



Medical Laboratory Techniques Department  
The Reproductive System



# The Reproductive System

ا.د. علي شعلان معيوف

## ❖ The Male Reproductive System

The male reproductive system consists of:

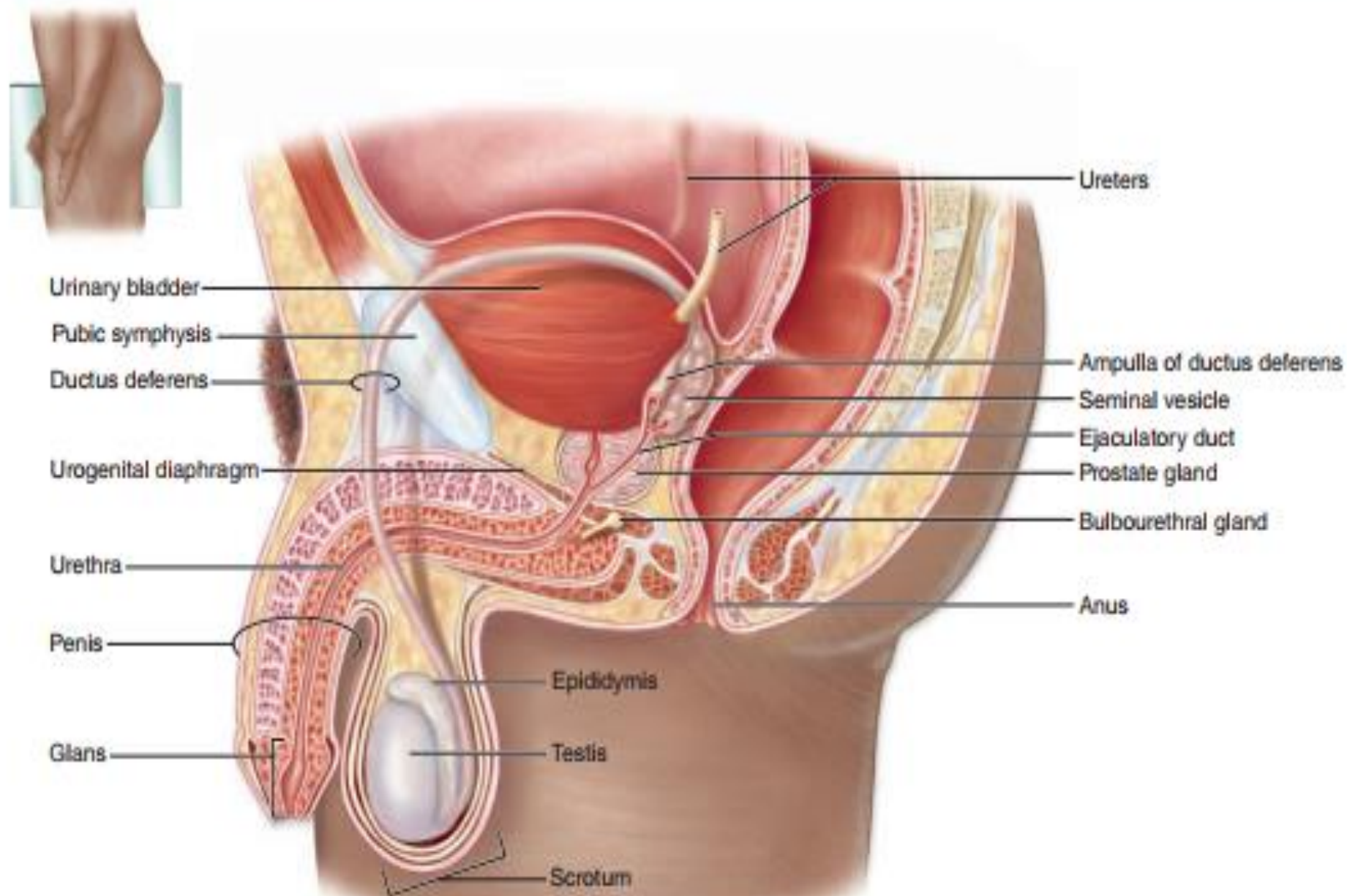
**A- a pair of testes:** production of hormones and spermatozoa

**B- Genital ducts:** produce secretions and propel spermatozoa

**C- Accessory glands:** produce secretions that provide nutrients for spermatozoa (semen)

**D- Penis:** introduce the semen into the female reproductive tract.

**FIGURE 21-1** The male reproductive system.



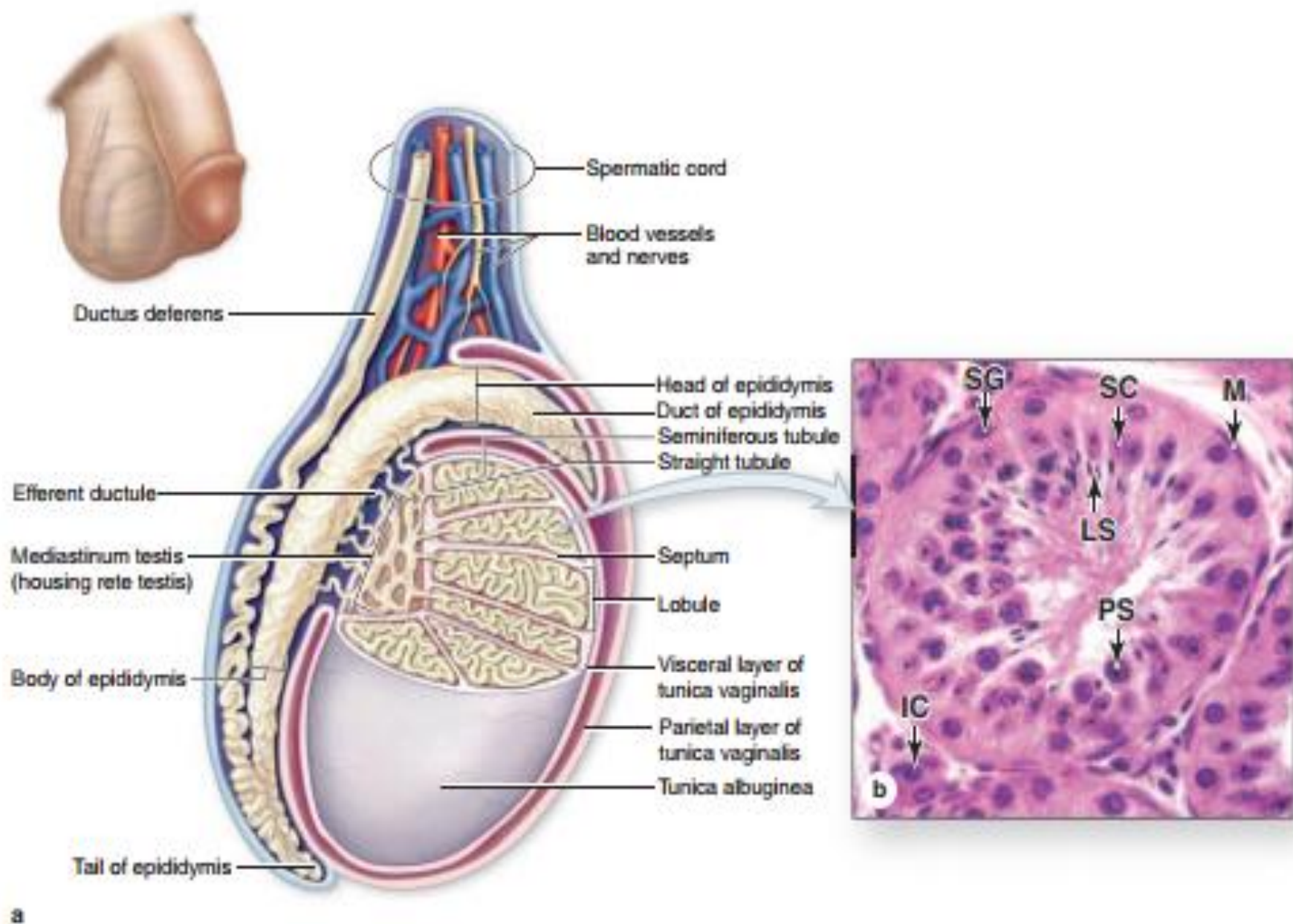
# Testes histology

- Each testis is surrounded by capsule of dense connective tissue, the tunica albuginea, which is divide it into about 250 pyramidal compartments (testicular lobules)
- Each lobules is occupied by one to four seminiferous tubules surrounded by a loose connective tissue rich in blood and lymphatic vessels, nerves and endocrine (leydig cells) which secrete testosterone.
- Tunica vaginalis a serous sac derived from the peritoneum

# Seminiferous Tubules

- Sperm are produced in the seminiferous tubules at a rate of about  $2 \times 10^8$  per day in the young adult
- Each tubule measures 150-250  $\mu\text{m}$  in diameter and 30-70 cm in length.
- Each seminiferous tubule is lined with a complex, specialized stratified epithelium called germinal
- The basement membrane of this epithelium is covered by fibrous connective tissue, with an innermost layer containing flattened, smooth muscle-like myoid cells

**FIGURE 21-2** Testes and seminiferous tubules.



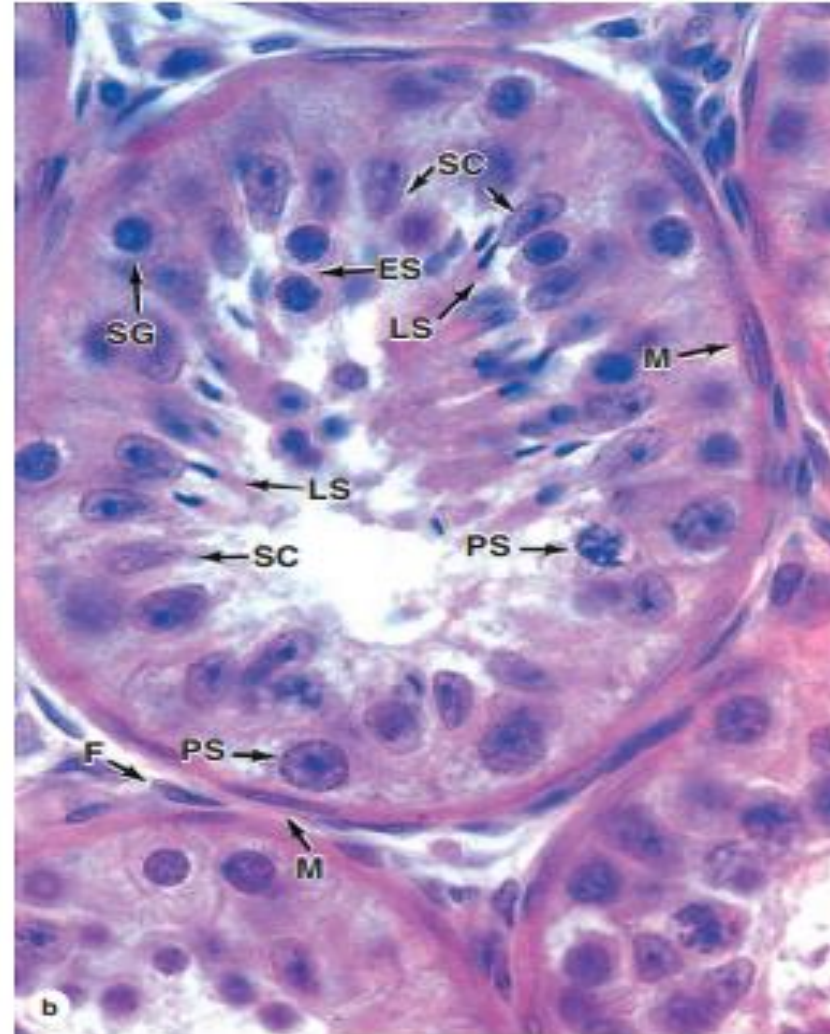
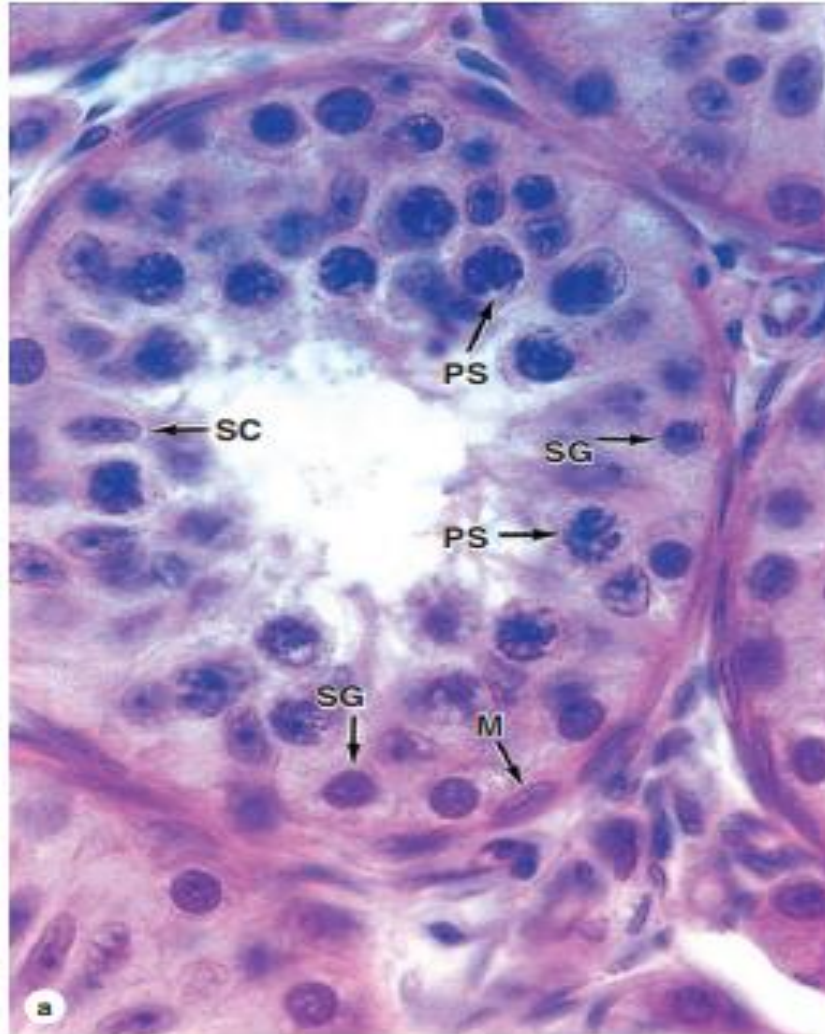
The germinal epithelium consists of two types of cells:

**A-** Large non-dividing cell called Sertoli cells

**B-** Proliferative cells (Dividing cells) of the spermatogenic lineage.

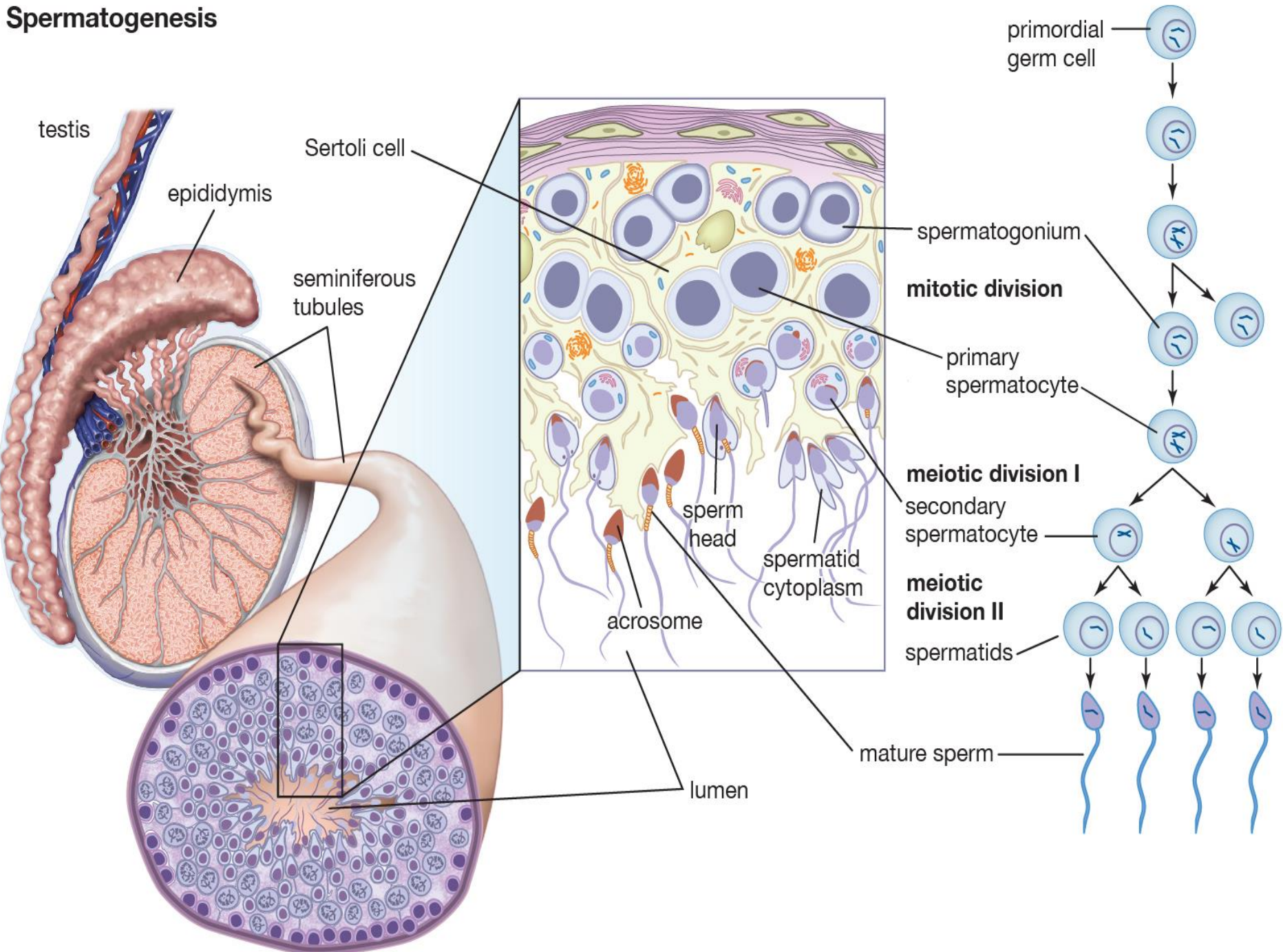
- Spermatogenesis: the final differentiation of the haploid male germ cells and is the process by which spermatids transform into spermatozoa

# Seminiferous tubules: Sertoli cells and spermatogenesis





# Spermatogenesis





**Thank you**