



# How to Evaluate for Chronic Kidney Disease

## Know the criteria for CKD

- Abnormalities of kidney structure or function, present for >3 months, with implications for health
- Either of the following must be present for >3 months:
  - Markers of kidney damage (one or more)
  - eGFR <60 ml/min/1.73 m<sup>2</sup>

## Screen for CKD with two simple tests.

- “Spot” urine for albumin-to-creatinine ratio (uACR) to detect albuminuria
- Serum creatinine to estimate glomerular filtration rate (eGFR)

## What if CKD is detected?

- Classify CKD based on cause, GFR category, and albuminuria category
- Implement a clinical action plan based on patient’s CKD classification (See flip side)
  - Consider co-management with a nephrologist if the clinical action plan cannot be carried out
  - Refer to a nephrologist when eGFR <30 mL/min/1.73 m<sup>2</sup> or uACR >300 mg/g
- Learn more at [kidney.org/professionals](https://www.kidney.org/professionals)

## Why should you classify CKD?

- To have a more precise picture of each patient’s condition
- To guide decisions for testing and treatment
- To evaluate patient’s risk of progression and complications
- Because neither the category of GFR nor the category of albuminuria alone can fully capture prognosis of CKD

## References

**Anemia:** Am J Kidney Dis. 2013;62(5):849-859. **BP:** Am J Kidney Dis. 2022;79(3):311-327. & Kidney Int. 2021;99(3S):S1-S87. **CKD Management:** Am J Kidney Dis. 2014;63(5):713-735. & Kidney Inter, Suppl. 2013;3:1-150. **CKD-MBD:** Am J Kidney Dis. 2017;70(6):737-751. & Kidney Int, Suppl. 2017;7(1):1-59. **DM:** Kidney Int. 2022;102(5S):S1-S127. & Diabetes Care. 2022;45(12):3075-3090. **Gadolinium-based contrast media:** Kidney Med. 2020;3(1):142-150. **Iodinated contrast media:** Kidney Med. 2020;2(1):85-93. **Lipid management:** Am J Kidney Dis. 2015;65(3):354-366. **Metabolic acidosis:** Am J Kidney Dis. 2019;74(2):263-275. **Vascular access:** Am J Kidney Dis. 2020;75(4 Suppl 2):S1-S164.

## How do you classify CKD?

- Identify cause of CKD\*
- Assign GFR category
- Assign albuminuria category

\*Cause of CKD is classified based on presence or absence of systemic disease and the location within the kidney of observed or presumed pathologic-anatomic findings.

### GFR categories in CKD

Category	GFR (ml/min/1.73 m <sup>2</sup> )	Terms
G1 †	≥90	Normal or high
G2 †	60-89	Mildly decreased*
G3a	45-59	Mildly to moderately decreased
G3b	30-44	Moderately to severely decreased
G4	15-29	Severely decreased
G5	<15	Kidney failure

\*Relative to young adult level.

† In the absence of evidence of kidney damage, neither GFR category G1 nor G2 fulfill the criteria for CKD.

### Albuminuria categories in CKD

Category	uACR (mg/g)	Terms
A1	<30	Normal to mildly increased
A2	30-299	Moderately increased*
A3	≥300	Severely increased†

\*Relative to young adult level.

†Including nephrotic syndrome (uACR >2220 mg/g)  
**uACR >30 for >3 months indicates CKD.**

## Abbreviations

**25-OH Vitamin D**, 25-hydroxy vitamin D; **A Stage**, albuminuria category; **ACE-I**, angiotensin-converting-enzyme inhibitor; **AKI**, acute kidney injury; **ARB**, angiotensin receptor blocker; **ASCVD**, atherosclerotic cardiovascular disease; **BMD**, bone mineral density; **BP**, blood pressure; **CCB**, calcium-channel blocker; **CKD**, chronic kidney disease; **CGM**, continuous glucose monitoring; **CKD-MBD**, chronic kidney disease mineral and bone disorder; **COVID-19**, coronavirus disease 2019; **CVD**, cardiovascular disease; **DM**, diabetes mellitus; **DOAC**, direct-acting oral anticoagulant; **DRI**, direct renin inhibitor; **eGFR**, estimated glomerular filtration rate; **ESA**, erythropoietin-stimulating agent; **FDA**, Food & Drug Administration; **G Stage**, GFR category; **GLP-1 RA**, glucagon-like peptide 1 receptor agonist; **Hb**, hemoglobin; **HTN**, hypertension; **iPTH**, intact-parathyroid hormone; **NS-MRA**, non-steroidal mineralocorticoid receptor antagonist; **NSAIDs**, nonsteroidal anti-inflammatory drugs; **PICC**, peripherally inserted central catheter; **PT/INR**, prothrombin time/international normalized ratio; **SBP**, systolic blood pressure; **SGLT-2i**, sodium-glucose cotransporter-2 inhibitor; **T2DM**, type 2 diabetes mellitus; **uACR**, urine albumin-to-creatinine ratio.



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