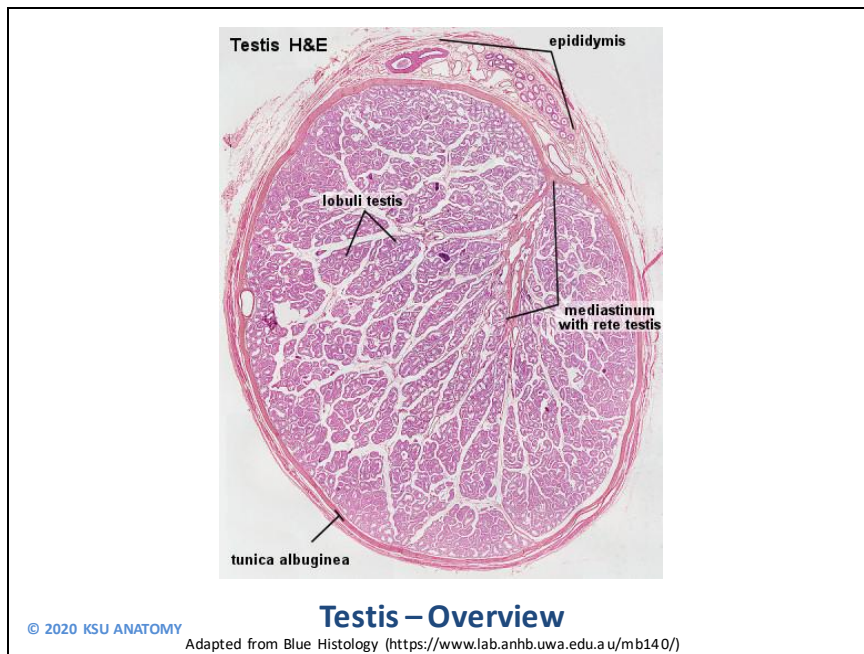
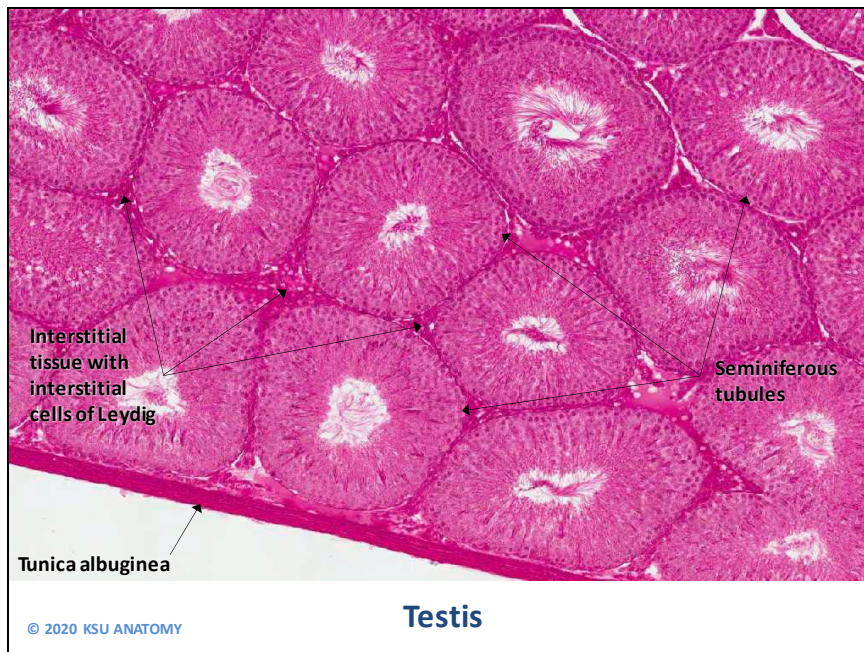


This is the Histology Practical Lab of the Male Reproductive System.

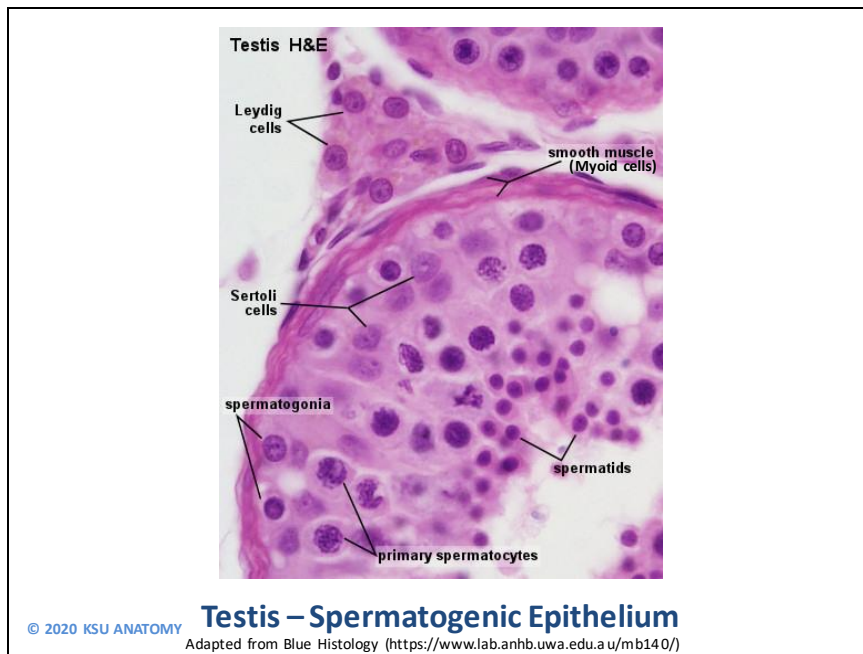


This is a section in the testis. The epididymis is cut in the section too. The testis is covered by a thick capsule of dense irregular collagenous CT, called tunica albuginea, from which septa arise dividing the testis into lobules.



In the lobules we can see two features:

1. Many seminiferous tubules: cut in different planes and appearing as rounded, oval, tubular or having any other irregular shape, but here they are mostly cut more or less transversely and appear rounded or oval in shape, and
2. Interstitial cells of Leydig in the interstitial tissue between the seminiferous tubules.



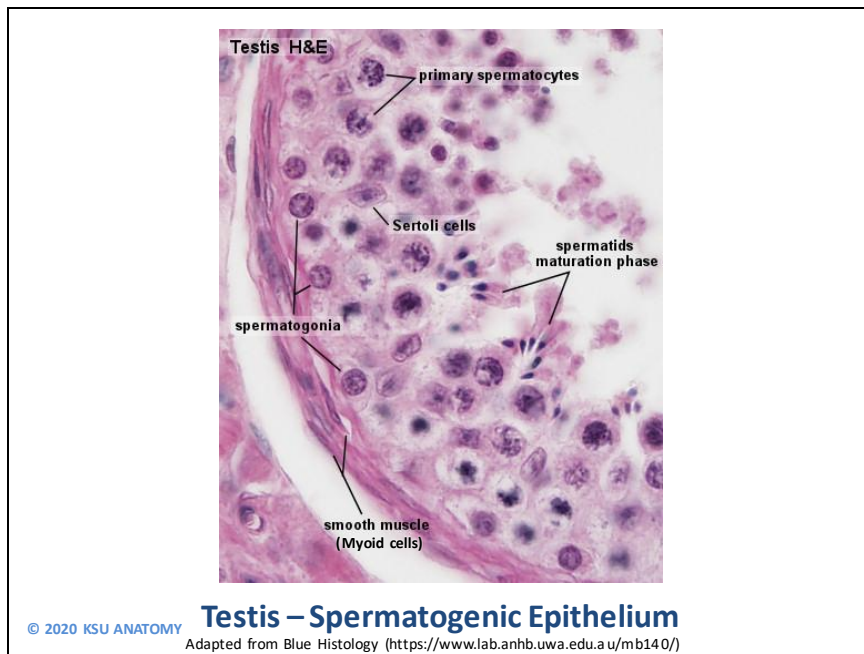
1. The seminiferous tubule:

- The wall of the tubule is thick, and the lumen is narrow.
- The wall has well-defined basement membrane surrounded by a layer of CT containing collagen fibers, fibroblasts, and, in animals, smooth muscle-like cells called myoid cells.
- The wall is formed of many layers of cells between the basement membrane and the lumen; these are called the spermatogenic cells:
  - The cells lying adjacent to the basement membrane are spermatogonia. They are small round cells with round nuclei.
  - Next are the primary spermatocytes; the largest cells in the wall. They are large round cells with large round nuclei.
  - Next are the secondary spermatocytes and the spermatids. Secondary spermatocytes are rarely seen in the section because they quickly divide giving rise to spermatids. Spermatids are small, round cells with a central round nucleus.
- Few Sertoli cells are scattered between the spermatogenic cells. They are tall, slender, and pale cells extending from the basement membrane to the lumen. But we can't see that, because they have pale cytoplasm, and ill-defined cell boundaries. We can see only their large oval or irregular

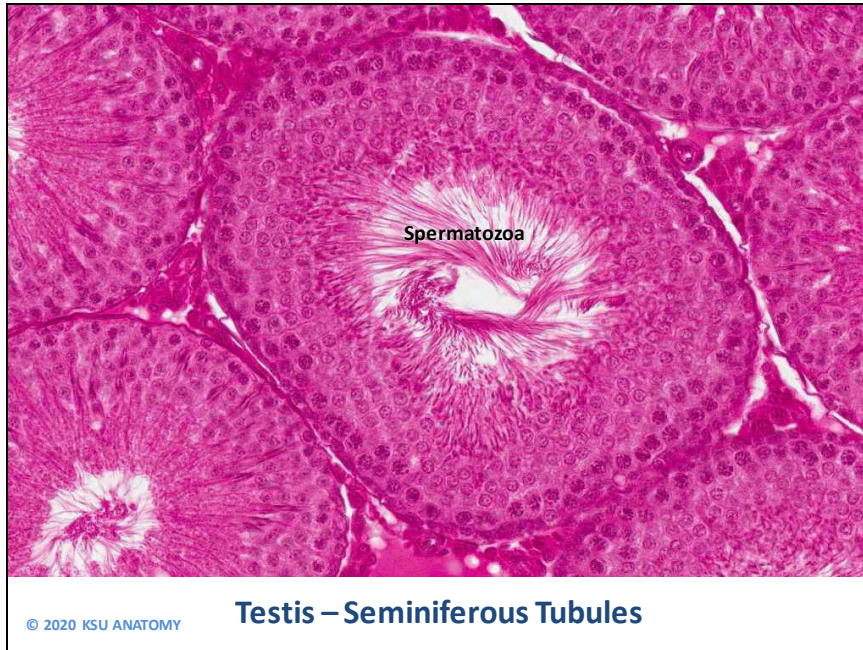
vesicular nuclei (pale with a prominent nucleolus).

- Together, the spermatogenic cells and Sertoli cells are called the spermatogenic epithelium.

1. Interstitial cells of Leydig: are large round or polygonal cells with indefinite cell outlines and with vesicular central round nuclei. Cytoplasm is acidophilic and vacuolated because it's full of lipid droplets. They are found either singly or in groups in the interstitial tissue between the seminiferous tubules (which is loose vascular CT).

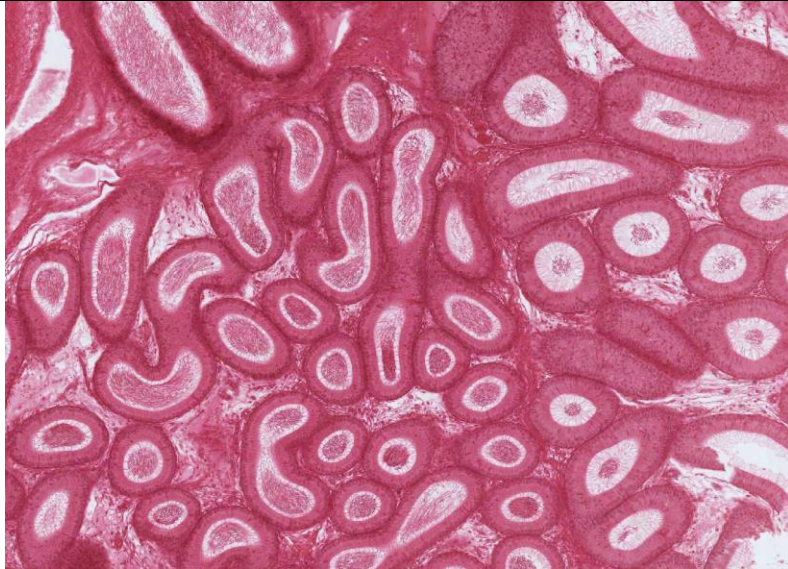


Here we can see spermatogonia, primary spermatocytes, nuclei of Sertoli cells, spermatids as they transform to spermatozoa (a process called spermiogenesis) they become elongated with a deeply-stained eccentric nucleus, and interstitial cells of Leydig.



Here we can see spermatozoa in the lumen.

When asked about identifying features of a section in the testis, you can answer: tunica albuginea, seminiferous tubules, spermatogenic cells (spermatogonia, primary spermatocytes, secondary spermatocytes, spermatids, spermatozoa), Sertoli cells, interstitial tissue with interstitial cells of Leydig.



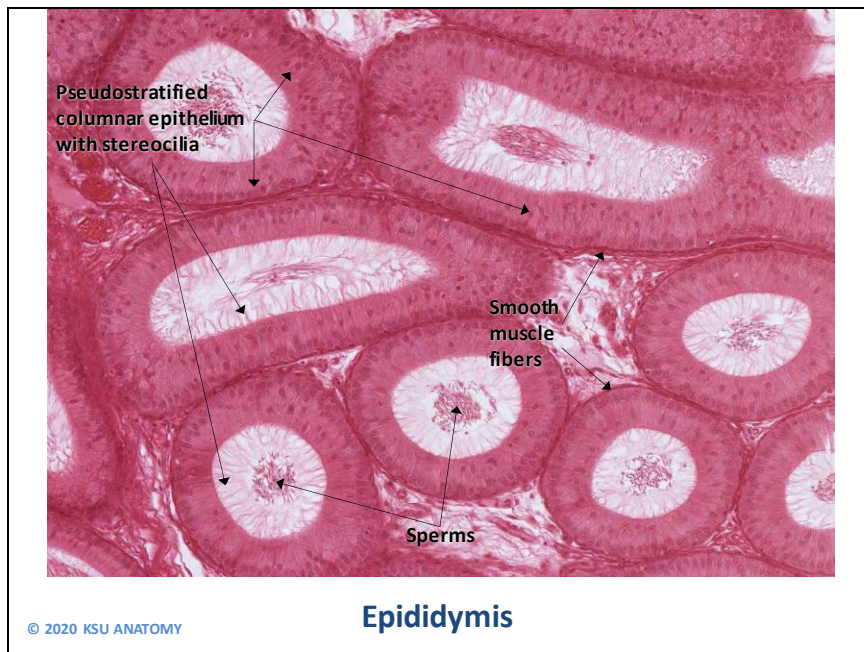
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## Epididymis

This is a section in the epididymis. It's a very convoluted duct and that's why the section cuts it many times and in different planes. A section in the epididymis shows: Many rounded, oval, tubular, or irregular sections.

These sections have thin walls and wide lumens (in contrast to sections in the seminiferous tubules which have thick walls and narrow lumens).



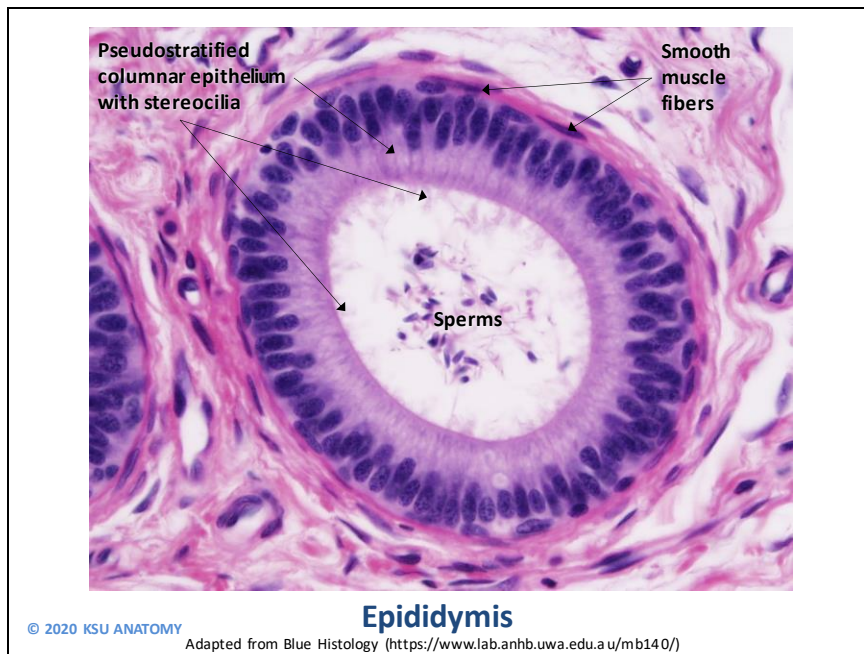


The walls are composed of:

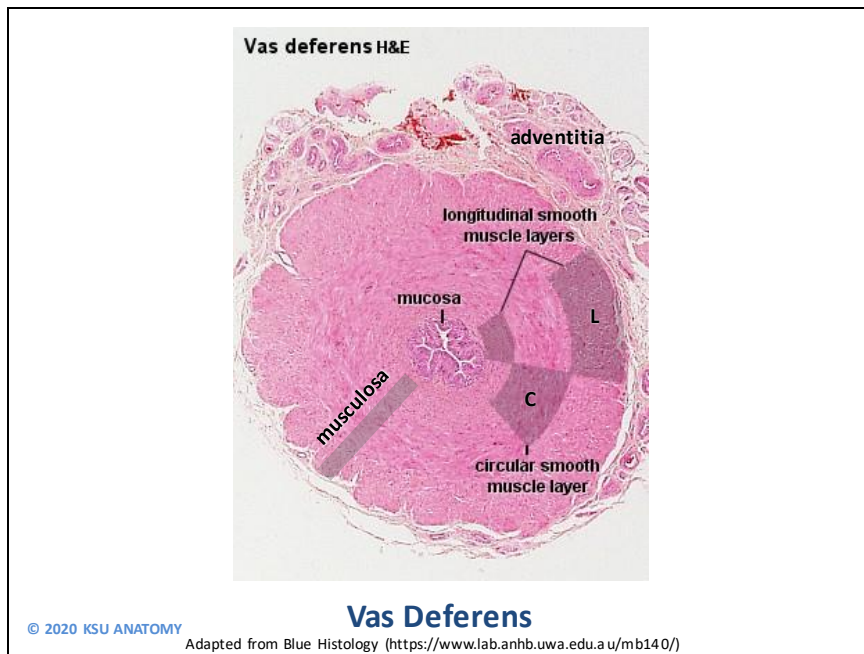
pseudostratified columnar epithelium with very long microvilli (called immotile cilia or stereocilia).

this epithelium lies on a basement membrane surrounded by smooth muscle fibers embedded in CT.

The lumen is usually full of sperms (spermatozoa).

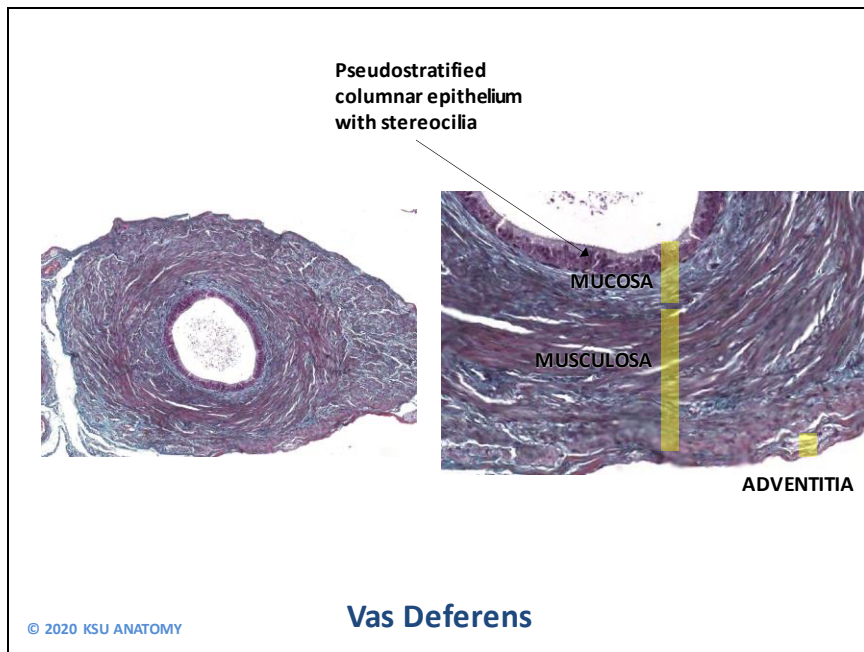


Higher magnification to show clearly the identifying features of a section in the epididymis: pseudostratified columnar epithelium with stereocilia, the smooth muscle fibers around the wall embedded in CT, and sperms in the lumen.

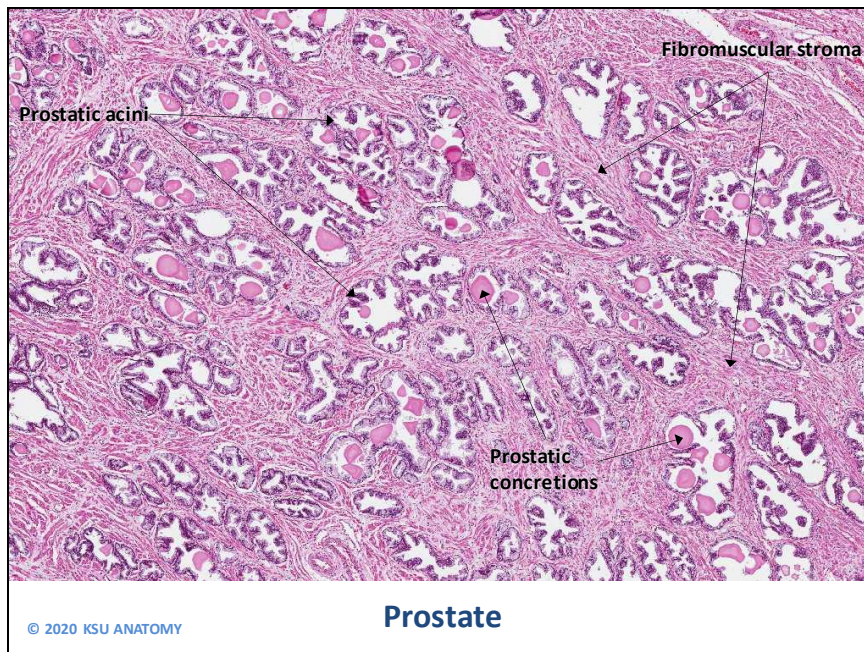


This is a section in the vas deferens. It is characterized by having a very thick wall and a very narrow lumen. The thickness of the wall is due to the very thick muscle layer. The wall is formed of three coats:

1. Mucosa: lined by pseudostratified columnar epithelium with stereocilia (immotile cilia; actually long microvilli).
2. Musculosa: very thick and formed of three layers in LCL arrangement:
  - inner thin longitudinal (L)
  - middle thick circular (C)
  - outer thin longitudinal (L)
3. Adventitia of CT.



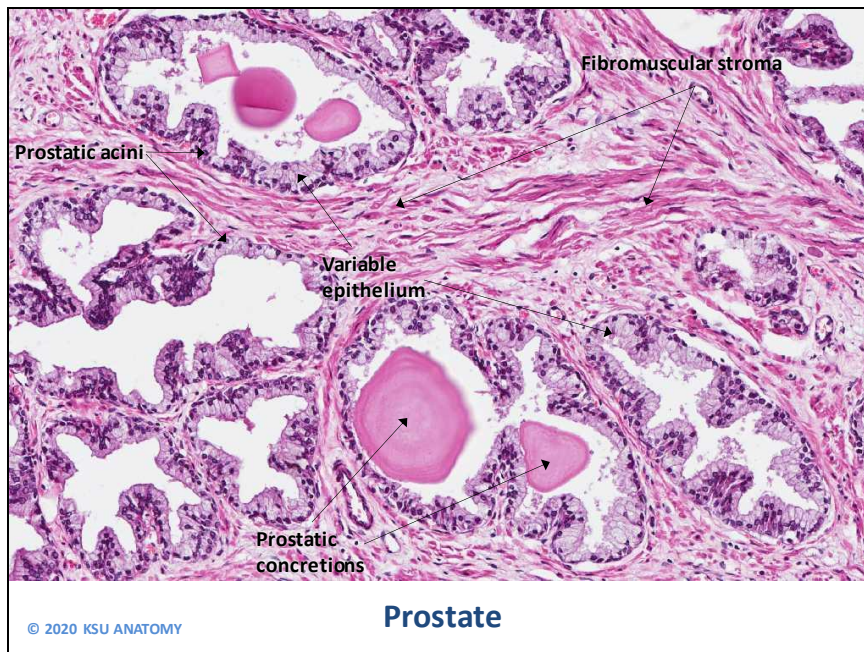
Also a section in the vas deference but with a different stain. When asked about the identifying features of a section in the vas deference, you can answer: very thick wall, very narrow lumen, pseudostratified columnar epithelium with stereocilia, very thick musculosa formed of three layers in LCL arrangement.



This is a section in the prostate.

With the low power, we can see clearly a reddish fibromuscular stroma, and a parenchyma consisting of the acini of the prostatic glands.

Prostatic acini are irregular in outline and variable in size.



The lining epithelium of the prostatic acini is variable according to the activity of the gland and the degree of distention of the acini. It varies from pseudostratified columnar to columnar or even cubical when the acini are distended. Round or oval acidophilic masses of dried secretions may be seen in some acini, especially in old age, and are called prostatic concretions or corpora amylacea.

When asked about the identifying features of a section in the prostate, you can answer: fibromuscular stroma, prostatic acini, variable epithelium (from pseudostratified columnar to columnar or even cubical), and prostatic concretions.

Thank You



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