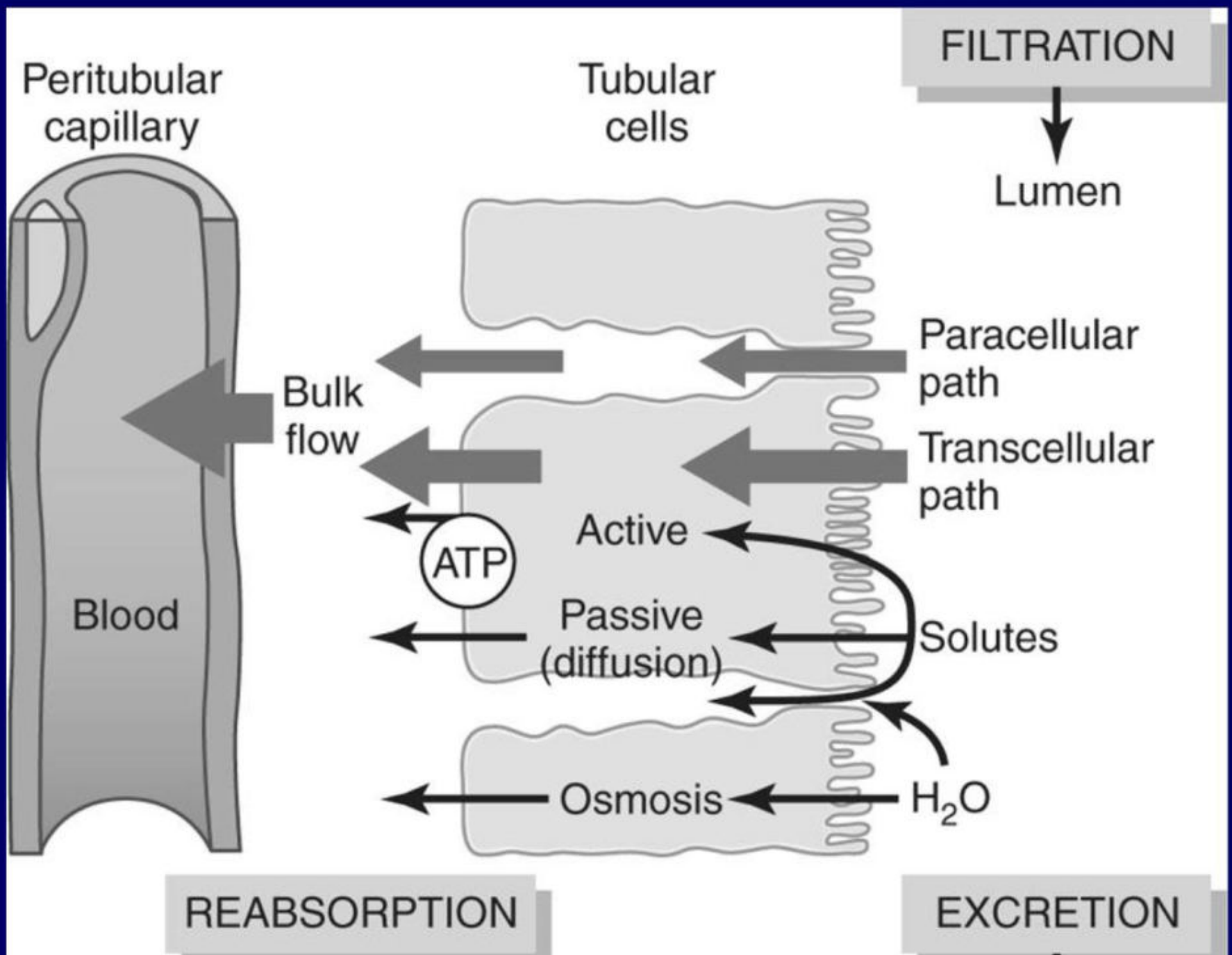


Tubular Reabsorption and Secretion

Tubular reabsorption

- It is quantitatively large and highly selective
- It includes both active and passive mechanisms
- Primary active transport
- Secondary active transport

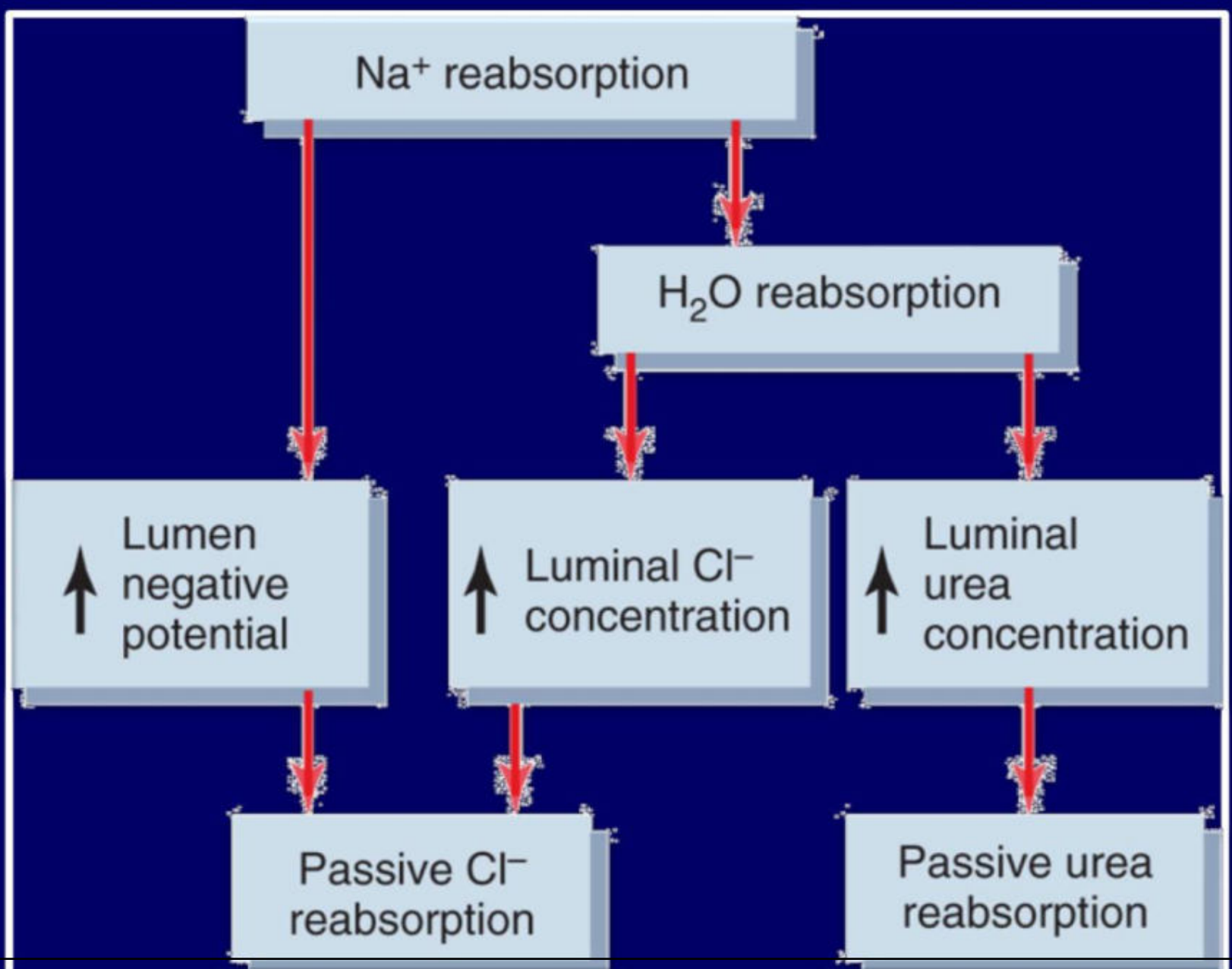


Substances actively reabsorbed and follow transport maximum

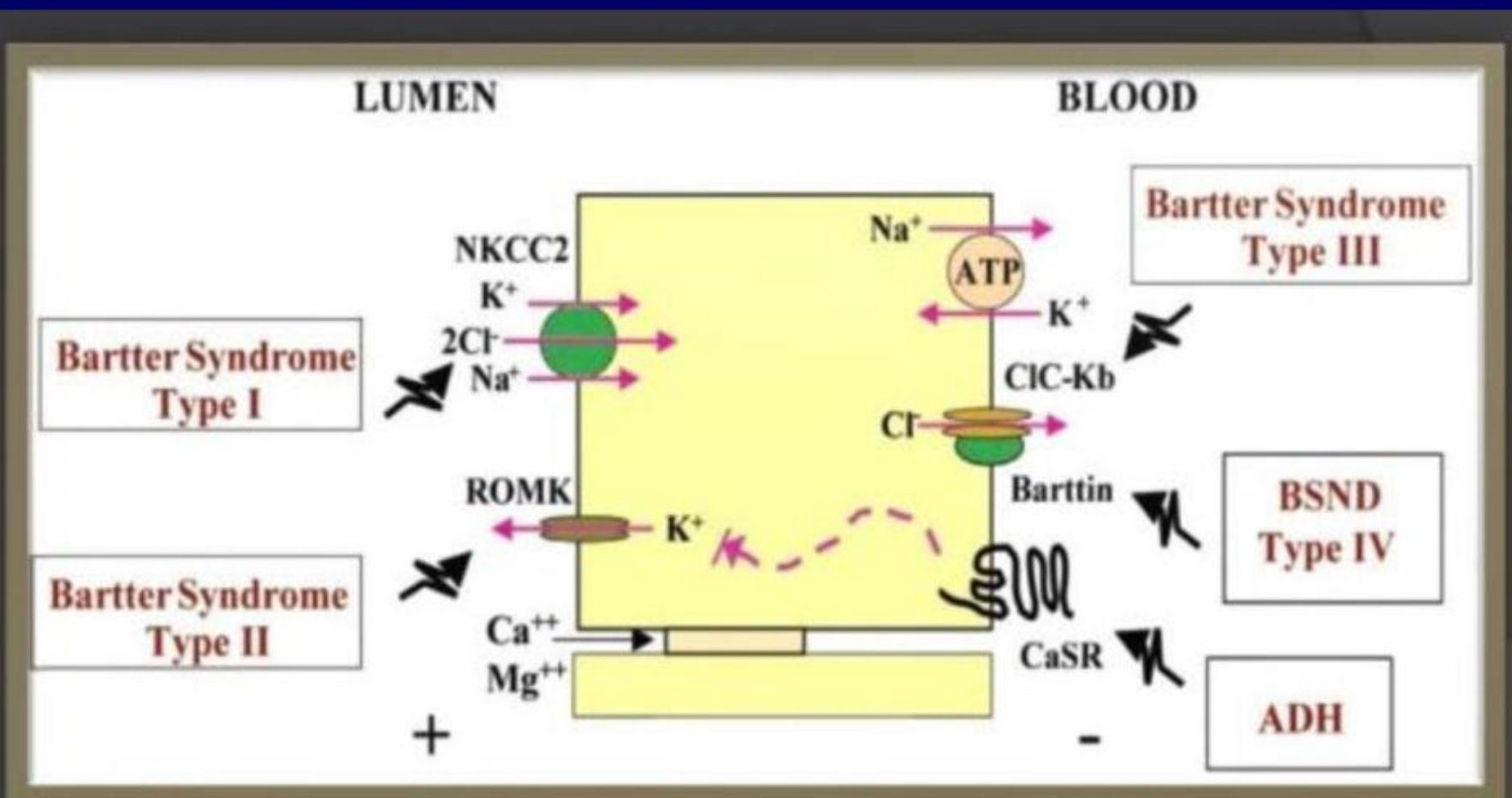
- Glucose
- Phosphates
- Sulfate
- Amino acids
- Urate
- Lactate
- Plasma proteins

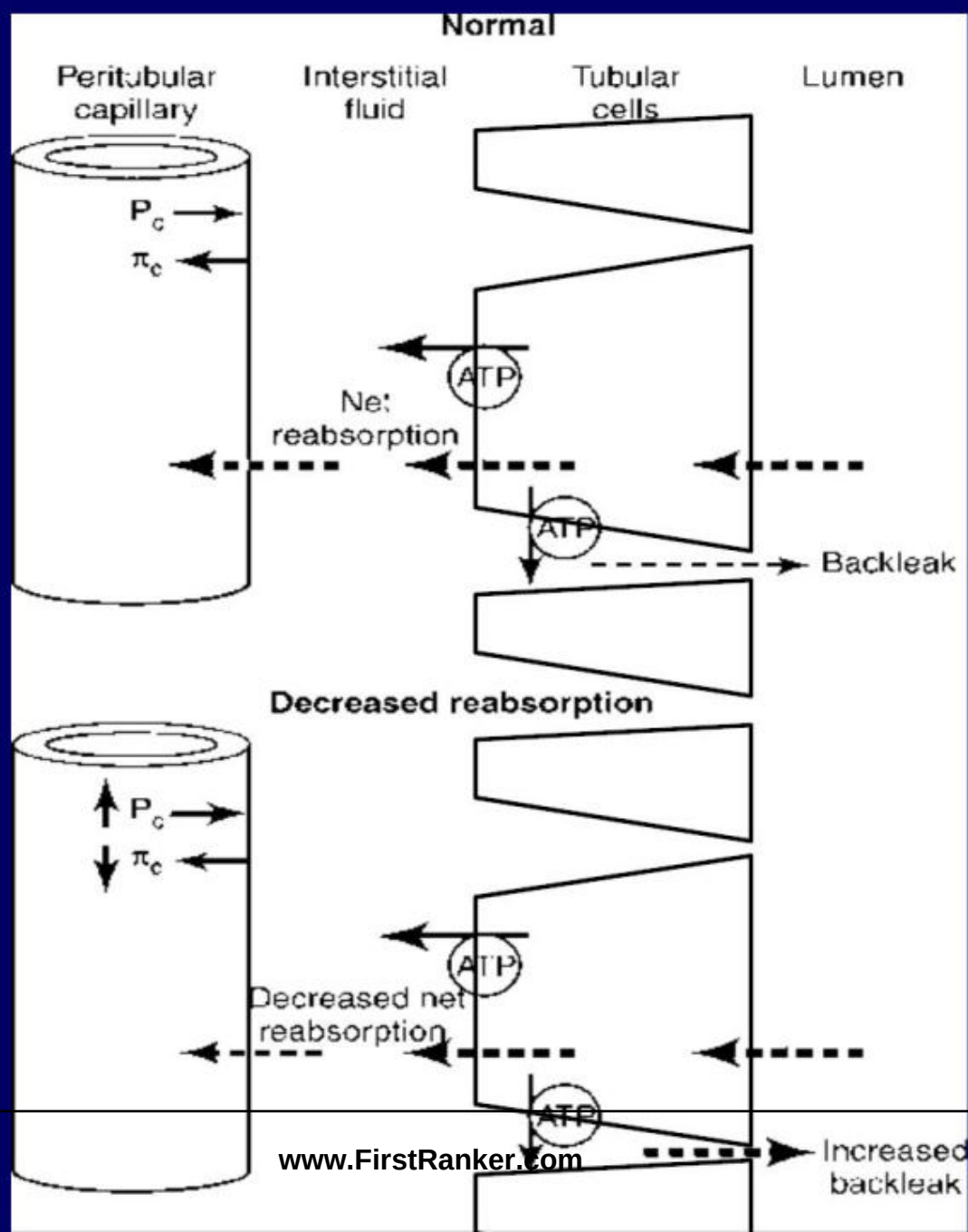
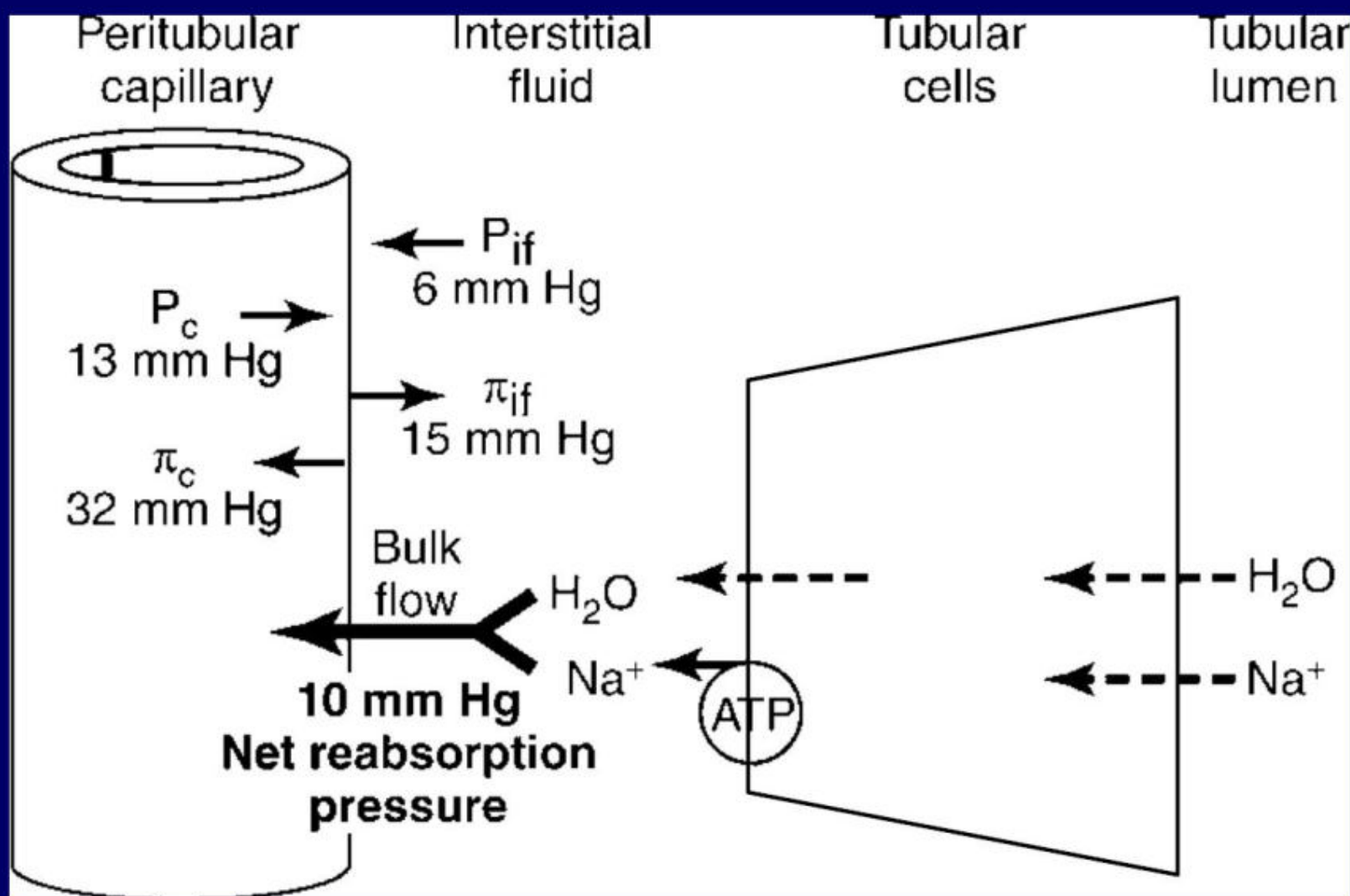
Substances actively secreted and follow transport maximum

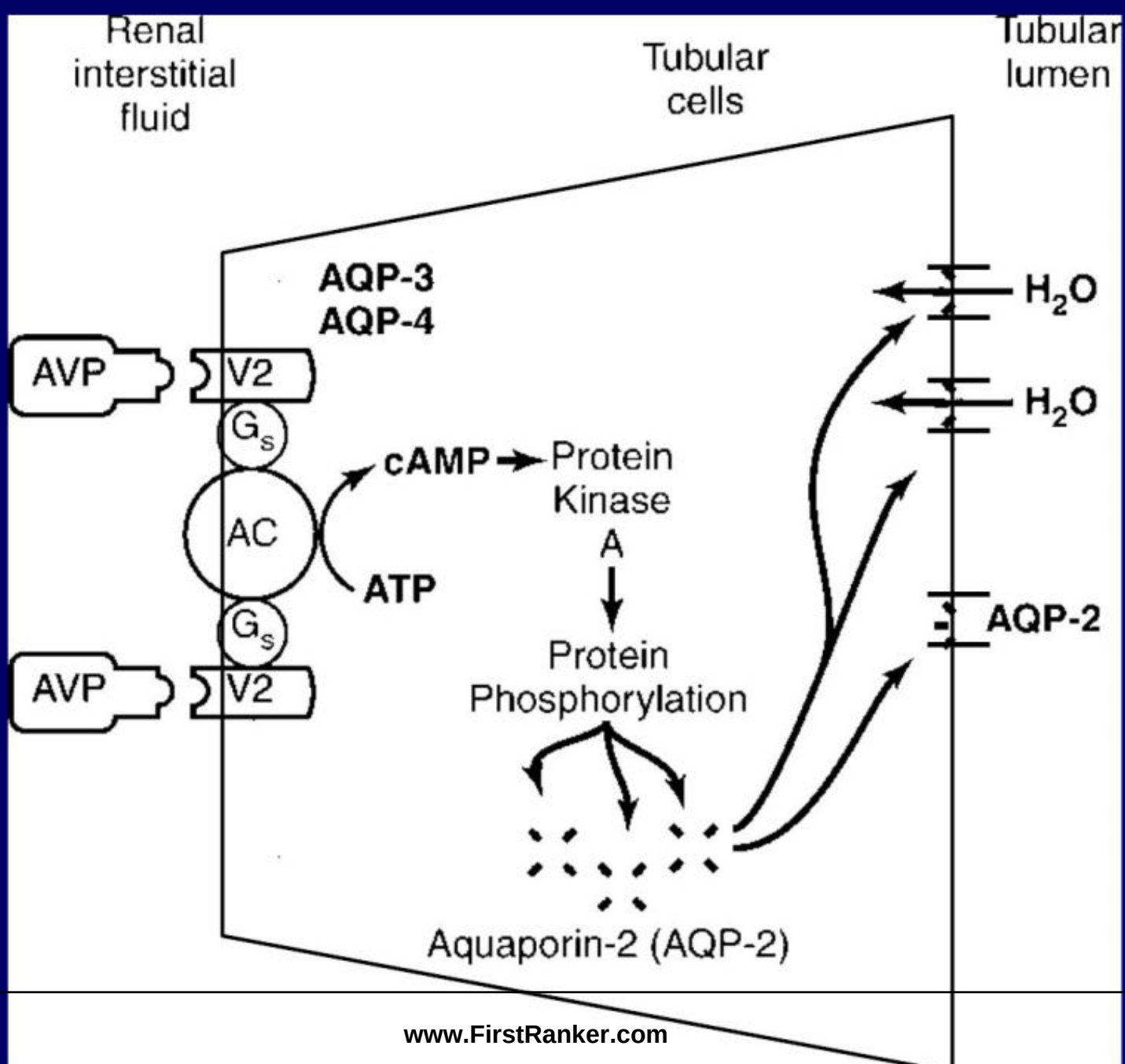
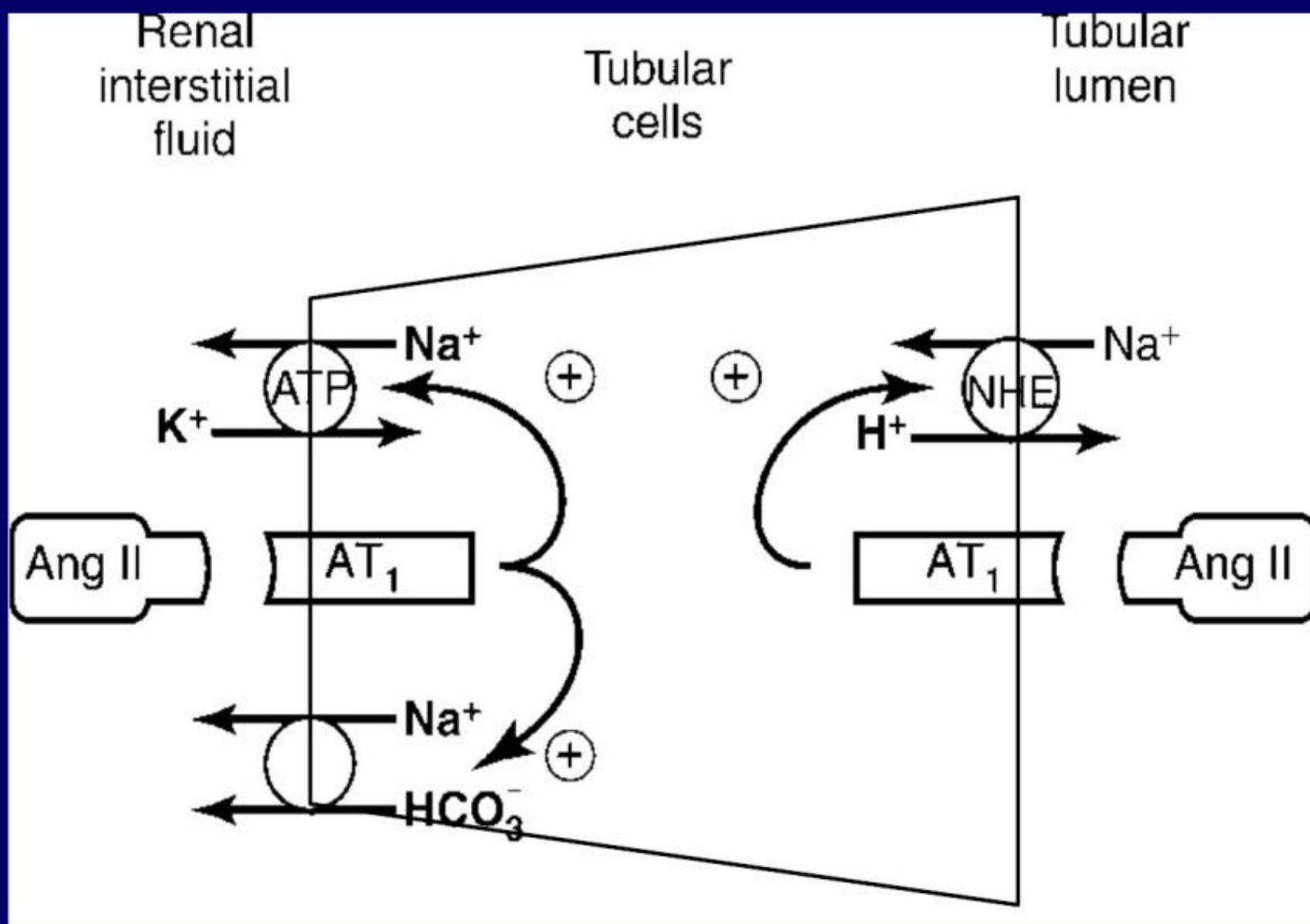
- Creatinine
- Para-amino Hippuric Acid (PAH)

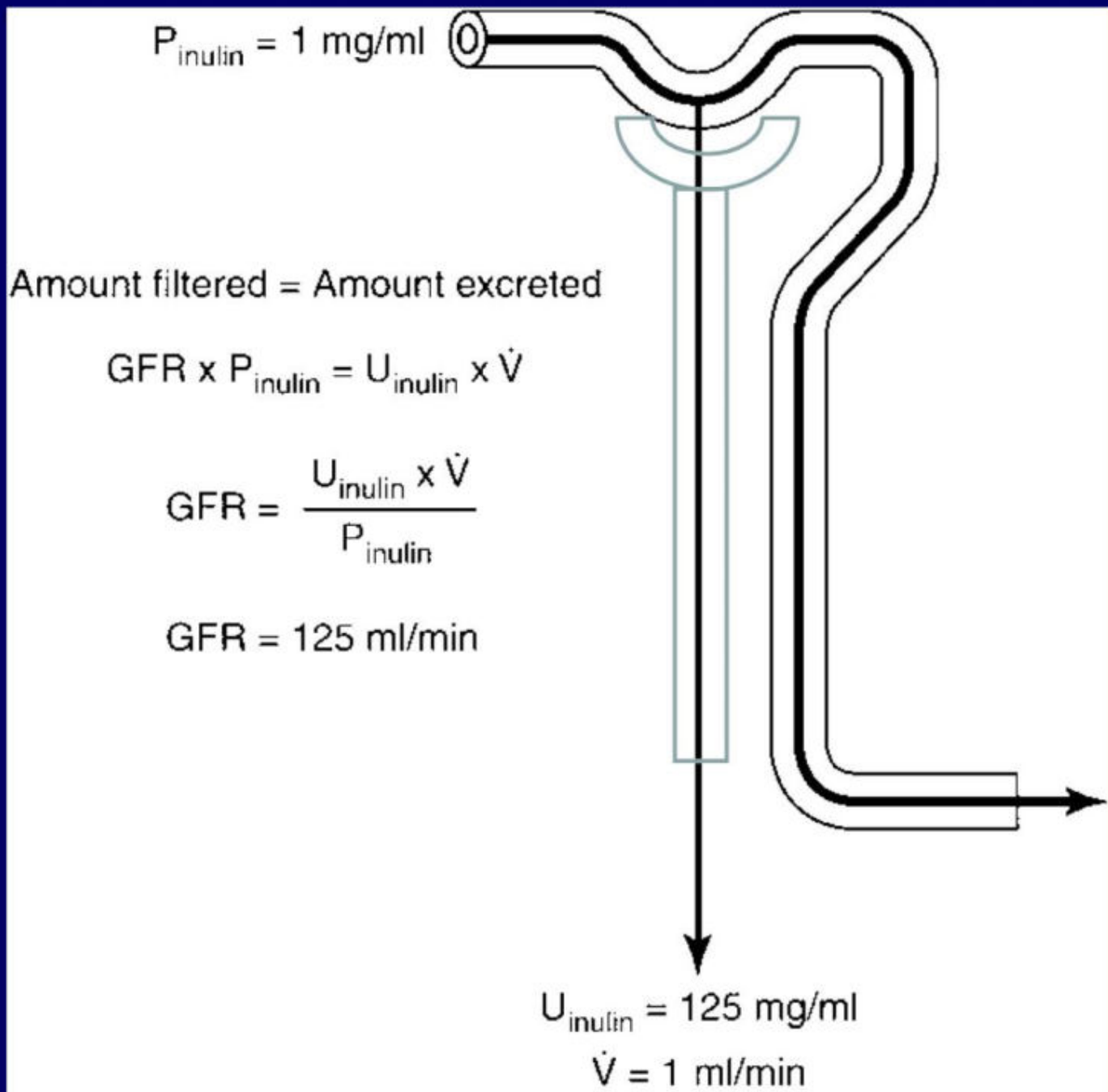


- PCT secretes
 - Bile acids
 - Oxalate
 - Urate
 - Catecholamines









Clearance tests to quantify renal function

- Clearance rate (C_s) = $U_s \times V / P_s$
- $\text{GFR} = U_{\text{inulin}} \times V / P_{\text{inulin}}$
- Clearance ratio = C_s / C_{inulin}
- $\text{ERPF} = C_{\text{PAH}}$
- $\text{RBF} = \text{RPF} / 1 - \text{Hematocrit}$
- Excretion rate = $U_s \times V$