

فسلجة الامراض النظري  
المرحلة الثالثة  
الفصل الاول

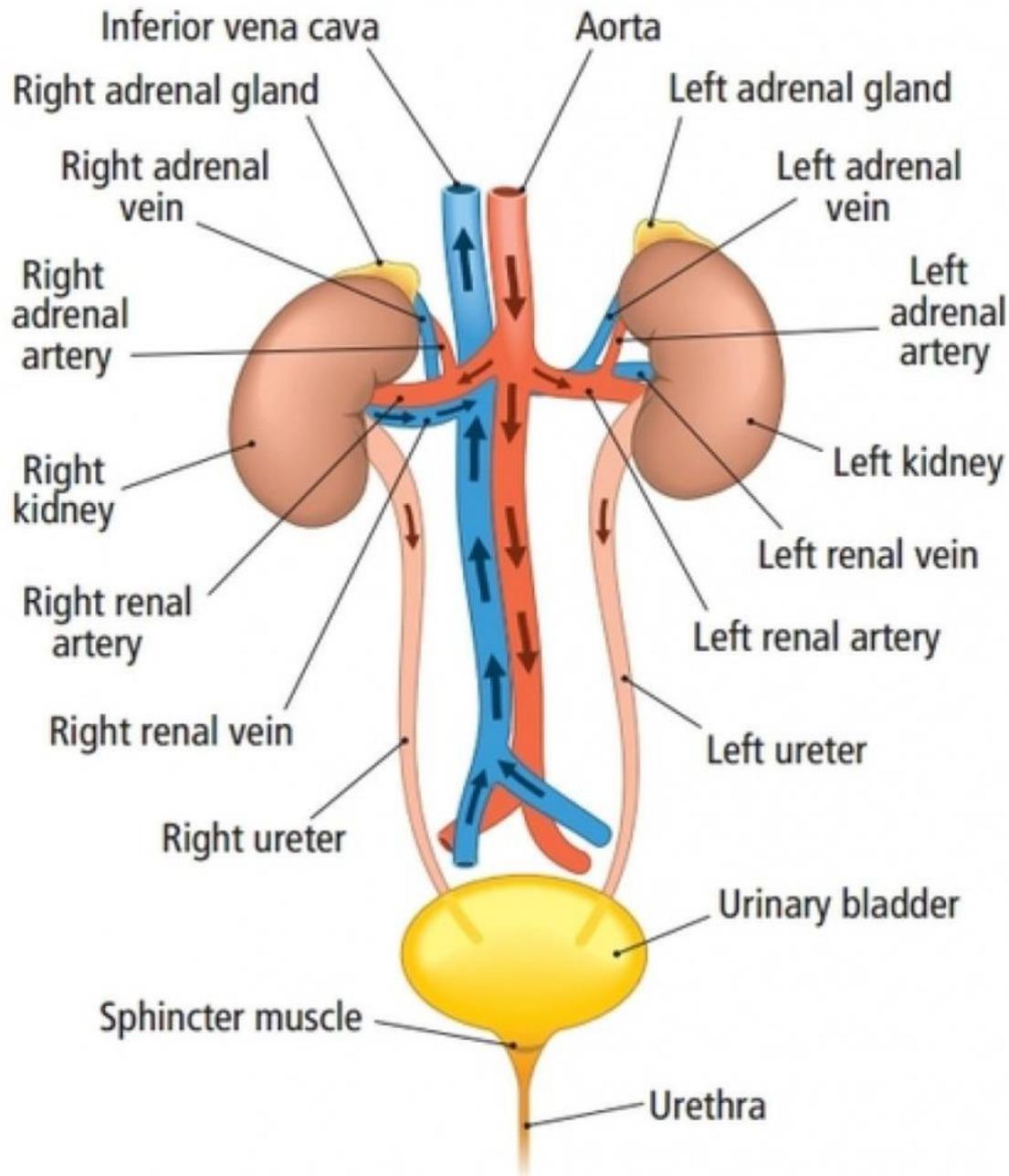


كلية الرشيد الجامعة  
قسم الصيدلة  
٢٠١٨ - ٢٠١٩

# Disorders of the Renal System

Lec (8)

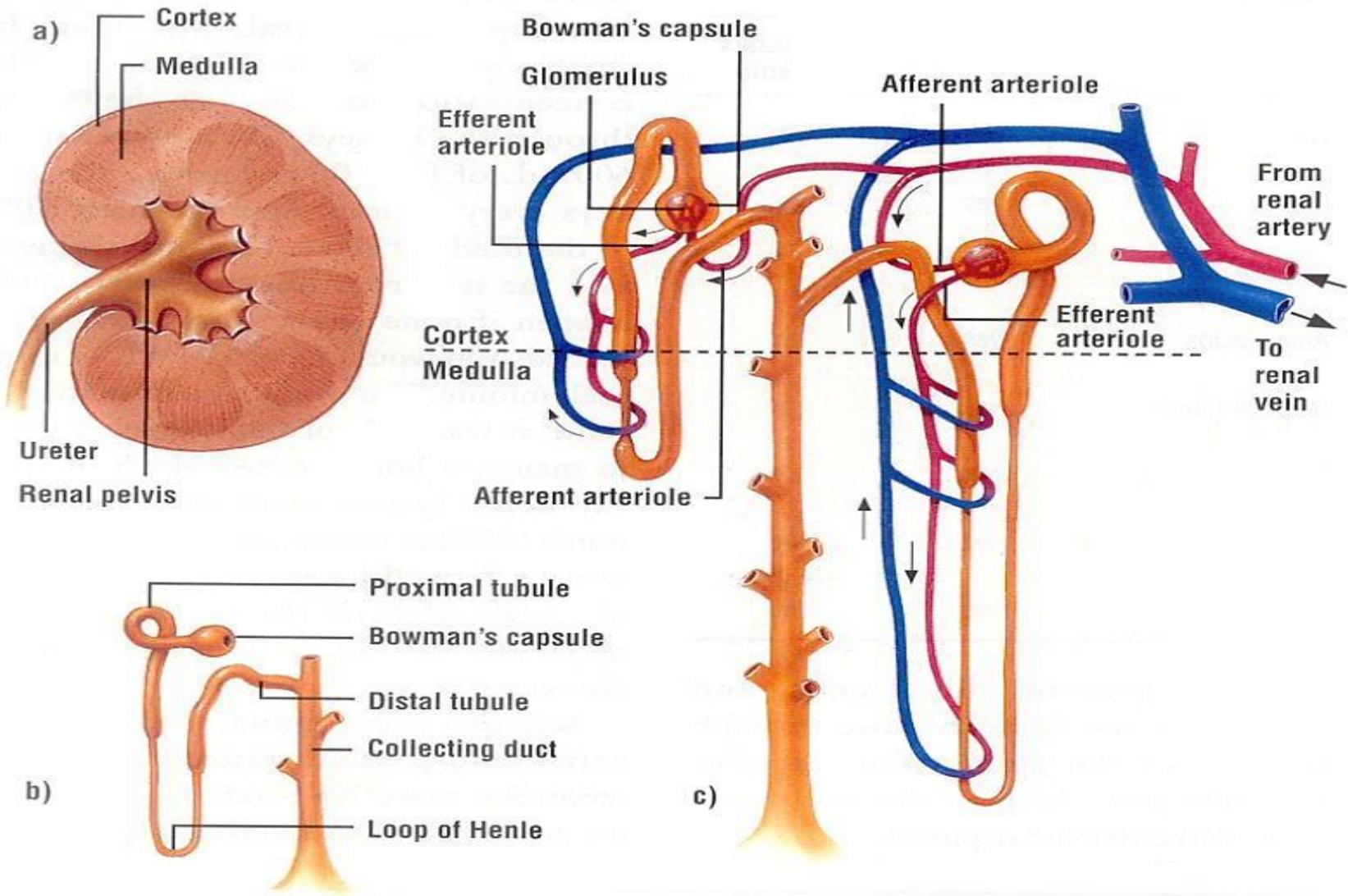
Assis. Prof. Dr. Muna Salih Daoud



# Anatomy

## Urinary System

---



## Anatomy of the Kidney and the Nephron



# Functions of the Kidney:

---

- ▶ Formation of urine by filtration of blood via the glomerulus (so it is an excretory organ)
- ▶ Removal of nitrogenous waste products (urea, uric acid, creatinine and ammonia)
- ▶ Maintenance of homeostasis through fluid balance, electrolyte balance and acid – base balance
- ▶ Regulation of blood pressure through the juxtaglomerular apparatus and the renin angiotensin – aldosterone system



# Disorders of the Renal System:

---

- ▶ Urine incontinence and retention
- ▶ Urinary tract infection (UTI):
  - ▶ Upper UTI (pyelonephritis)
  - ▶ Lower UTI (cystitis and urethritis)
- ▶ Inflammatory disorders (acute and chronic glomerulonephritis)
- ▶ Nephrotic syndrome
- ▶ Urinary tract obstruction (stones, hydronephrosis and tumors)
- ▶ Congenital disorders:
  - ▶ Polycystic kidneys
  - ▶ wilm's tumor (nephroblastoma)
- ▶ Renal failure (acute and chronic)



# 1- nephrotic syndrome:

---

- ▶ It is characterized by:
  - ▶ Massive proteinuria
  - ▶ Hypoalbuminemia
  - ▶ Generalized edema
  - ▶ Hyperlipidemia
  - ▶ Slight azotemia, hematuria or hypertension

## 2- Nephritic syndrome:

- ▶ Hematuria
  - ▶ Reduced GFR, oliguria and azotemia
  - ▶ Hypertension
- 



# 3- glomerulonephritis:

---

- ▶ It is of two types:
  - ▶ Acute glomerulonephritis
  - ▶ Chronic glomerulonephritis
- ▶ Definition:
- ▶ Etiology (causes):
- ▶ Clinical features:



# 4- pyelonephritis:

---

- ▶ Definition:
- ▶ Etiology (causes):
- ▶ Predisposing factors:
- ▶ Pathogenesis:
- ▶ Clinical features:



# 5- Renal Failure:

---

- ▶ It describes a medical condition in which the kidneys fail to adequately filter toxins and waste products from the blood. It is of 2 types:
  - ▶ Acute kidney failure
  - ▶ Chronic kidney failure
- ▶ Acute kidney failure: can be divided into the followings:
  - ▶ Prerenal failure
  - ▶ Post renal failure
  - ▶ Intrarenal failure
- ▶ Etiology:
- ▶ Pathogenesis:
- ▶ Clinical features:
- ▶ Diagnostic evaluations:



- 
- ▶ **Chronic kidney failure:** is a clinical syndrome characterized by primary renal failure and irreversible renal structural lesions that have been present for months or years
  - ▶ **Etiology:**
  - ▶ **Pathogenesis:**
  - ▶ **Morphological changes:**
  - ▶ **Clinical features**

