

Male Reproductive System Disease

Name

Institution

Course

Professor

Date

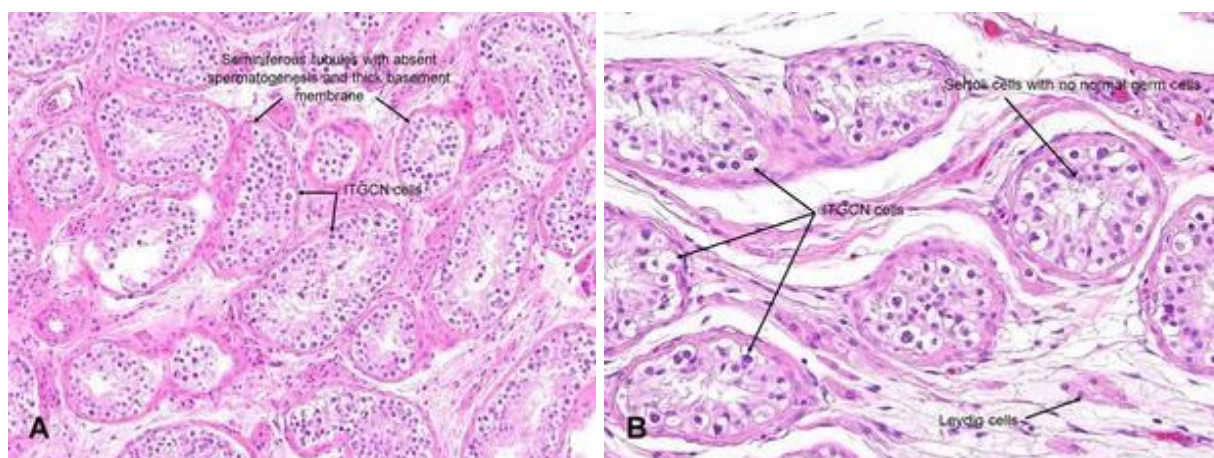
## Testicular Cancer

This is a type of cancer that develops within the testes. In most cases, testicular cancer develops within one testicle, but in some people it can develop in both two testicles (Cheng et al., 2018).

### Pathology and Etiology of Testicular Cancer

In many people, testicular cancer starts developing from the germ cells. Germ cells are responsible for making the sperm in males. In the testicles, germ cells are made up of two main types of tumors namely seminomas and non-seminomas. In many occasions testicular cancer develops in both seminomas and non-seminomas cells. Testicular cancer makes these cells to grow and multiply rapidly. Germ cells testicular cancer can begin as carcinoma in situ disease which at first exists in non-invasive form (Cheng et al., 2018). The primary cause of testicular cancer is not known. However, there are various risk factors that are associated with testicular cancer including: congenital defects such as hypospadias, and family (inheritance of certain genes).

### Histological differences between normal and affected germ cells



**American Urological Association. The Intratubular Germ Cell Neoplasia (ITGCN)**  
**(Online)**

By examining the intratubular germ cell neoplasia under the microscope, the cells look abnormal. The differences between the normal and abnormal tissues are depicted through the proliferation of uncommitted neoplastic germ cells within the seminiferous tubules (American Urological Association). Also, in testicular cancer tissues, the seminiferous tubules seem to have a thickened cell membrane. Under the microscope, the cells seem to creep individually within the normal epithelium (American Urological Association). Furthermore, the tumor cells seem to fill and distend the seminiferous tubules.

**Prostate Cancer**

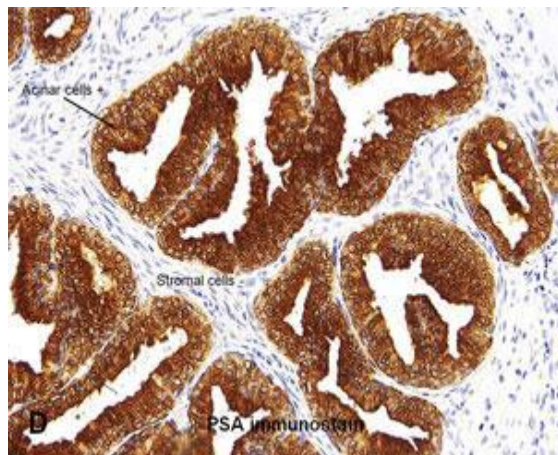
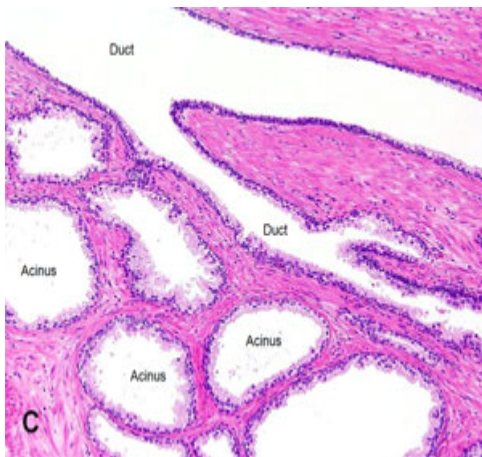
Borrowing from its name, prostate cancer is a disease that occurs in the prostate (Mustafa et al., 2016). The prostate is a small gland found in the male reproductive system that plays a crucial role of producing seminal fluid responsible for transportation of sperm (Rawla, 2019).

**Pathology and Etiology of Prostate Cancer**

Prostate cancer begins when the cells of the prostate gland mutate into cancer cells. Mutations normally take place at P53 gene, BCL2, and ERK5 (Mustafa et al., 2016). For cell survival and apoptosis, the prostate glands require androgen hormones. The androgen hormones are made up of testosterone, dihydrotestosterone, and dehydroepiandrosterone (Owen et al., 2016). During early phases, small clumps of cancer cells would remain confined to prostate glands. This gives rise to a condition referred to as carcinoma in situ or prostatic intraepithelial neoplasia. After a certain period, these cells start to multiply and spread to the surrounding prostate tissue creating a tumor. Over time, the tumor may develop large enough to invade

nearby organs i.e. the closest lymph nodes, the lymphatic system, the rectum, and bladder (Mustafa et al., 2016). Currently, the exact causes of prostate cancer remain elusive though it is associated with some risk factors such as prostatitis, family history, high blood levels of testosterone, and age (Mustafa et al., 2016).

### **Histological differences between normal and affected prostate tissues**



### **American Urological Association: Prostate images (Online)**

- Under the microscope, duct and acini look similar from a cross-sectional point of view.
- The secretory cells appear cuboidal to low columnar cells that seem to be multi-layered.
- The basal cells appear between secretory cells and basement membrane.

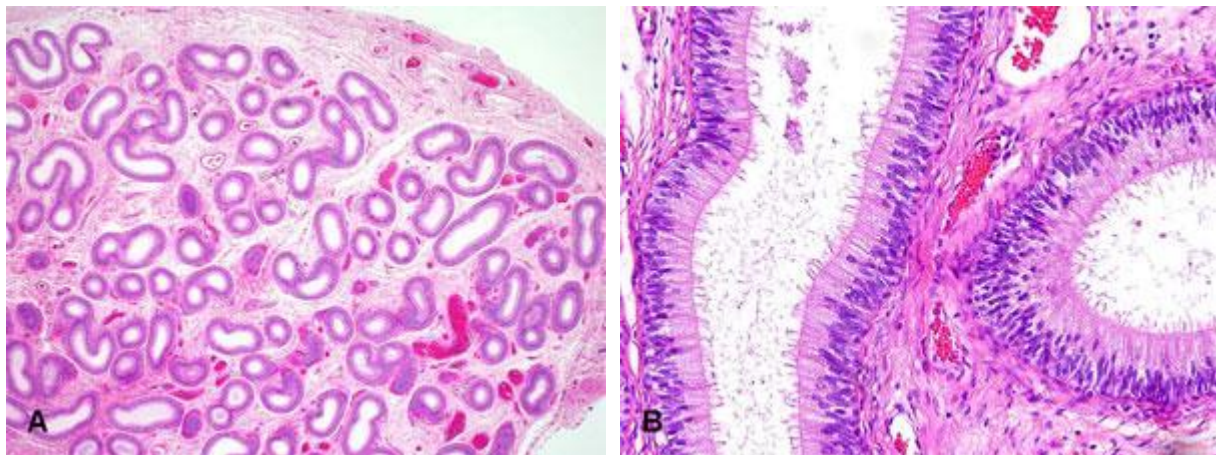
## **Epididymitis**

Epididymitis is a condition characterized by inflammation of the epididymis (McConaghy & Panchal, 2016). Epididymitis has a bimodal age distribution, taking place between the age 15-30 years and occurring again in males who are above 60 years old (McConaghy & Panchal, 2016).

### **Pathology and Etiology of Epididymitis**

Epididymitis condition is usually caused by bacterial infection which also includes the sexually transmitted infections. The condition can stem from the lower urinary tract such as the bladder and urethra, via the classic UTI or through the non-enteric organisms (McConaghy & Panchal, 2016). The main risk factors for epididymitis include non-enteric causes (gonorrhea, syphilis) and enteric causes such as urethral stricture and penis enlargement (McConaghy & Panchal, 2016).

### **Histological differences between normal and affected Epididymis tissues**



**American Urological Association: Epididymis**

The main abnormality examined under the microscope is that affected epididymis tissues is the smooth lined tubules as opposed to sawtooth border of the efferent ductules (McConaghy & Panchal, 2016).

### References

American Urological Association. Intratubular Germ Cell Neoplasia (Online)

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