Interpreting patient results with the National Kidney Foundation risk map[1]

Nearly 40 million US adults have chronic kidney disease (CKD) and may require additional testing and follow-up to optimally manage their conditions. To aid your practice, the National Kidney Foundation and Kidney Disease: Improving Global Outcomes (KDIGO) initiative have developed a risk map and follow-up testing guidelines.

1 Inputs needed

Kidney profile

Serum creatinine with estimated glomerular filtration rate (eGFR): stage of CKD

and

Urine albumin-creatinine ratio (uACR): kidney damage

Guidelines recommend annual eGFR and uACR testing in all patients with:

- Existing CKD
- Diabetes
- Hypertension
- Family history of CKD
- Other risk factors for CKD

2 Using the risk map

Map your patient's results on the National Kidney Foundation risk map to determine:

- Patient's CKD stage
- Annual frequency to repeat eGFR and uACR testing
- When to confirm eGFR
- When to refer to a nephrologist

CKD stage and eGFR range (mL/min/1.73 m²)			Albuminuria categories and ACR ranges (mg/g creatinine)		
			Normal to mildly increased <30	Moderately increased 30–300	Severely increased >300
	1 and 2	≥60	1	1	2,R
	3A	45–59	1,C	2	3,R
	3B	30–44	2	3	3,R
	4	15–29	3,R	3,R	≥4,R
	5	<15	≥4,R	≥4,R	≥4,R

- **Low risk:** monitor yearly if evidence of kidney damage (eg, indicated by imaging or biopsy). The NKDEP recommends that actual values above 60 mL/min/1.73m² be reported only as >60 due to variability near the upper limit of the reference range.
- **Moderately high risk:** monitor yearly
- **High risk:** monitor 2 times yearly
- **Very high risk:** monitor 3 times yearly
- **Very high risk:** monitor ≥4 times yearly

3 Follow-up testing for complications

KDIGO and the National Kidney Foundation provide the following evidence-based suggestions for testing for complications and comorbidities:

	CKD stage 1-2 (eGFR ≥ 60)	CKD stage 3A (eGFR 45-59)	CKD stage 3B (eGFR 30-44)	CKD stage 4-5 (eGFR ≤ 29)
uACR < 30		• Lipid panel **annually** • HbA1c **as needed for glycemic control** • Hemoglobin **at least annually** • Carbon dioxide **at least once**	• Lipid panel **annually** • HbA1c **as needed for glycemic control** • Hemoglobin **at least annually** • Carbon dioxide **at least once** • Calcium **at least once** • Phosphate **at least once** • Parathyroid hormone **at least once** • Vitamin D **at least once**	• Lipid panel **annually** • HbA1c **as needed for glycemic control** • Hemoglobin **at least annually** • Carbon dioxide **at least once** • Calcium **at least once** • Phosphate **at least once** • Parathyroid hormone **at least once** • Vitamin D **at least once**
uACR ≥ 30	• Lipid panel **annually** • HbA1c **as needed for glycemic control**	All of the above, plus: • Potassium, **serum annually**	All of the above, plus: • Potassium, **serum annually**	All of the above, plus: • Potassium, **serum annually**

1. Kidney Disease: Improving Global Outcomes (KDIGO) CKD Work Group. KDIGO 2012 Clinical Practice Guideline for the Evaluation and Management of Chronic Kidney Disease. *Kidney Int*. 2013; 3(1 Suppl):1-150. doi:10.1038/kisup.2012.73

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