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**Faculty of Applied Science**

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# Urinary System Lab.

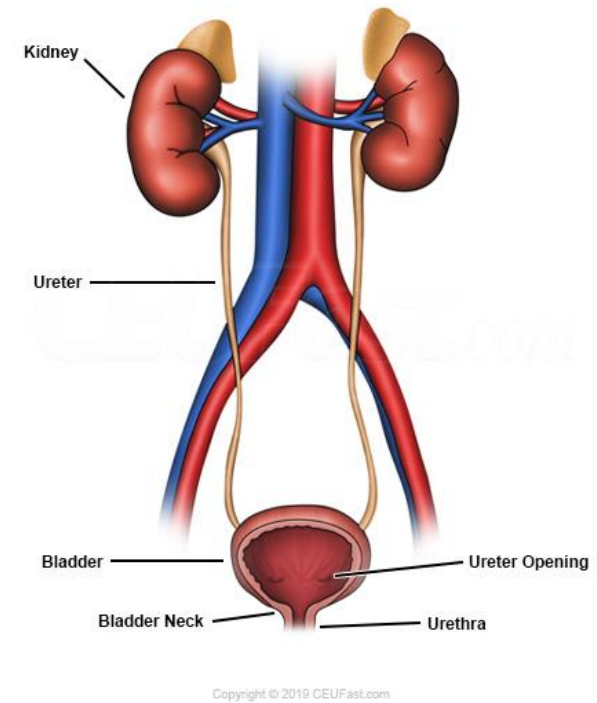
**Human Anatomy**

**Spring Semester**

**Week No. 4**

# Outlines

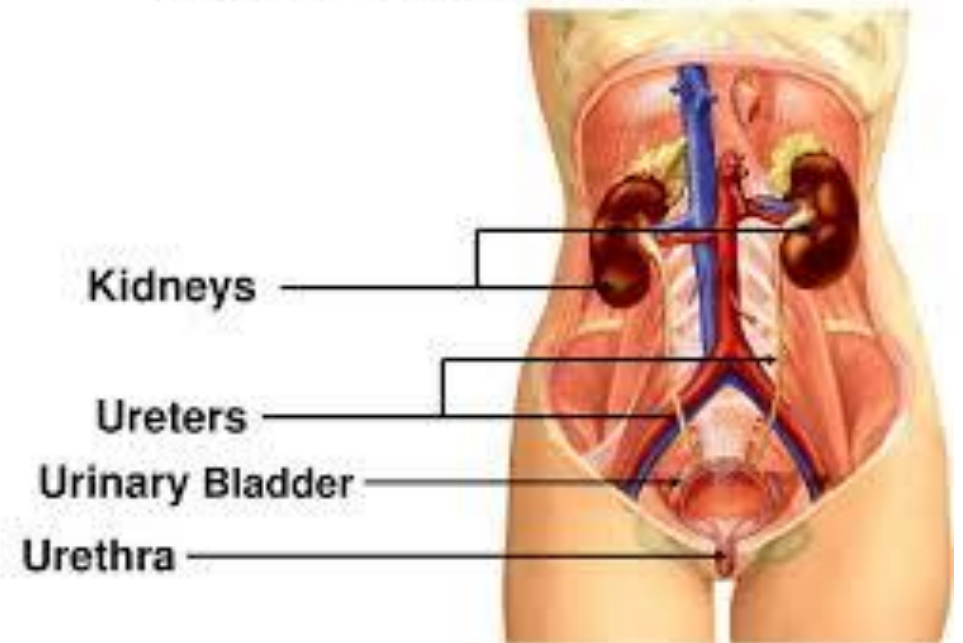
- 1. Kidney**
- 2. Ureters**
- 3. Bladder**
- 4. Urethra**



# Urinary System

The **renal system** (also called the urinary system) is responsible for filtering blood, removing waste, maintaining fluid and electrolyte balance, and regulating blood pressure.

Urinary System Anatomy



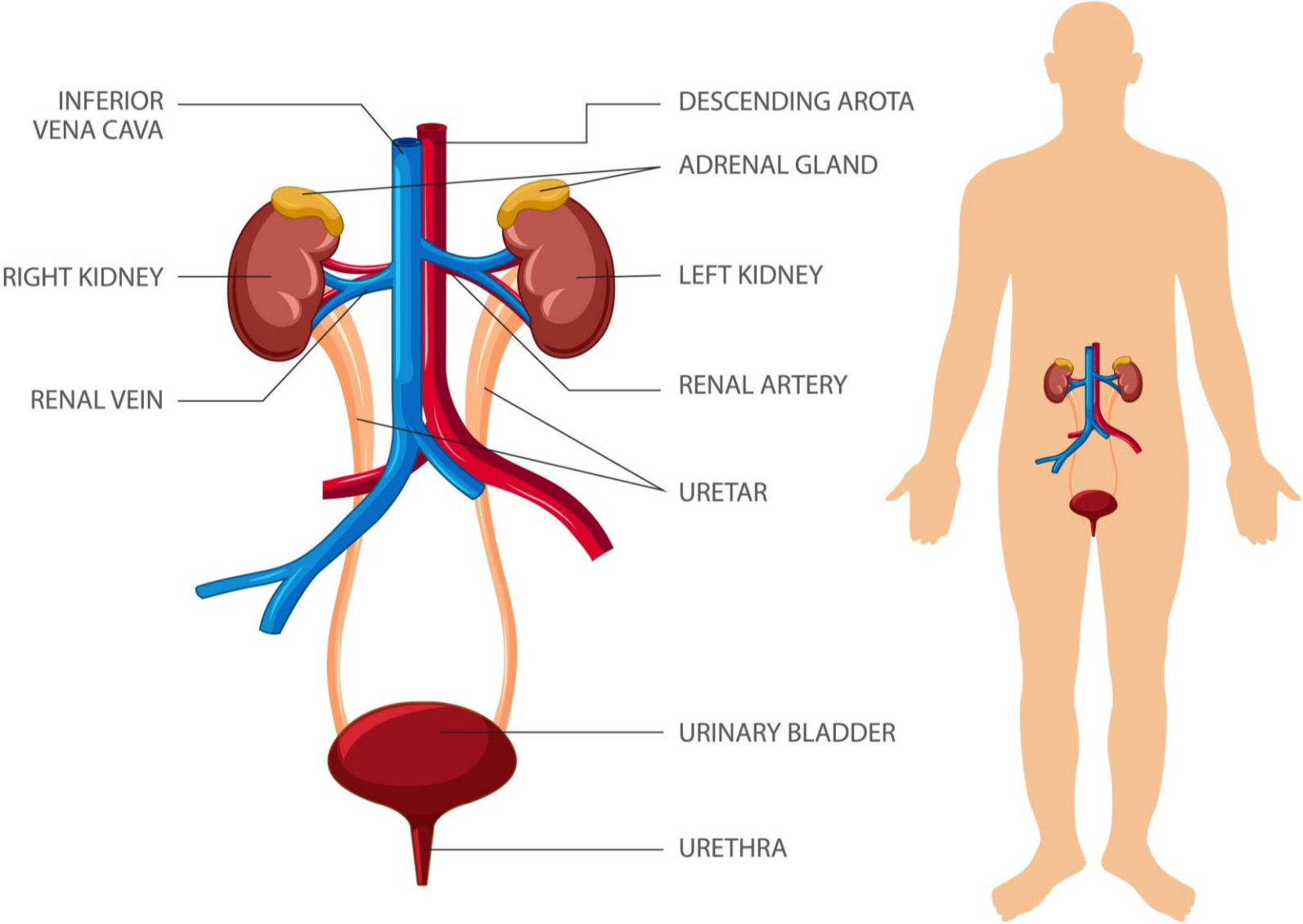
# Urinary System

## **Kidneys (Two):**

The kidneys are located in the **posterior (back) part of the abdomen.**

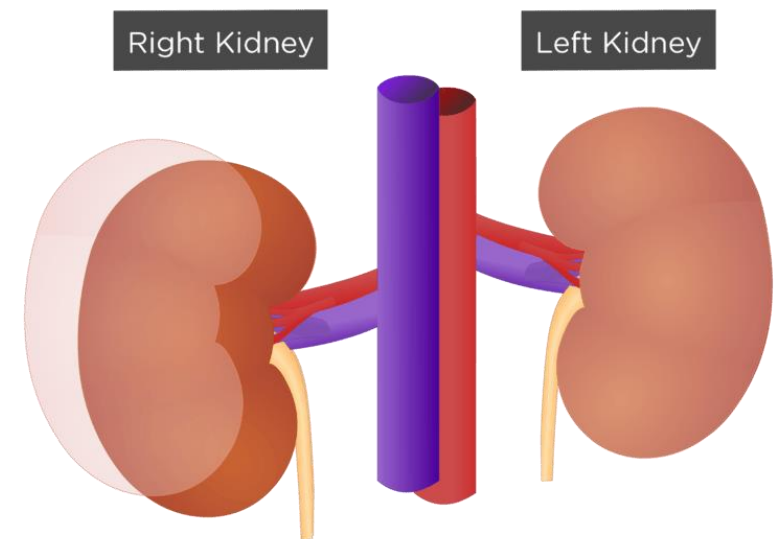
They sit **on either side of the spine, in the upper abdominal area.**

# Urinary System

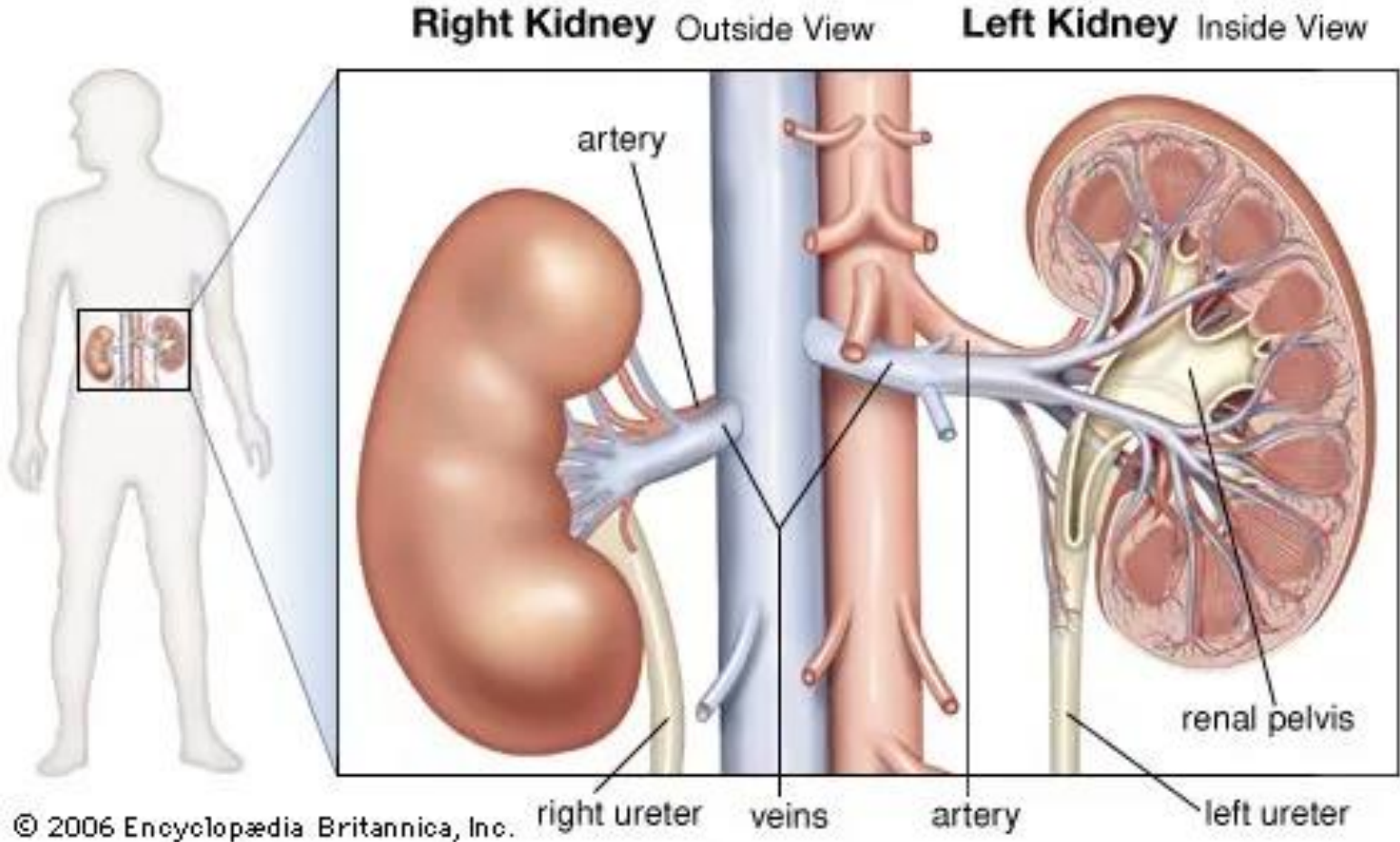


# Urinary System

The **left kidney** is slightly higher than the right kidney by half an inch. It reaches up to the level of the 11th rib, while the right kidney reaches up to the 11th space.

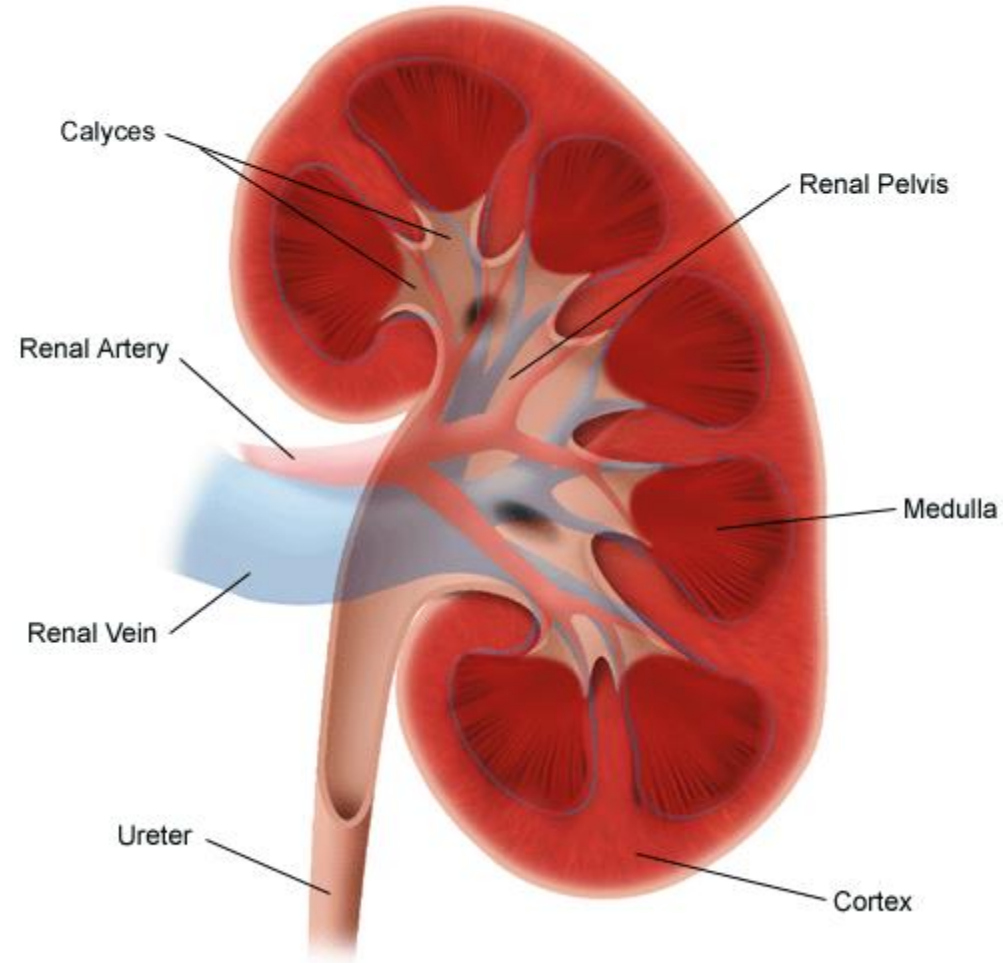


# Urinary System



# Urinary System

Anatomy of the Kidney



# Urinary System

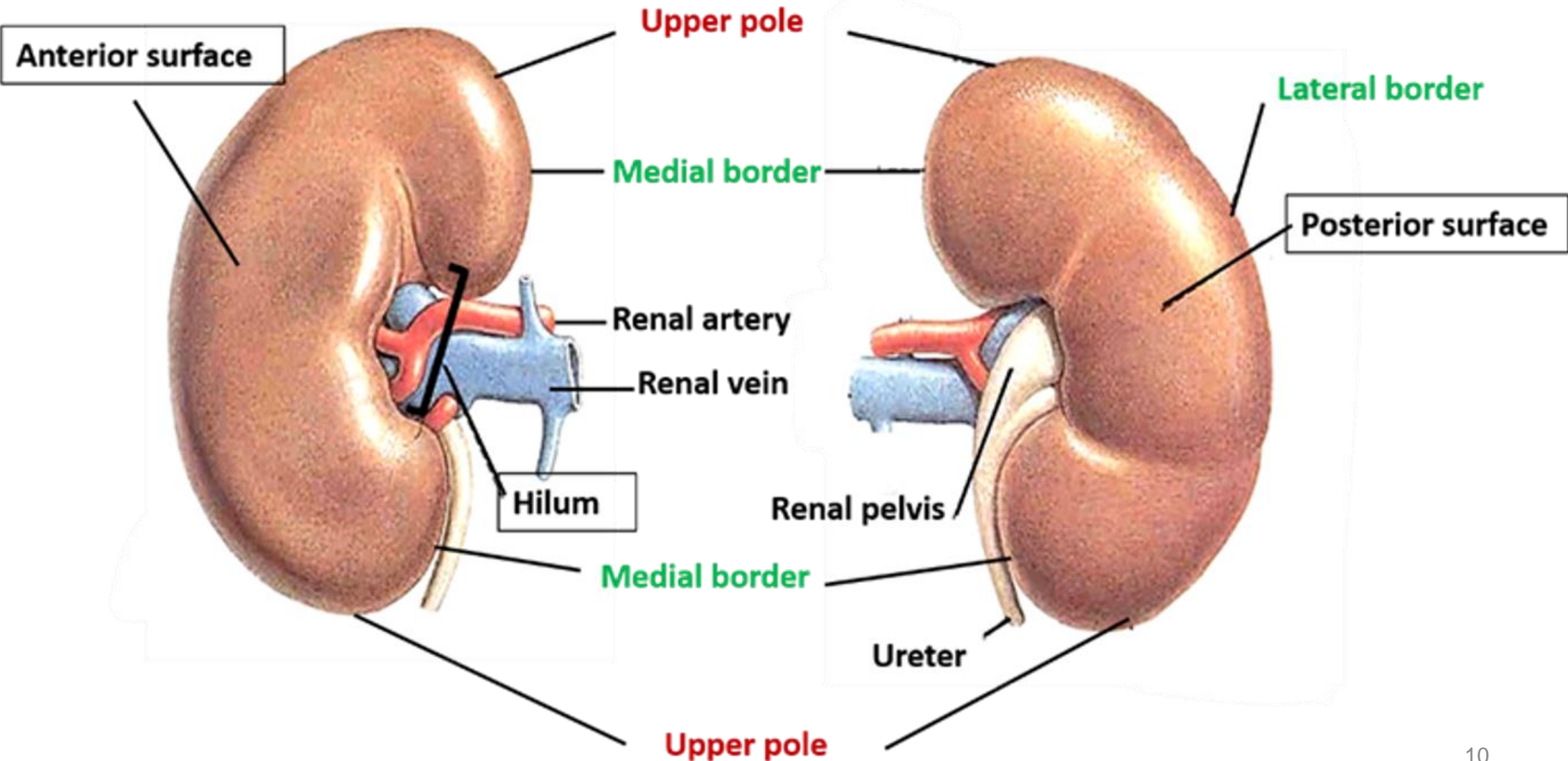
**Size** of the kidney: is 10 cm long, 5 cm wide and 2.5 cm thick.

**Shape:** the kidney is bean-shaped organ and has 2 Poles, 2 borders and 2 surfaces.

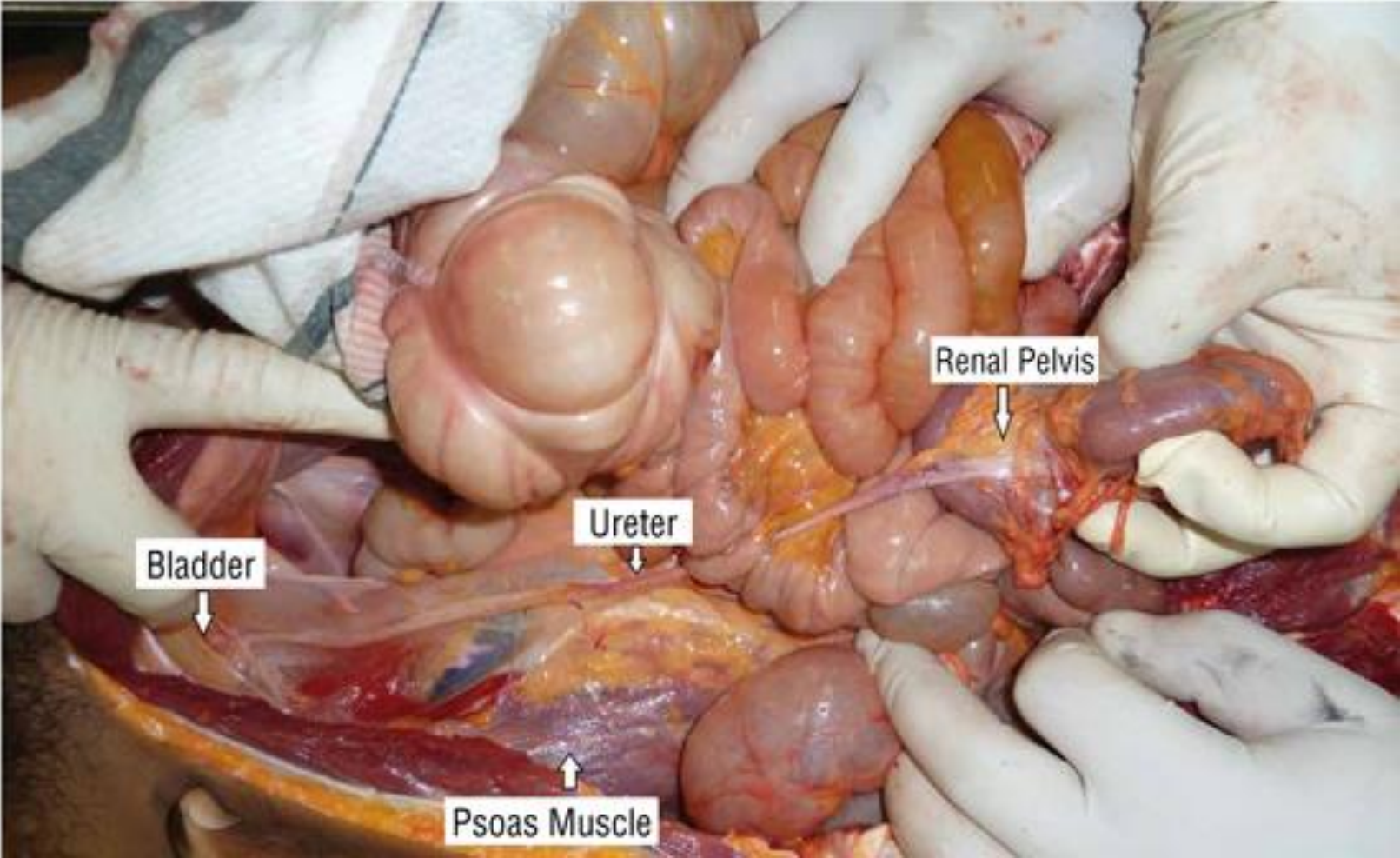
➤◆ **Two poles:** upper and lower: the upper pole is slightly thicker.

➤ **Two borders:** lateral and medial.

# Urinary System



# Urinary System

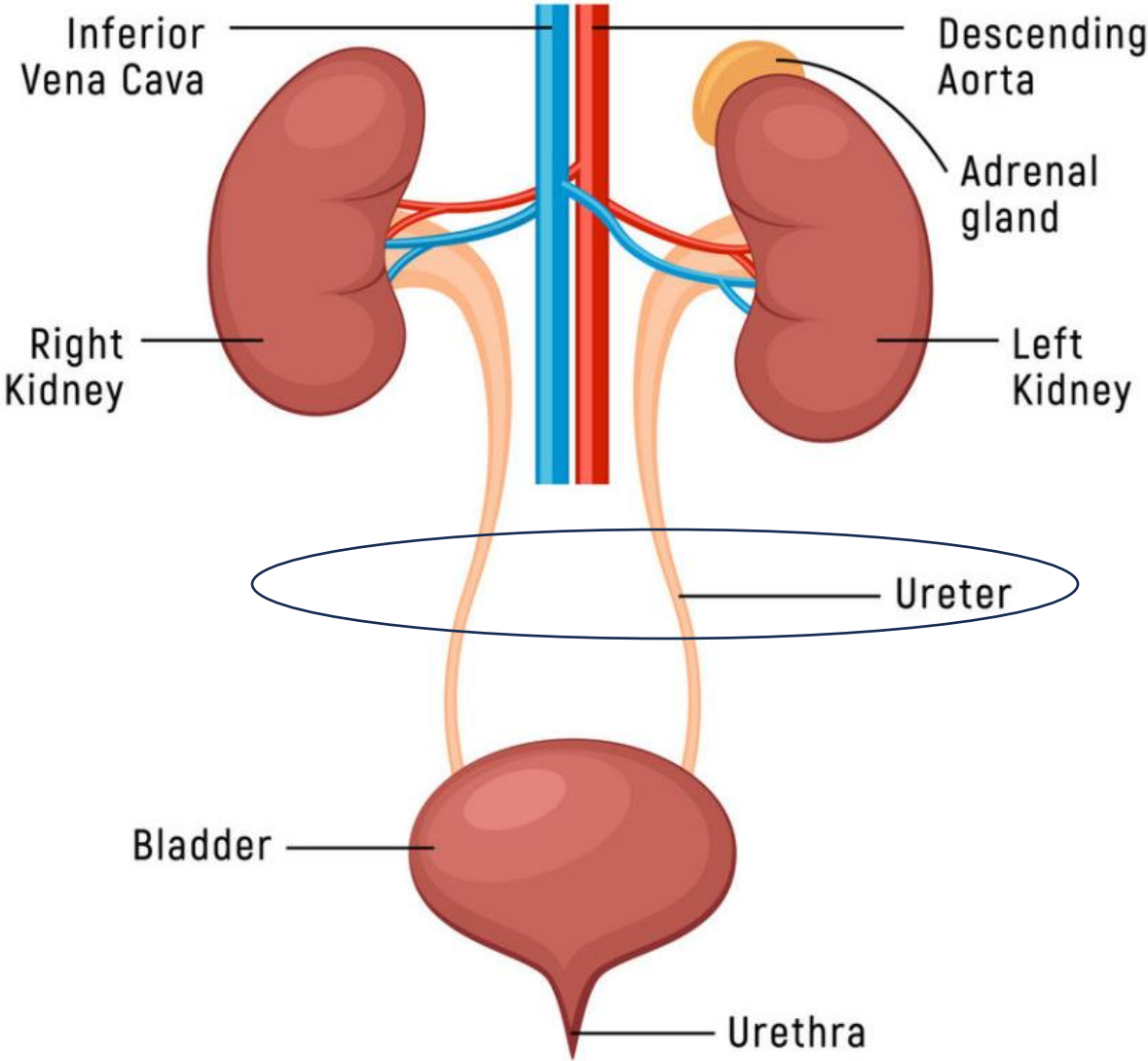


# Functions

- 1. Remove waste products.**
- 2. Balance fluids.**
- 3. Control electrolytes.**
- 4. Regulate blood pressure.**
- 5. Produce hormones.**

# Urinary System

## 2. Ureters (Two):



# Urinary System

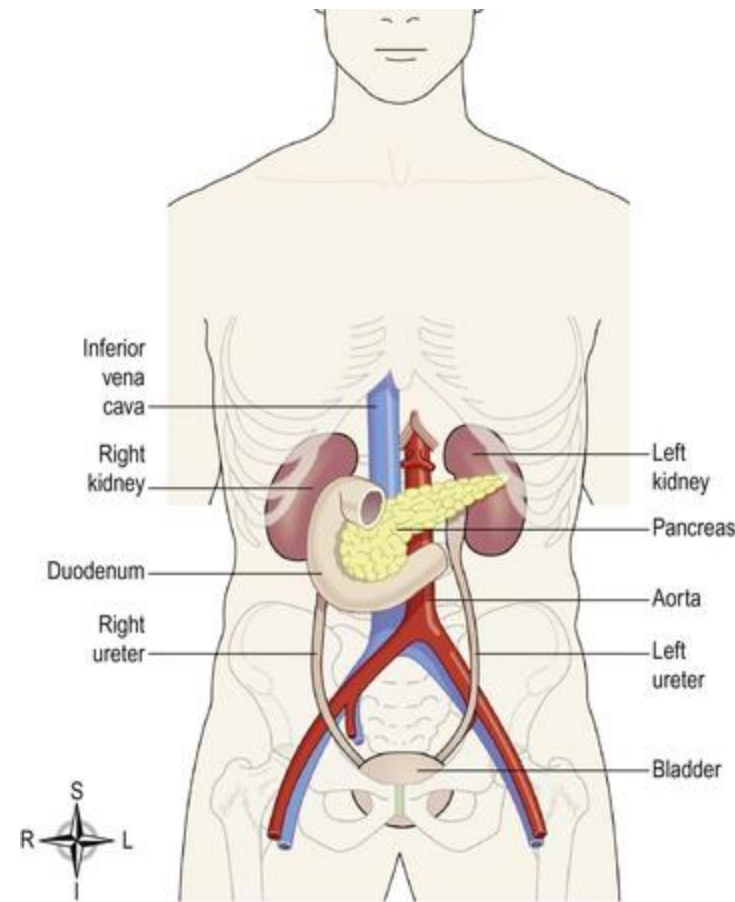
## 2. Ureters (Two):

- Ureters are **two thin tubes** (one from each kidney) that **carry urine from the kidneys to the urinary bladder.**
- Each ureter connects a kidney to the bladder
- They use **muscular contractions (peristalsis)** to push urine downward

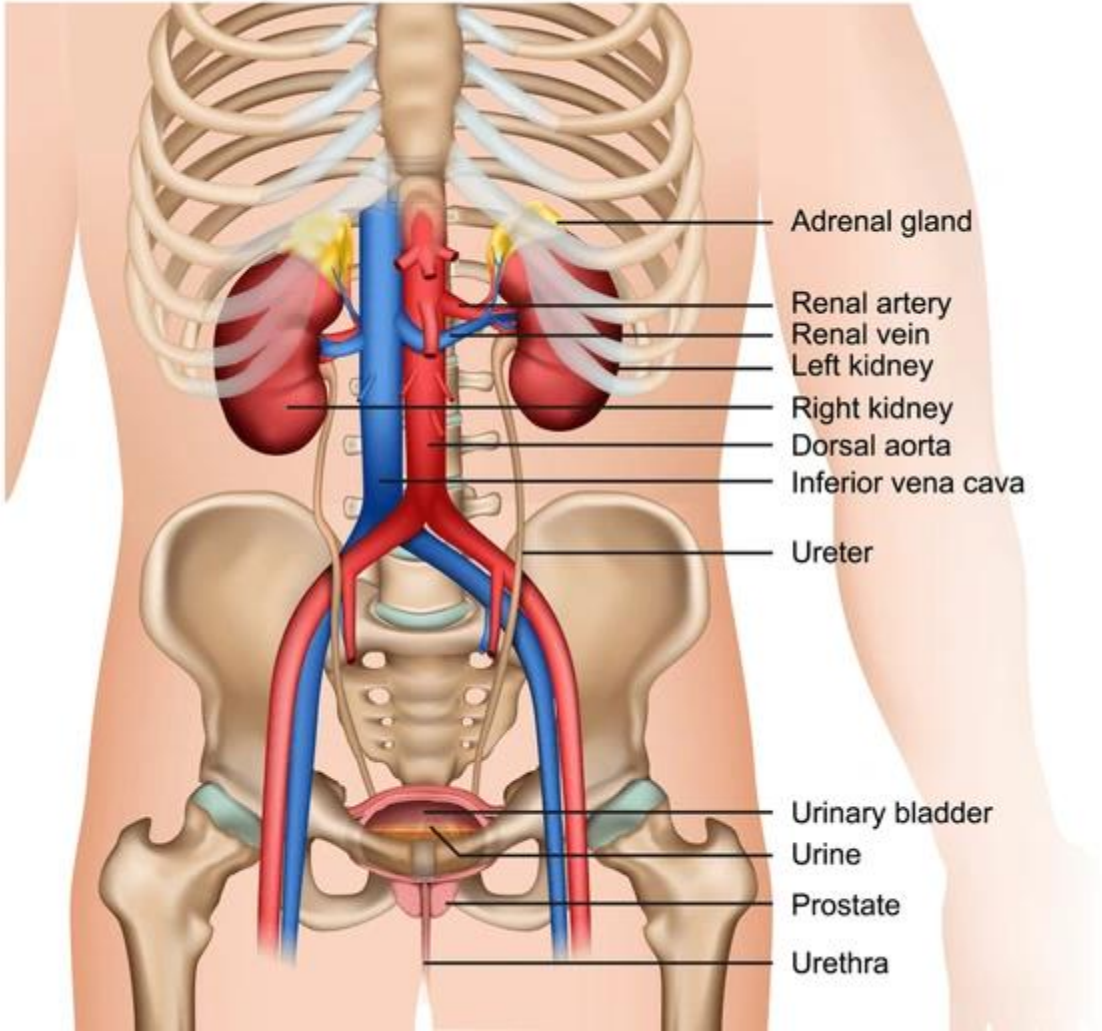
# Urinary System

**Length:** Ten inches (25 cm) long.

**Location:** The ureters are located in the lower part of the abdomen and pelvis.



# Urinary System



# Urinary System

## Functions of Ureters

1. Carry urine from the kidneys to the urinary bladder
2. Move urine by peristalsis (wave-like muscle contractions)
3. Prevent backflow of urine into the kidneys
4. Ensure one-way flow of urine into the bladder

