CKD Risk Assessment Tool

CLASSIFY patients with chronic kidney disease (CKD) based on Cause (C), GFR (G), and Albuminuria (A).

CONSULT the "CKD Risk Map" to help evaluate patients by GFR and albuminuria categories.

- **Colors:** Represent the risk for progression, morbidity, and mortality from best to worst.

  Green Low risk (if no other markers of kidney disease, no CKD)

  Yellow Moderately increased risk

  Orange High risk

  Red Very high risk

  Dark Red Highest risk

- **Numbers:** Represent a recommendation for the number of times per year the patient should be monitored.
- **Refer:** Indicates that nephrology referral and services are recommended.

KNOW that the "CKD Risk Map" reflects general parameters only based on expert opinion and must take into account underlying comorbid conditions and disease state, as well as the likelihood of impacting a change in management for any individual patient.

LEARN more about classifying, evaluating, and managing patients with CKD at **www.kidney.org/casestudies**

CKD Risk Map

Prognosis of CKD by GFR and Albumininuria Category

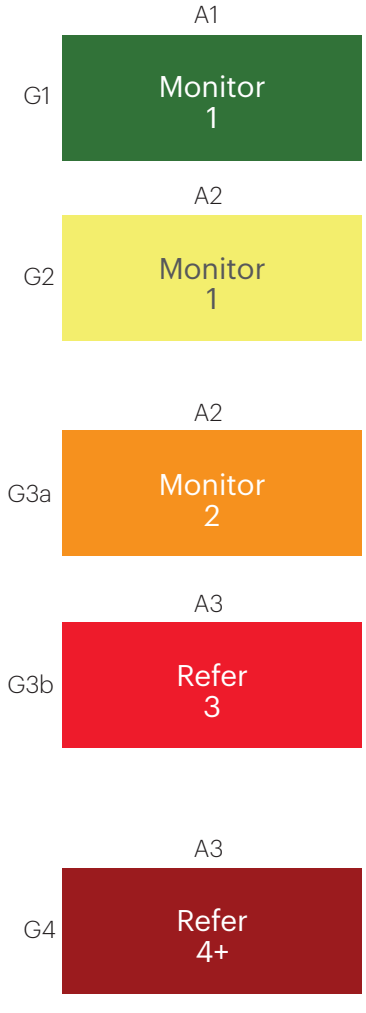
GFR categories (ml/min/1.73 m²) Description and range				Albuminuria categories Description and range		
				A1	**A2**	**A3**
				Normal to mildly increased	Moderately increased	Severely increased
				<30 mg/g <3 mg/mmol	30-299 mg/g 3-29 mg/mmol	≥300 mg/g ≥30 mg/mmol
	G1	Normal or high	≥90	Monitor 1	Monitor 1	Refer* 2
	G2	Mildly decreased	60-89	Monitor 1	Monitor 1	Refer* 2
	G3a	Mildly to moderately decreased	45-59	Monitor 1	Monitor 2	Refer 3
	G3b	Moderately to severely decreased	30-44	Monitor 2	Monitor 3	Refer 3
	G4	Severely decreased	15-29	Refer* 3	Refer* 3	Refer 4+
	G5	Kidney failure	<15	Refer 4+	Refer 4+	Refer 4+

Adapted with permission from KDIGO 2012 Clinical Practice Guideline for the Evaluation and Management of Chronic Kidney Disease. *Kidney Int.* 2013;Suppl.3:1-150.

*Referring clinicians may wish to discuss with their nephrology service depending on local arrangements regarding monitoring or referral.

Abbreviations: ACE-I, angiotensin-converting-enzyme inhibitor, **ACR**, albumin-to-creatinine ratio; **AKI**, acute kidney injury; **CKD**, chronic kidney disease; **CKD-MBD**, chronic kidney disease mineral and bone disorder; **eGFR/GFR**, estimated glomerular filtration rate; **iPTH**, intact parathyroid hormone.

Case Studies: Evaluating Risk



CASE STUDY: 44-YEAR OLD WOMAN WITH AUTOSOMAL DOMINANT KIDNEY DISEASE

A 44-year old woman with autosomal dominant kidney disease presents to your clinic for routine follow-up. Since her last follow-up 6 months ago, she has had some back discomfort. Her blood pressure is 128/76. Her eGFR has remained stable at 110 ml/min/1.73 m^2, and her ACR shows 20 mg/g of albuminuria. Based on the "CKD Risk Map," you know that: 1) her CKD can be classified as A1/G1; 2) her risk of progression is low; 3) she should be monitored by you at least once per year.

CASE STUDY: 55-YEAR OLD OBESE MAN WITH HISTORY OF HYPERTENSION

A 55-year old obese man has a history of hypertension for which he takes a diuretic and ACE-inhibitor. He was hospitalized for acute kidney injury (AKI) in the setting of frequent ibuprofen use 6 months ago. His eGFR prior to his AKI was >90 ml/min/1.73 m^2; his prior ACR test revealed no albuminuria. However, his eGFR has now stabilized to 65 ml/min/1.73 m^2, and he has had persistent albuminuria of ~150 mg/g. Based on the "CKD Risk Map," you know that: 1) his CKD can be classified as A2/G2; 2) his risk of progression is moderate; and 3) he should be monitored by you at least once per year.

CASE STUDY: 60-YEAR OLD MAN WITH LONG-STANDING HYPERTENSION

A 60-year old man with long-standing hypertension has been a patient in your clinic for one year. Within that year, his eGFR results have remained ~50 mL/min/1.73m^2. His albuminuria is 50 mg/g. On exam, he has a blood pressure of 156/92. He is obese. The remainder of his exam is unremarkable. Based on the "CKD Risk Map," you know that: 1) his CKD can be classified as A2/G3a; 2) his risk of CKD progression is high; and 3) he should be monitored by you at least twice per year.

CASE STUDY: 53-YEAR OLD MAN WITH TYPE 2 DIABETES AND HYPERTENSION

A 53-year old man with type 2 diabetes and hypertension presents to your clinic for follow-up. His eGFR has been around ~40 ml/min/1.73 m^2 for the past two years. His ACR test shows he has 380 mg/g of albuminuria. On exam, his blood pressure is 150/90 with a heart rate of 78 beats per min. His BMI is 32 kg/ m^2. He has 1+ pitting edema along his lower extremities and decreased sensation along the dorsal aspect of his feet. Based on the "CKD Risk Map," you know that: 1) his CKD can be classified as A3/G3b; 2) his risk of progressing to kidney failure is very high; 3) referral to a nephrologist is recommended; and 4) he should be monitored at least 3 times per year.

CASE STUDY: 35-YEAR OLD WOMAN WITH TYPE 1 DIABETES, HYPERTENSION, AND DYSLIPIDEMIA

A 35-year old woman presents with type 1 diabetes, hypertension, and dyslipidemia. She is on an ACE-inhibitor with good blood pressure control. Within the past 3 years, her eGFR has dropped from 46 mL/min/1.73m^2 to 28 mL/min/1.73 m^2. Her current albuminuria consistently remains ≥300 mg/g. Her lab results reveal that she has recently developed CKD-related mineral and bone disorder (CKD-MBD), with an iPTH of 220 pg/ml and serum phosphorus of 4.8 mg/dl. Based on the "CKD Risk Map," you know that: 1) her CKD can be classified as A3/G4; 2) her risk of progression is very high; 3) referral to a nephrologist is recommended; and 4) she should be monitored 4 or more times per year.

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