Prostate pathology

	BENIGN PROSTATIC HYPERPLASIA (BPH)	PROSTATIC ADENOCARCINOMA
PATHOGENESIS	Related to dihydrotestosterone (DHT) - Testosterone is converted to DHT by 5a-reductase in stromal cells. - DHT acts on the androgen receptor of stromal and epithelial cells resulting in hyperplastic nodules.	Androgen are believed to play a major role in the pathogenesis
MORPHOLOGY	- hallmark of BPH is nodularity - Nodular hyperplasia begins in the inner aspect of the prostate gland, the **transition zone** - compress the wall of the urethra	- 70% arises in the **peripheral zone** - Tumor is firm and gritty and is palpable on rectal exam
MICROSCOPY	- main feature of BPH is nodularity	- well- defined gland patterns. - The malignant glands are lined by a single layer of cuboidal or low columnar epithelium - **large** nuclei and one or more large nucleoli
CLINICAL FEATURE	Often presents with **frequency of urination**, **nocturia**, diffculty starting and stopping urine stream, **dysuria**. May lead to distention and **hypertrophy** of bladder, hydronephrosis, **UTIs**. free prostate-specifc antigen (**PSA**).	- very small size cancers are asymptomatic - away from urethra > urinary symptoms occur late. - back pain , increase serum ALP and PSA > **vertebral metastases** (Osteoblastic metastases in bone)
TREATMENT	- **Mild** cases of BPH may be treated with α-blockers and 5-α- reductase inhibitors - **Moderate to severe** require transurethral resection of the prostate (TURP)	- the most acceptable treatment for clinically localized cancer is **radical surgery** - Surgery, radiotherapy and hormonal therapy
Diagnosis	- the diagnosis of BPH cannot be made on needle biopsy	- diagnosed by PSA and subsequent **needle core biopsies.** - Prostatic acid phosphatase (PAP) and PSA are useful tumor markers
Other	- Prepubertal castration prevents BPH - Also known as **benign nodular hyperplasia** - **Not** premalignant.	- Most common cancer in men; 2nd most common cause of cancer-related death - Spread by direct local invasion and through **blood stream and lymph** - Gleason Grading and Scoring in prostate cancer is very useful in predicting prognosis of a patient. - Staging in prostate cancer depends on the TNM system. It is the most important indicator of prognosis.

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