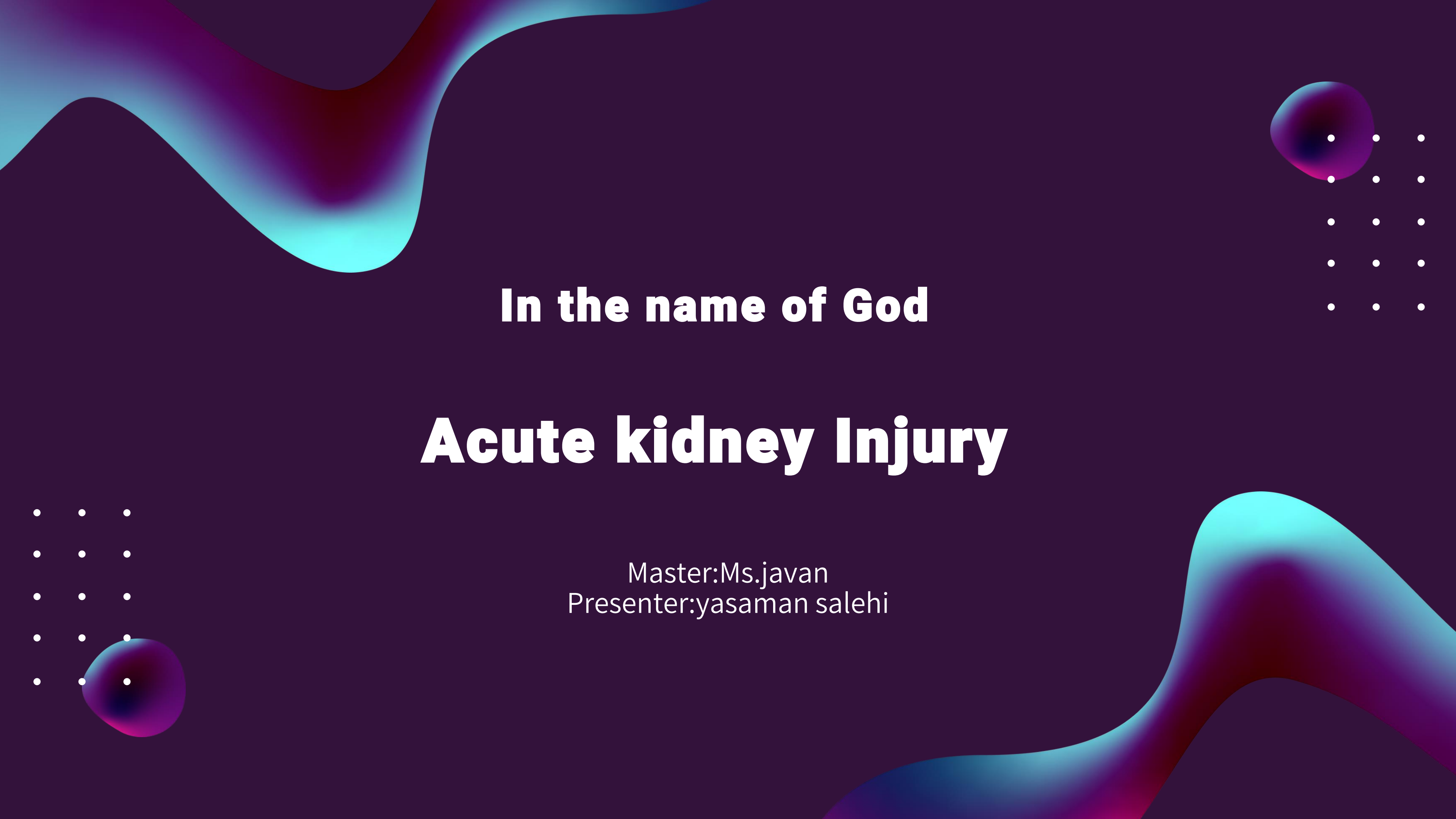




In the name of God

Acute kidney Injury

Master:Ms.javan
Presenter:yasaman salehi

What is Acute Kidney Injury?

Sudden decline in kidney function

Inability to maintain:

Fluid balance

Electrolyte levels

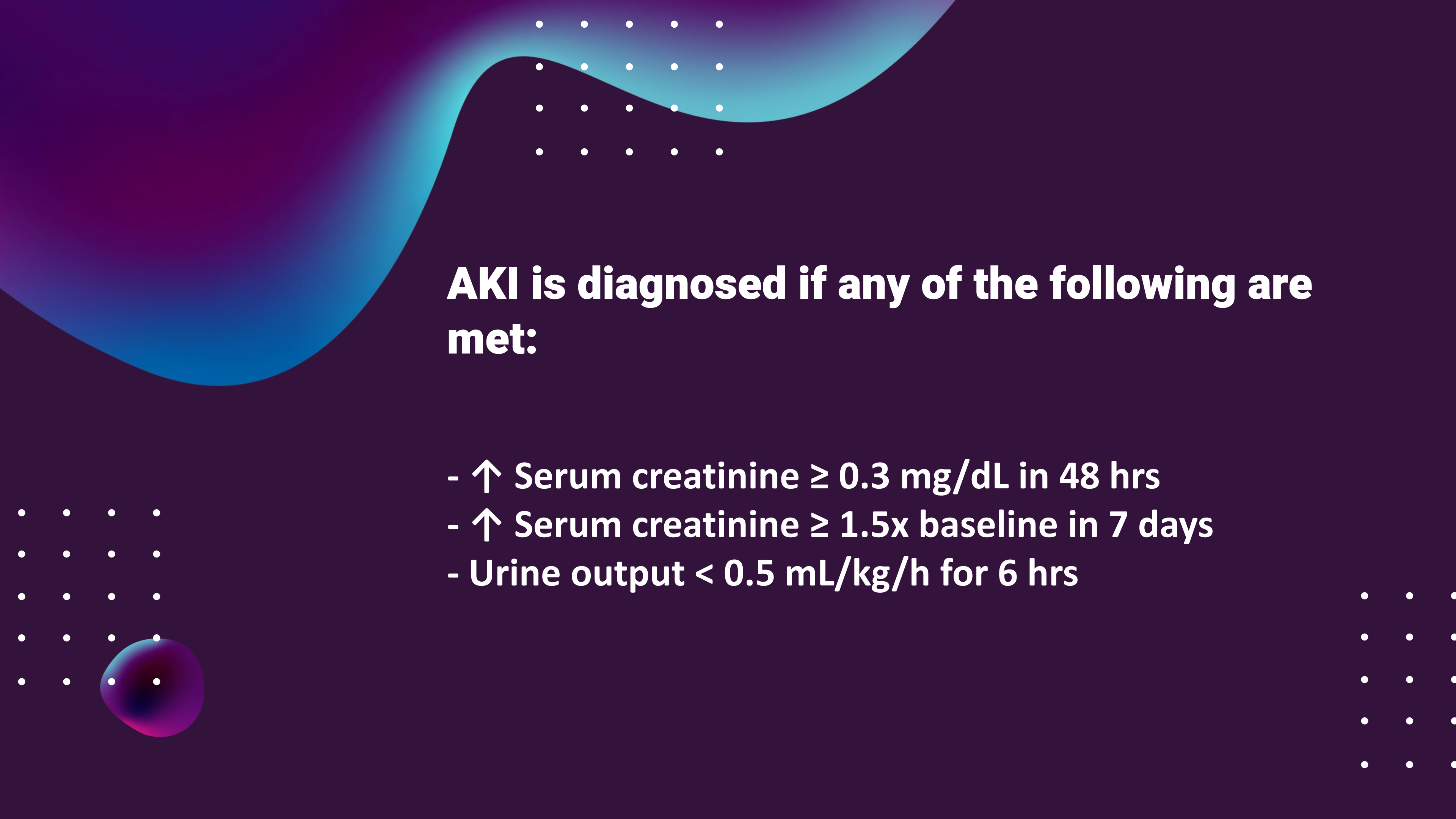
Acid-base homeostasis

Accumulation of waste (urea, creatinine)

Key signs:

↑Serum creatinine

↓Urine output



AKI is diagnosed if any of the following are met:

- ↑ Serum creatinine ≥ 0.3 mg/dL in 48 hrs
- ↑ Serum creatinine ≥ 1.5 x baseline in 7 days
- Urine output < 0.5 mL/kg/h for 6 hrs



Causes of AKI



Prerenal (↓ Blood Flow):

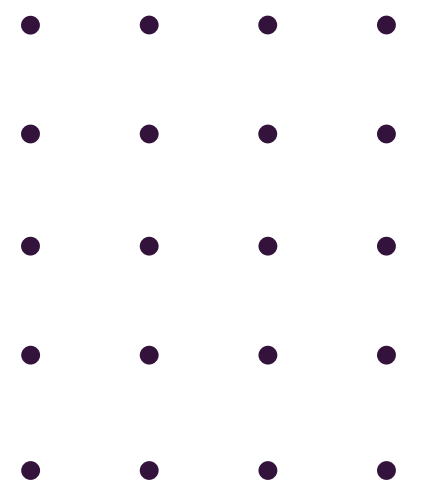
- Dehydration
- Heart failure
- Hemorrhage

Intrarenal (Direct Kidney Damage):

- Acute tubular necrosis (e.g., drugs, toxins)
- Glomerulonephritis
- Interstitial nephritis

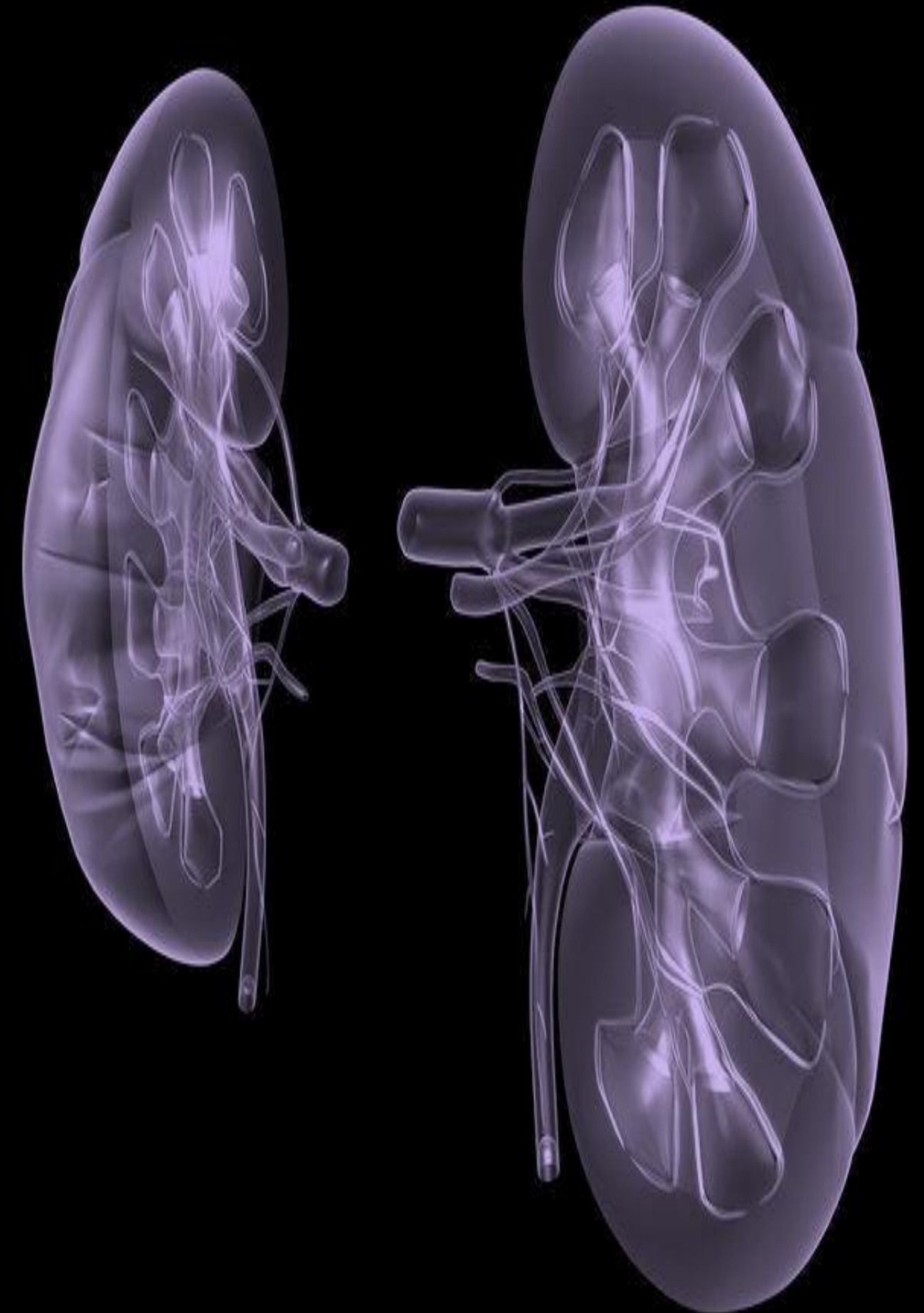
Postrenal (Obstruction):

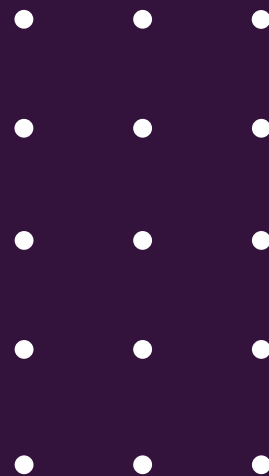
- Kidney stones
- Enlarged prostate
- Tumors



Symptoms of AKI

- Oliguria (< 400 mL/day) or anuria
- Fatigue, confusion
 - Edema (peripheral or pulmonary)
 - Nausea, vomiting
 - Hypertension
 - Flank pain (occasionally)





Diagnostic Tests and Evaluation

- 
- Serum creatinine & BUN
 - - Electrolytes (K⁺, Na⁺, HCO₃⁻)
 - - Urinalysis (protein, blood, casts)
 - - Monitor urine output
 - - Renal ultrasound (rule out obstruction)
 - - FeNa test (differentiates prerenal vs intrinsic)



Artemisia absinthium

1. Introduction

A. absinthium* is a traditional medicinal plant used for digestive, neurological, dermatological, and rheumatic disorders. In countries like Germany, it is used to treat weight loss and reduced appetite.

2. Beneficial Effects

- Antioxidant
- Anti-inflammatory
- Immunomodulatory
- Antitumoral
- Antimicrobial

3. Toxic Effects

- **Main Concern: Neurotoxicity due to thujone*** - Symptoms: Convulsions, hallucinations, insomnia (*Absinthism*) - Other effects: Mental disorders, stomach cramps, vertigo, nausea, vomiting, genetic mutations, cholinergic effects (urine retention/diarrhea)

4. Kidney-Related Findings

- One case of AKI likely due to seizures and rhabdomyolysis
- No direct nephrotoxicity confirmed in studies
- Some animal studies show no renal toxicity
- One study showed possible nephroprotective effect in IgA nephropathy



Marrubium vulgare

1. Introduction

M. vulgare is a widely used medicinal herb in Algeria and elsewhere, commonly for gastrointestinal and respiratory issues such as asthma and dyspepsia.

2. Beneficial Effects

- Antioxidant
- Anti-inflammatory
- Antihypertensive
- Antimicrobial
- Antidiabetic
- Used traditionally for cough and respiratory issues

3. Toxic Effects

- No significant toxicity reported by European Medicines Agency
- Some recent studies report:
- ↑ Liver enzymes
- Possible hepatotoxicity due to marrubiin*, premarrubiin, and furano labdane diterpene

4. Notes on Kidney Effects

- No direct nephrotoxicity reported
- One study on herbal mixtures (including M. vulgare*) did not show kidney damage at doses up to 1000 mg



Centaurium erythraea

1. Introduction

C. erythraea is a traditional medicinal herb commonly used for digestive disorders, liver conditions, and appetite stimulation.

2. Beneficial Effects

- Antioxidant
- Hepatoprotective (protects liver)
- Digestive stimulant
- Antimicrobial
- Anti-inflammatory

3. Toxic Effects

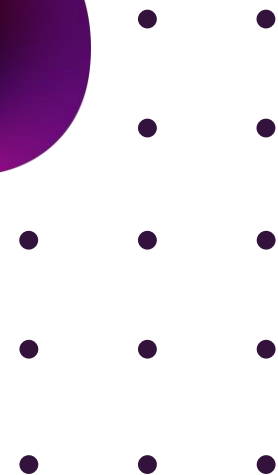
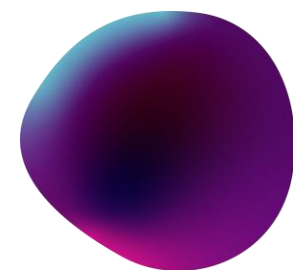
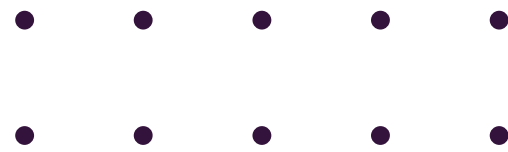
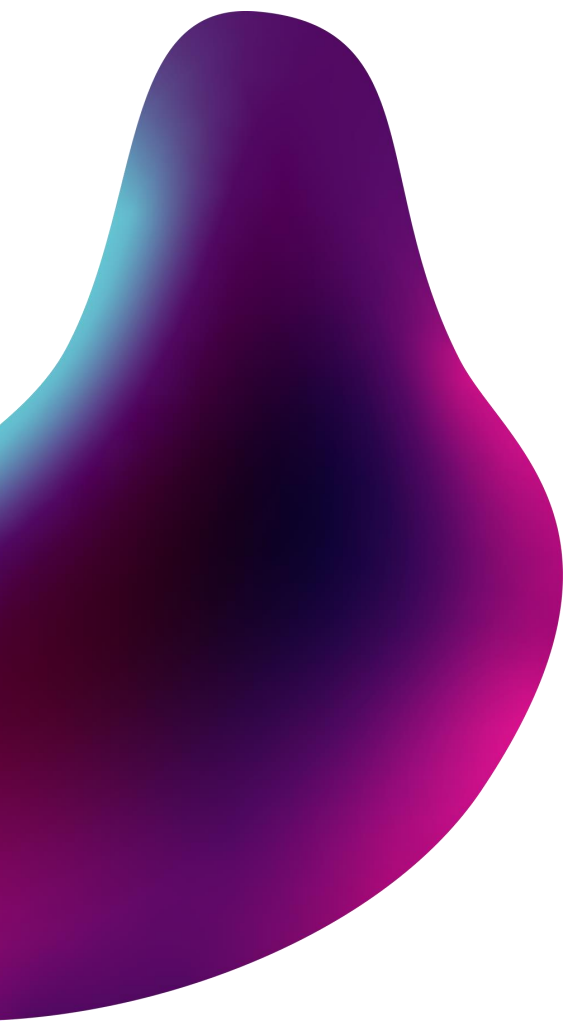
- Few studies suggest potential hepatotoxicity
- Possible increase in liver enzymes with high doses or prolonged use
- No specific reports on nephrotoxicity

4. Notes on Kidney Effects

- No documented nephrotoxic effects in standard doses
- Caution advised in patients with liver or kidney compromise







**Thank you for your
attention**

