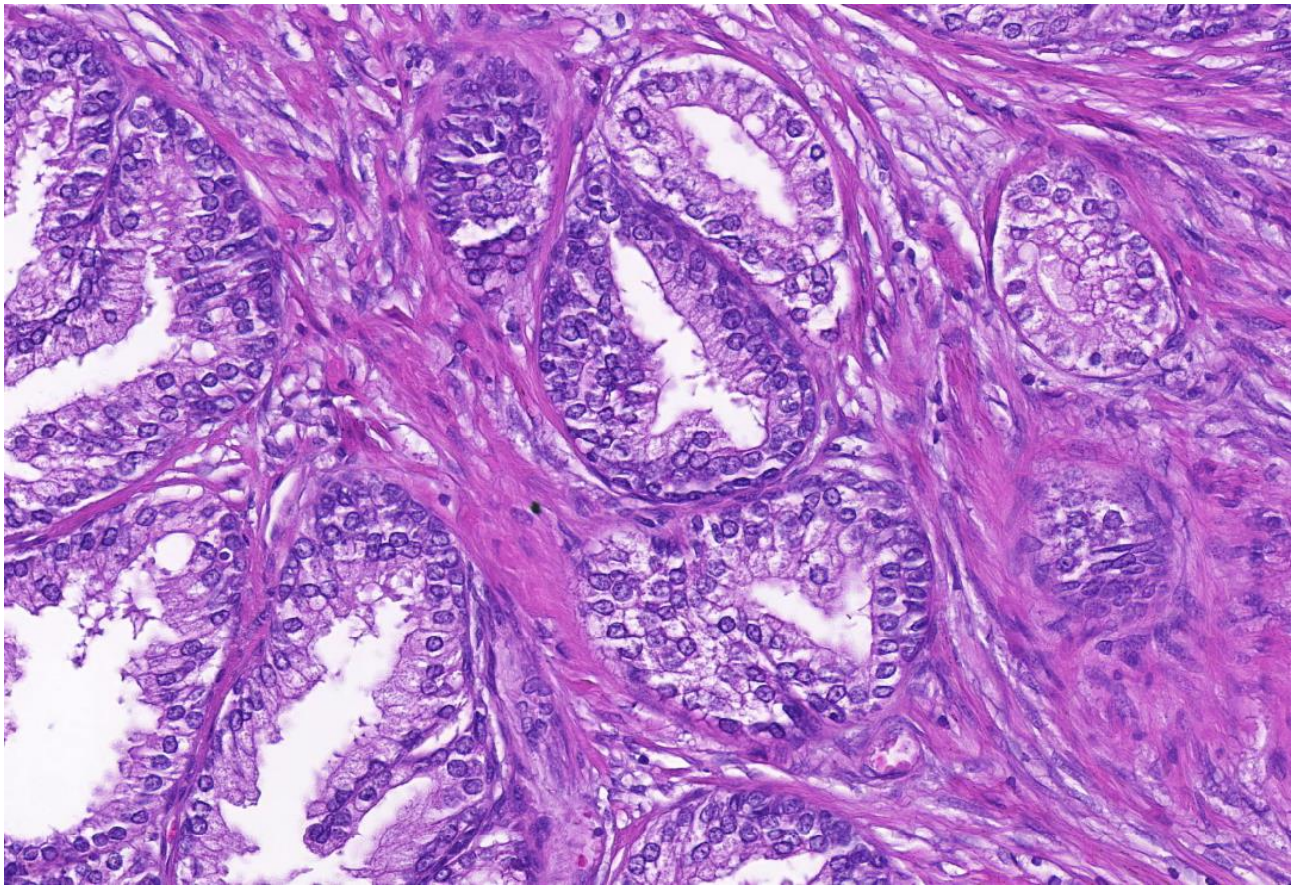
Lesion : **Benign prostate hyperplasia.**

It represents an extremely common disorder in men over age 50. It is characterized by the formation of large nodules in the periurethral region of the prostate.

- Microscopically the nodularity is produced by glandular proliferation (adenoma) ± dilatation (cysts) or by fibro-muscular proliferation of the stroma (fibroma, leiomyoma) or by hyperplasia of all 3 tissue elements (fibroleiomyoadenoma).
- The glands are lined by two cellular layers an inner columnar, and an outer flattened epithelium, based on an intact basement membrane.
- The epithelium is characteristically thrown up into numerous papillary buds and infoldings.



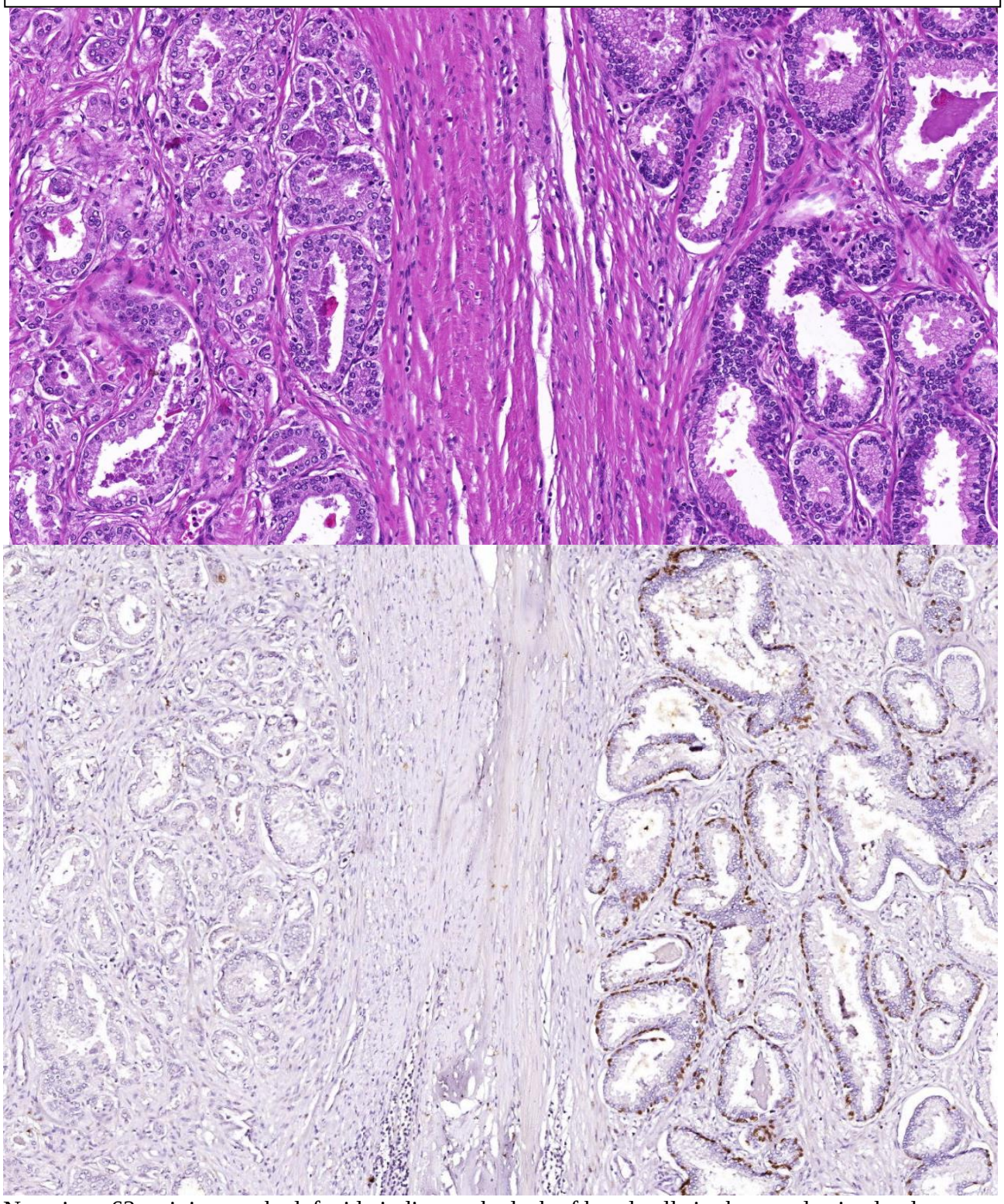




Organ: **Prostate**

Lesion : **Carcinoma of the prostate**.

- It is almost always an adenocarcinoma characterized by small-to-medium sized glands, which lack of organization and infiltrate the stroma.
- Well-differentiated tumors show relatively uniform glands lined by a single layer of neoplastic epithelial cells



Negative p63 staining on the left side indicates the lack of basal cells in the neoplastic glands