

# Sistem Urinarius

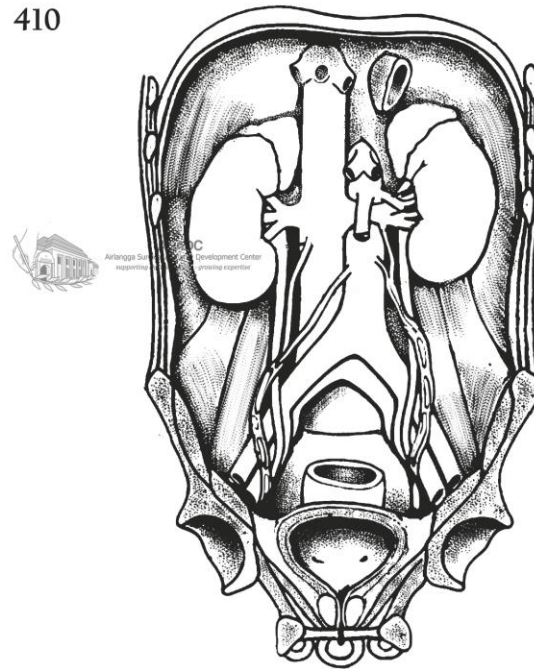
Sakina

FK UNAIR

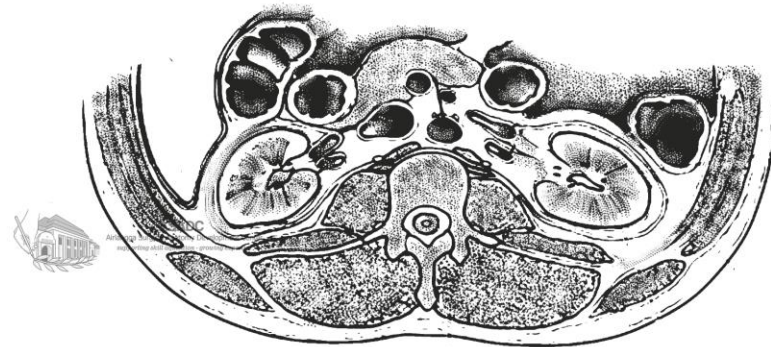
# Sistem urinarius

- Ren
- Ureter
- Vesica urinaria
- Urethra

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# Fungsi Sistem Urinarius

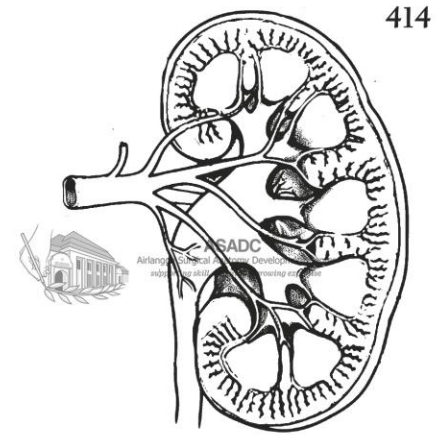
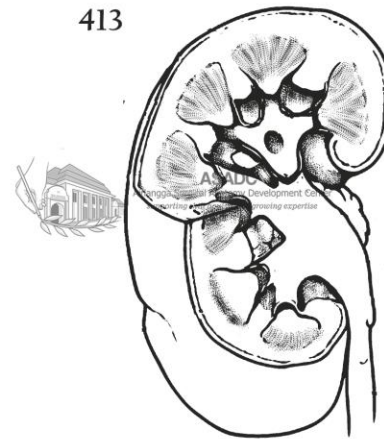
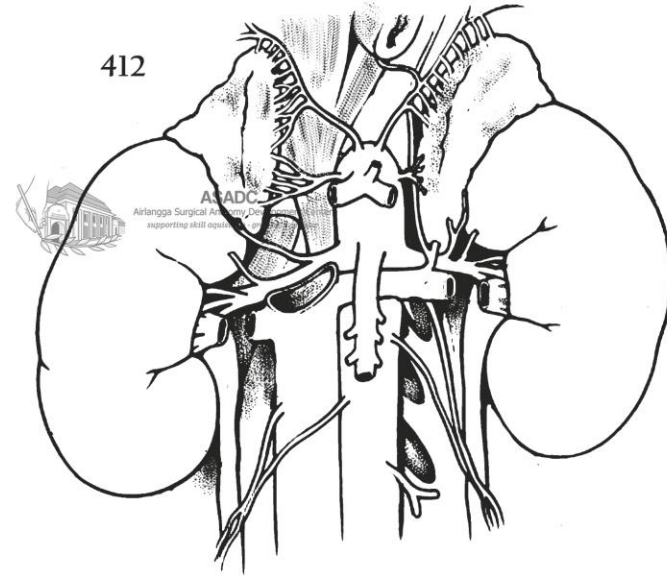
- Ren
  - Filtrasi darah → pembuangan zat sisa
  - Keseimbangan cairan, elektrolit dan asam-basa
  - Gluconeogenesis
  - Produksi renin dan erythropoietin
  - Aktivasi vitamin D

# Fungsi Sistem Urinarius

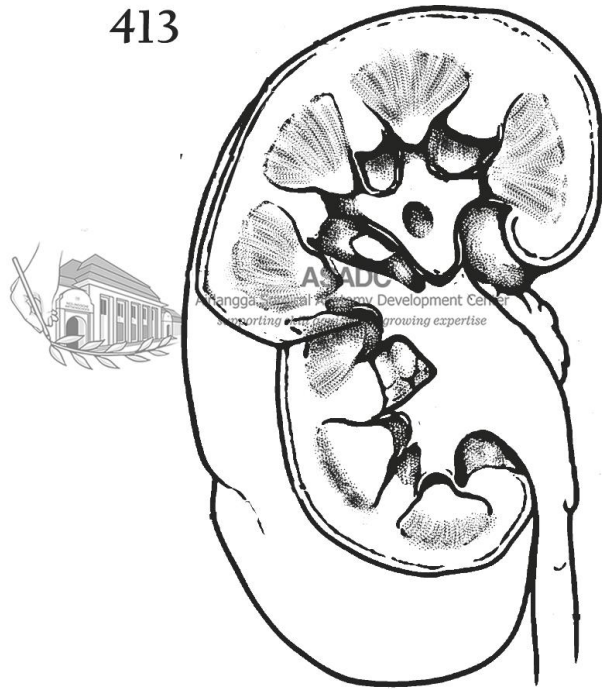
- Vesica urinaria
  - Penampung urin
- Ureter
  - Transportasi urine dari ren ke vesica urinaria
- Urethra
  - Transportasi urine dari vesica urinaria ke luar tubuh

# Ren

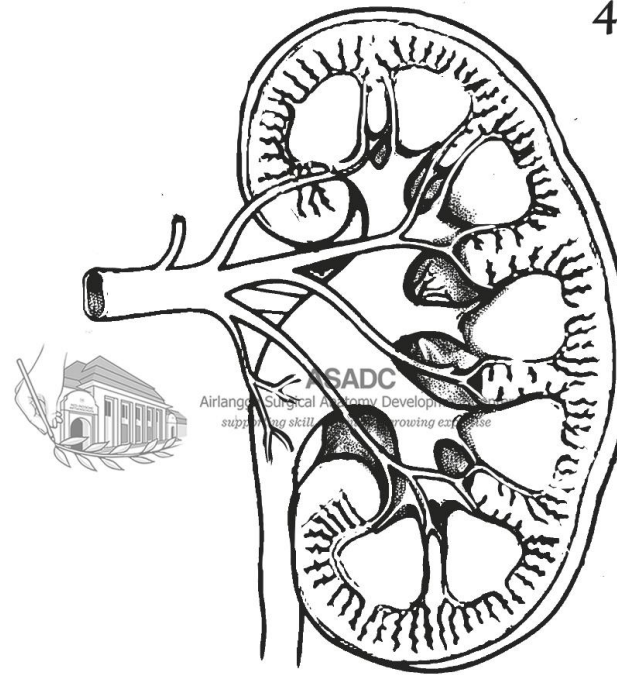
- T12-L3, dextra lebih rendah
- Retroperitoneal organ
- Lateral : convex
- Medial (Hilus): concave
- Glandula Adrenal



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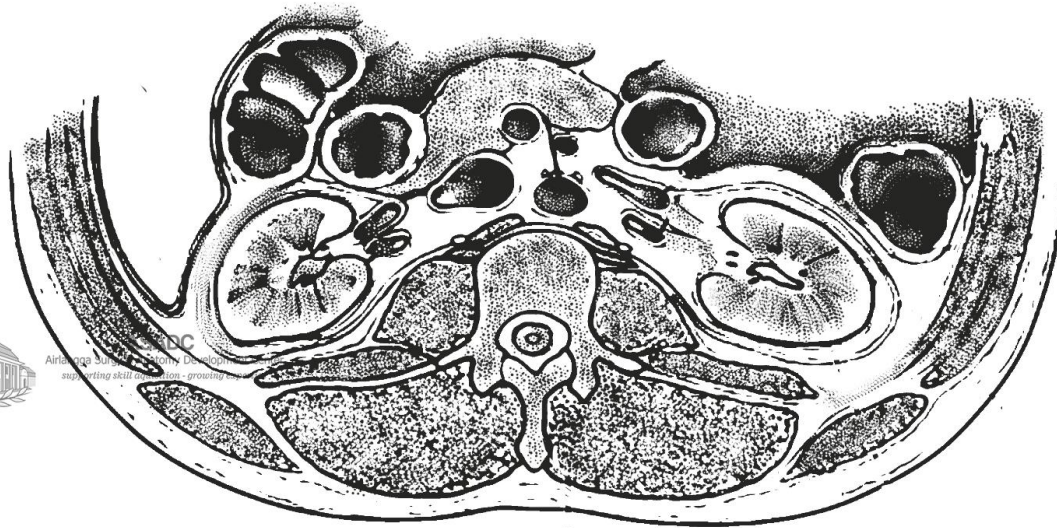
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# Selaput Pembungkus Renal

- Capsula Renalis– mencegah infeksi renalis, membungkus setiap ren
- Capsula Adiposa – melekatkan pada dinding tubuh, menjaga ren dalam posisinya
- Fascia Renalis

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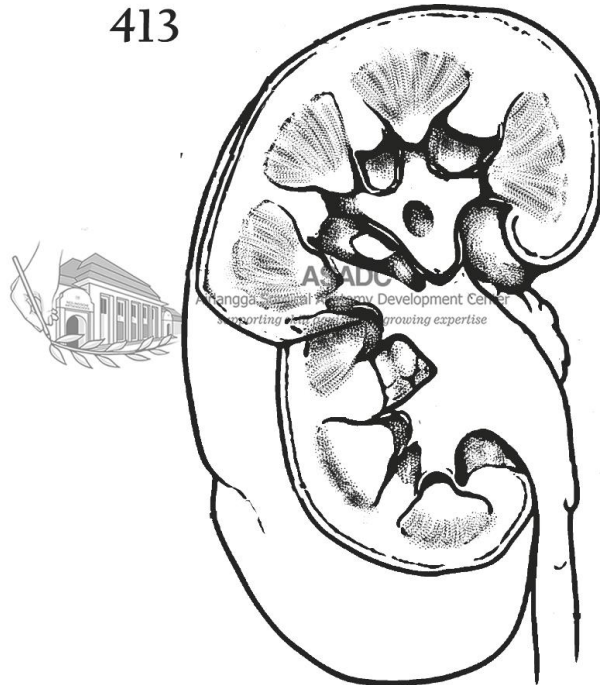


Airlangga University  
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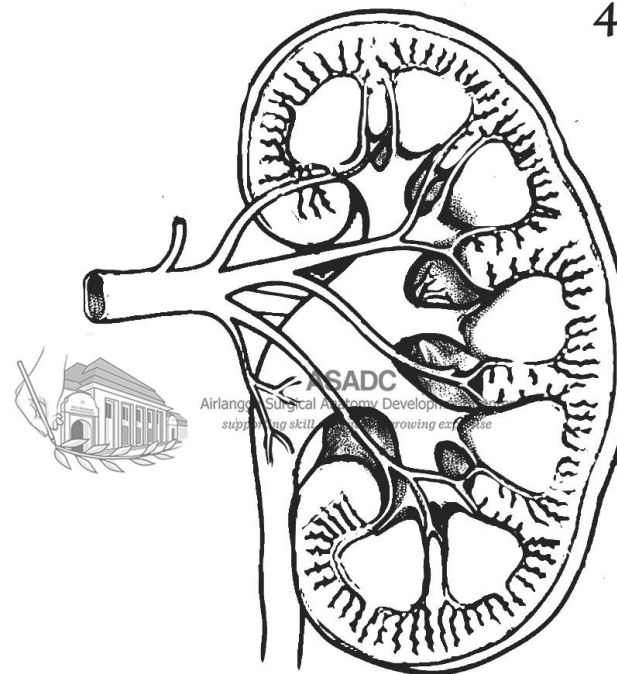
# • Ren

- **Cortex:**
  - Columna renalis
- **Medulla:**
  - Piramida renalis = lobus renalis

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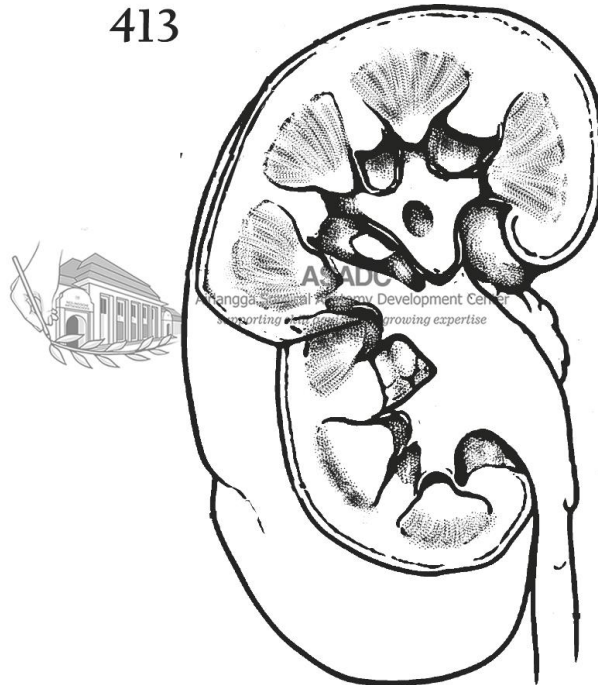


- **Piramida Renalis : 5-11@ ren**

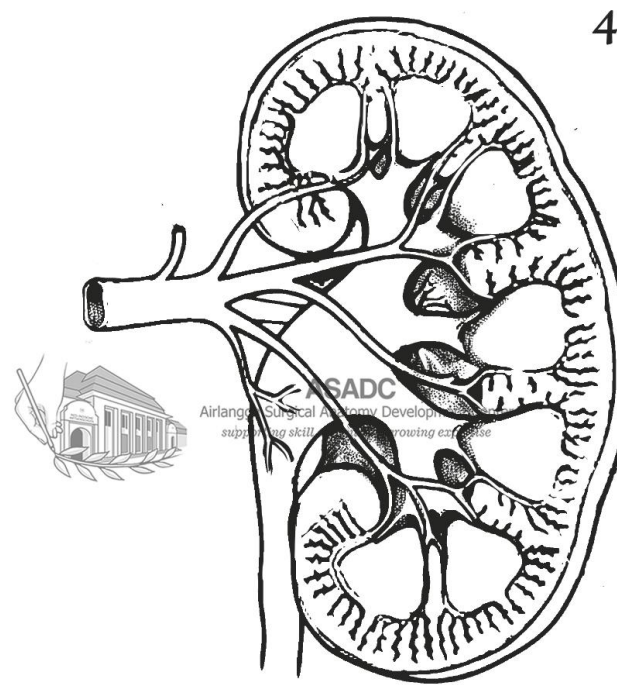
- **Pelvis Renalis**

- **Bagian superior ureter**
- **Bercabang menjadi calyx major → calyx minor (menerima dari papilla renalis)**

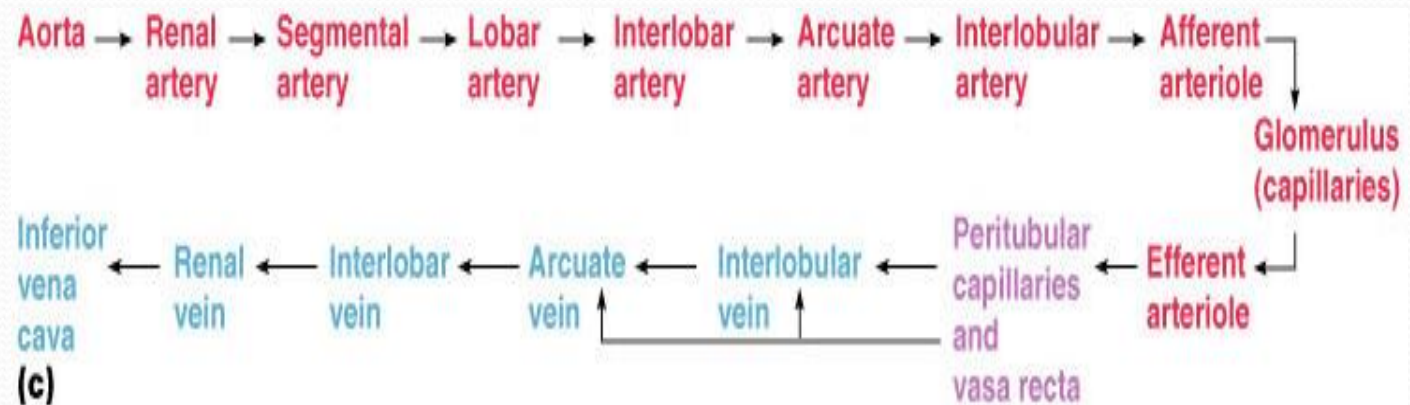
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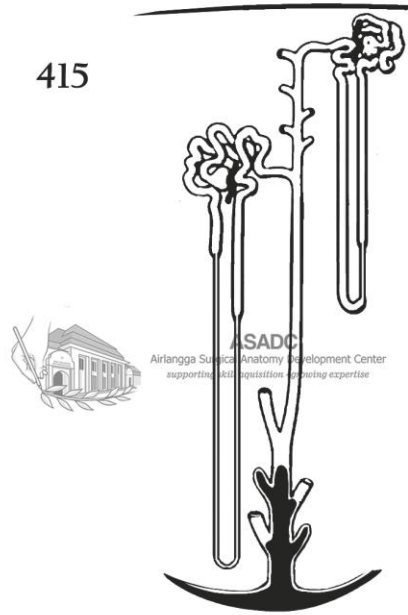
# Suplai darah



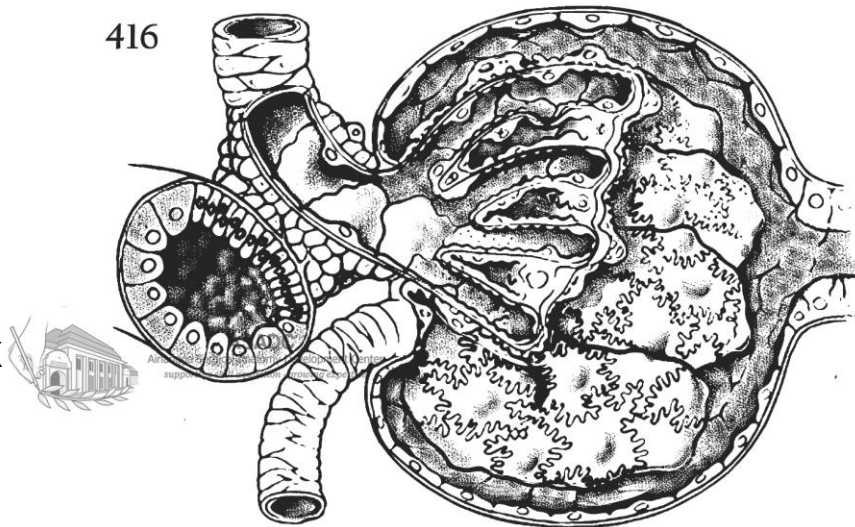
# Nephron

- Unit fungsional terkecil ren
- Terdiri atas : unit pembentuk urin, unit pemekat urine
  - Corpusculus Renalis
    - capsula bowman dan glomerulus
  - Tubulus Contortus Proximal
  - Loop of Henle
  - Tubulus Contortus Distal
  - Ductus colligentes
- Nephron corticalis
  - Berada di cortex
  - Sebagian besar nephron
- Nephron juxtamedullary
  - Perbatasan antara cortex dan medulla
- Pembentukan urine:
  - Filtration
  - Resorption
  - Secretion

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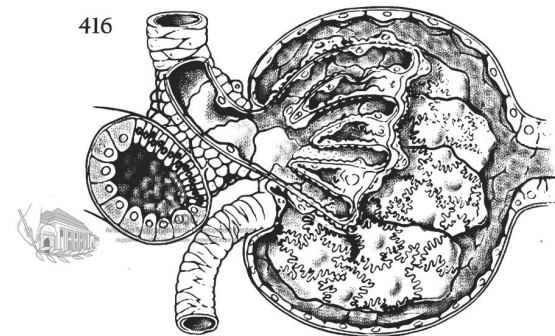
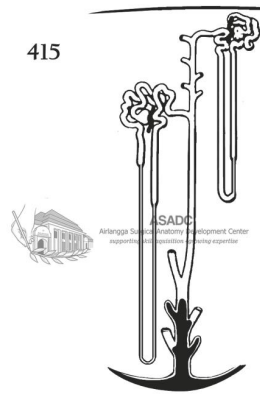


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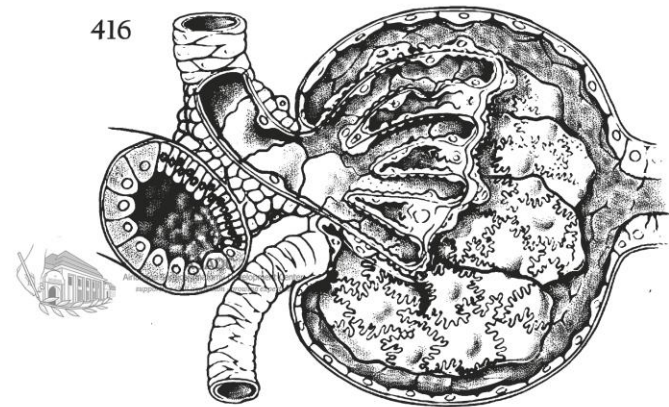
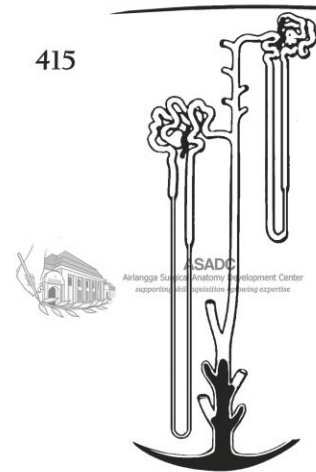
# Glomerulus

- Anyaman kapiler
- Melekat pada arterioli
  - Arterioli afferent
  - Arterioli efferent
- Kapiler dibungkus oleh podosit dari tubulus renalis
- Capsula glomeruli



# Tubulus Renalis

- Capsula Glomeruli(Bowman's)
- Tubulus contortus proximalis
- Loop of Henle
- Tubulus contortus distalis



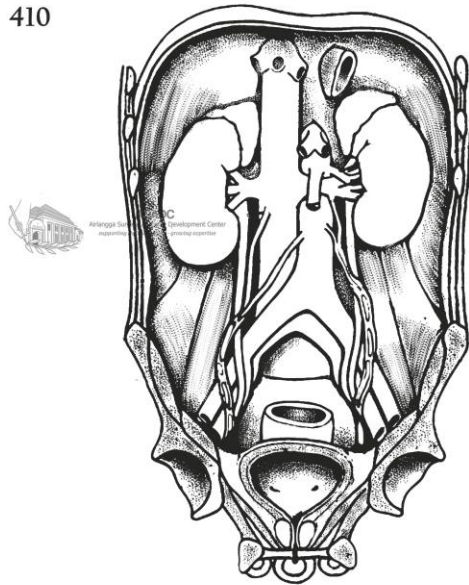
# Kapiler peritubuli

- Dari arteriol efferent glomerulus
- Melekat pada venula
- Dekat dengan tubulus renalis
- Reabsorpsi

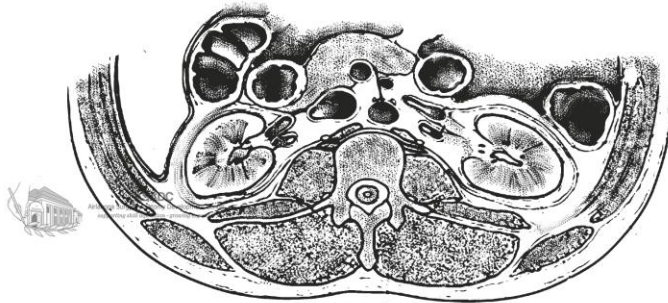
# Ureter

- Saluran sepanjang +/- 25 cm dari pelvis renalis
- Membawa urine ke vesica urinaria
- Retroperitoneal
- Masuk secara obliq di bagian inferior vesica
- Terdiri atas 3 lapis

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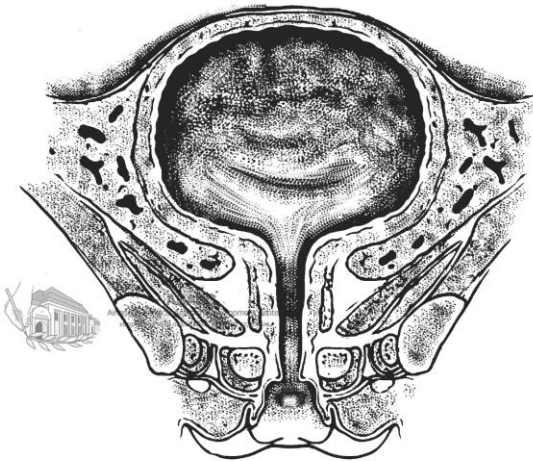
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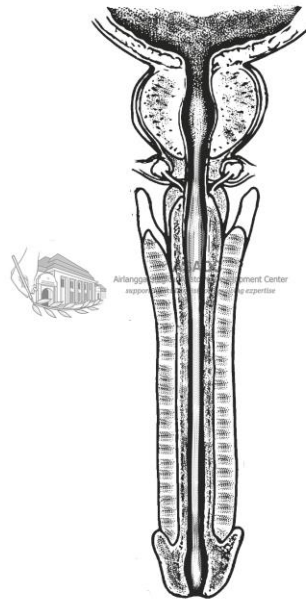
# Vesica Urinaria

- Kantong muskuler
- Menyimpan dan mengeluarkan urine
- Posterior dari symphysis pubis → Saat penuh (500 ml-1l) : meluas ke cavum abdomen
  - Laki-laki: anterior dari rectum
  - Perempuan: anterior dari vagina dan uterus

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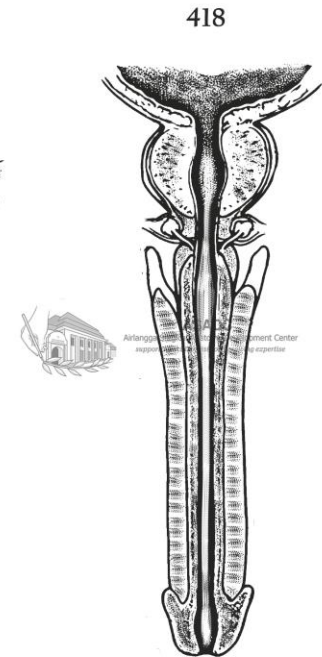
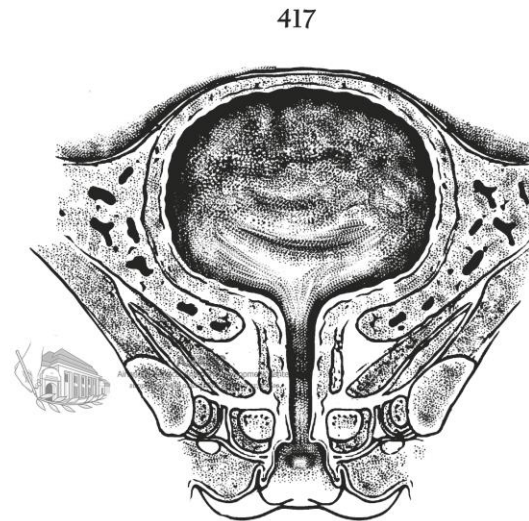


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# Urethra

- Mengeluarkan urine dari tubuh
- Laki-laki : 20 cm
- Perempuan : +/- 3-4 cm
- Sphincter : interna dan externa
- Urethra feminina terikat pada dinding anterior vagina
  - Orificium : anterior dari vagina dan posterior dari clitoris
- Urethra masculina
  - Pars Prostatica
  - Pars Membranosa
  - Pars Spongiosa





Semoga bermanfaat