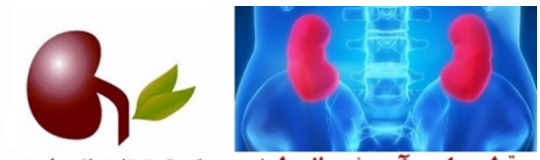

In The Name of God

CKD & Diagnosis

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Center of Excellence in Nephrology

2025

A Case

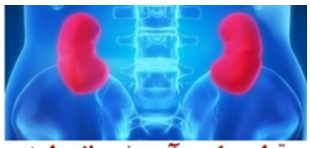
A 18 YO Man has been refered to you by a pilot recruitment agency to R/O of CKD.

مرکز تحقیقات نفرولوژی قطب علمی آموزشی نفرولوژی

Definition & Classification of CKD

Introduced by NKF/KDOQI Kidney Disease Outcomes Quality Initiative in 2002, & Kidney Disease Improving Global Outcomes KDIGO in 2004 [1-3].

Conference attendees recommended, by at least a 2/3 majority vote, that the previous KDOQI & KDIGO definitions of CKD be retained, but that the classification be modified to include the cause of disease and albuminuria staging [12]. KDIGO subsequently updated the guidelines in 2012 and adopted the recommendations [17].



قطب علمی آموزشی نفرولوژی مرکز تحقیقات نفرولوژی

CKD is a heterogeneous group of disorders characterized by alterations in kidney structure and function [1,4].

Risk factors

Genetic or sociodemographic predisposition.

Kidney failure is the end-stage of CKD.

ESKD generally refers to chronic kidney failure treated with either dialysis or Tx.

CKD usually asymptomatic

Symptoms in later stages due to Anemia, hyperparathyroidism, drug toxicity, cardiovascular disease, infection, cognitive impairment, & impaired physical function [20-23].

Definition of CKD

Presence of

1-Kidney damage refers to

- **-Pathologic abnormalities, or**
- **-Imaging studies, or**
- **-Urinary sediment abnormalities or**
- **-Increased rates of urinary alb excretion.**

2- Decreased kidney function refers to

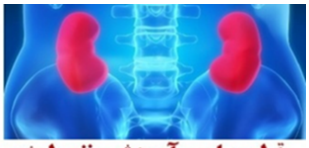
- **-A decreased GFR, which is usually eGFR using PCr & one of several available equations**

for 3 or more months [24].

Albuminuria

is the most frequently assessed marker of kidney damage. Reflects increased glomerular permeability [25].

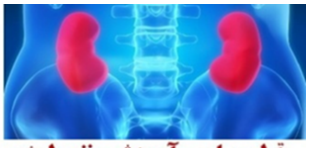
May reflect primary kidney disease or kidney involvement in systemic disease & endothelial dysfunction in (HTN, DM, hypercholesterolemia, smoking, obesity, & other disorders).



قطب علمی آموزشی نفرولوژی مرکز تحقیقات نفرولوژی

Urine ACR >30 mg/g

(or equivalent) have a significantly increased risk for all-cause & cardiovascular mortality, ESKD, AKI & CKD progression compared with those who have a lower ACR even when eGFR is normal [12,14-16,24].



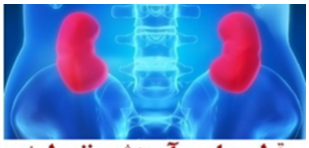
قطب علمی آموزشی نفرولوژی مرکز تحقیقات نفرولوژی

Urinary sediment abnormalities

such as RBC or WBC casts may indicate the presence

Imaging abnormalities

Kidney damage may be detected by the presence of imaging abnormalities such as polycystic kidneys, hydronephrosis, and small and echogenic kidneys



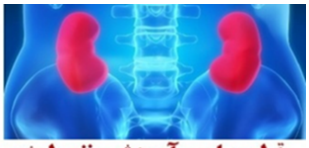
Pathologic abnormalities

A kidney biopsy may reveal evidence for glomerular, vascular, or tubulointerstitial disease.

Kidney transplantation

Patients with a history of kidney transplantation are assumed to have kidney damage whether or not they have documented abnormalities on kidney biopsy or markers of

Decreased GFR



GFR is generally considered to be the best index of overall kidney function, and declining GFR is the hallmark of progressive kidney disease [32].

The widely accepted threshold defining a decreased GFR is < 60 mL/min/1.73 m2;

Kidney failure is defined as a GFR <15

خسته نباشید و متشکرم