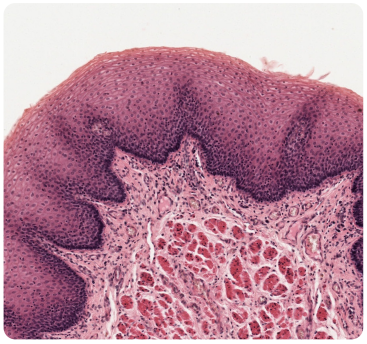
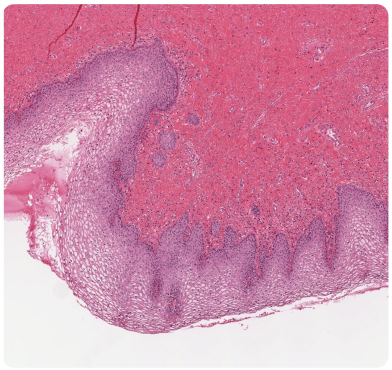
Stratified — Squamous — Simple

- Multilayered flat cells
- Found in places that need protection from
  - UV
  - Abrasion
  - Pathogens
  - Environmental damage
- Multi layers of easily replaceable squamous epithelium acts as a good protective barrier

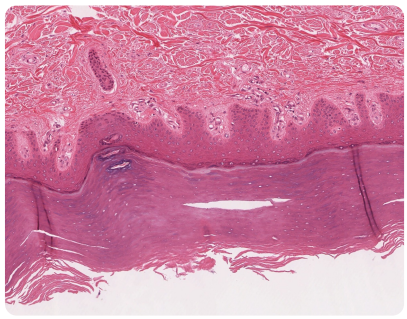
Examples:



Oesophagus



Vagina



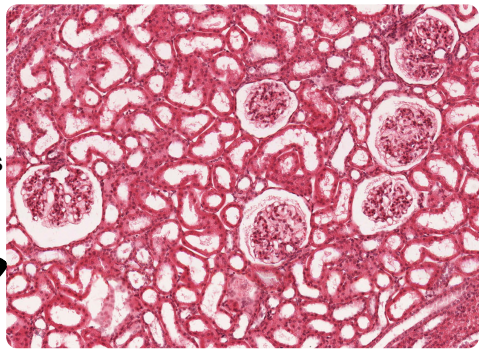
Skin

- Note the dark staining keratin for added protection from external environment

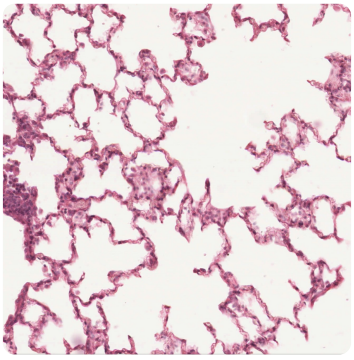
- Single layer of flat cells
- Found in places that require membranes and exchange of substances
- Single layers offer a short diffusion distance making it good of exchange of molecules

Examples:

Capilaries



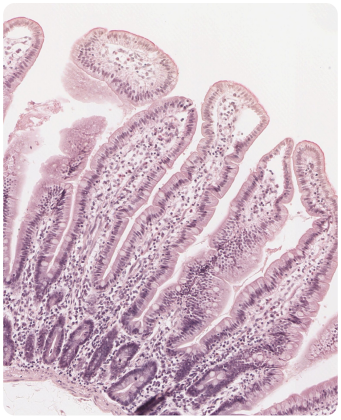
Glomerulus and Bowmans capsule (kidney)



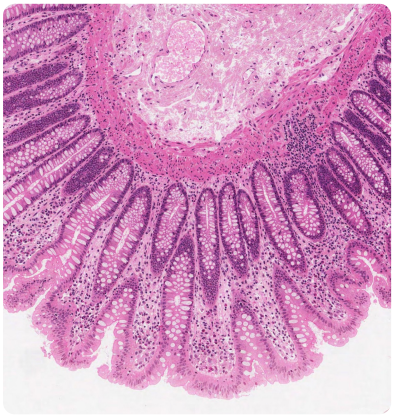
Alveoli

Columnar

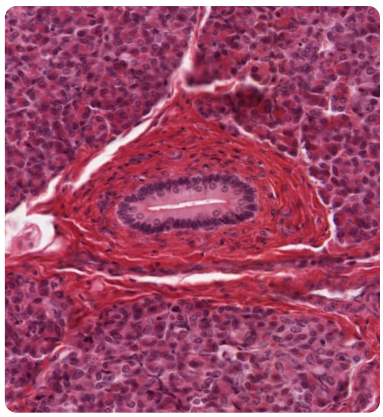
- Found in mucous membranes or epithelia that produce substances, line large ducts and places of absorption
- It's size/shape and cellular contents make it suitable to produce, release and absorb substances
- Seen throughout the GI tract and in large ducts
  - Goblet cells anywhere are columnar



Ileum



Colon

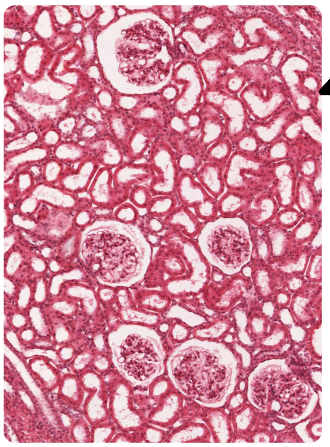


Pancreatic duct

Microvilli on cells increase surface area for absorption

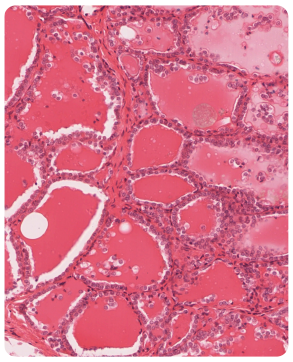
Cuboidal

- Similar to columnar but more square
- Found in places that require production and absorption of substances and ducts

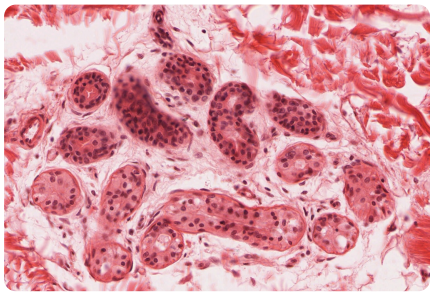


Kidney tubules

Thyroid



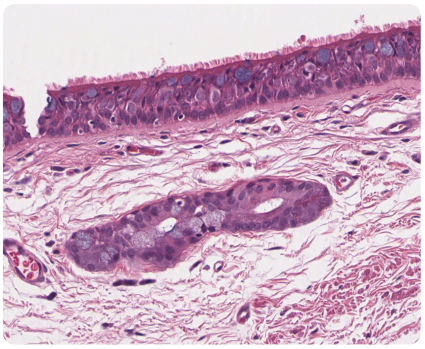
Sweat gland



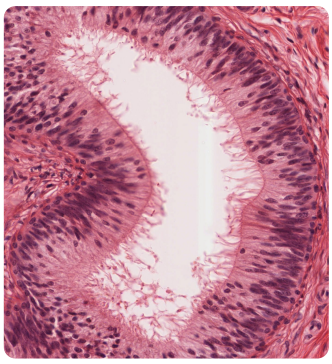
Pseudo-stratified columnar

- Columnar epithelia that looks multi layered but is actually single layered
- Found in places that need non muscular movement to “waft” things around and make a current.

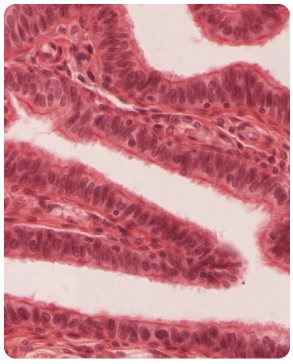
Examples:



Upper respiratory tract
- Produces the mucociliary escalator



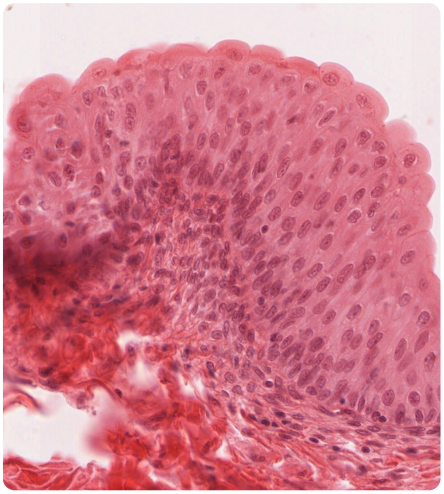
Testis
- Note this is stereocillia and this doesn’t move, it has an absorption function



Fallopian tube
- Wafts and transports egg to uterus

Transitional

- Found in the urinary system only!
- Helps distension for urine and protect surrounding tissue from toxins



Bladder
- Note the “umbrella cells”