CHRONIC KIDNEY DISEASE WITHOUT TYPE 2 DIABETES

PRIMARY CARE MANAGEMENT OF **CKD**

T2D remains the leading cause of CKD, but primary care practitioners need to ensure they are not ignoring the other risk factors in those without diabetes.

Hypertension is currently the second most common cause of CKD.

CKD screening

In the early stages of CKD, there are typically no symptoms, so screening is vital.

Older adults should not be excluded from screening programs, but a holistic approach is required.

How? UACR and eGFR

Frequency? In those with a diagnosis of hypertension, screening should occur **at least once a year.**

Testing older individuals at high risk

- Physiological GFR decline needs to be distinguished from pathologic causes of CKD.
- A hallmark of age-related kidney decline is the absence of proteinuria/albuminuria.
- Confirmatory tests with cystatin C can help confirm a CKD diagnosis.

Diagnosis and classification of CKD

CKD is defined as persistent
(for at least 3 months)
eGFR <60 mL/min/1.73 m^2,
albuminuria (ACR ≥30 mg/g),
or other markers of kidney damage.

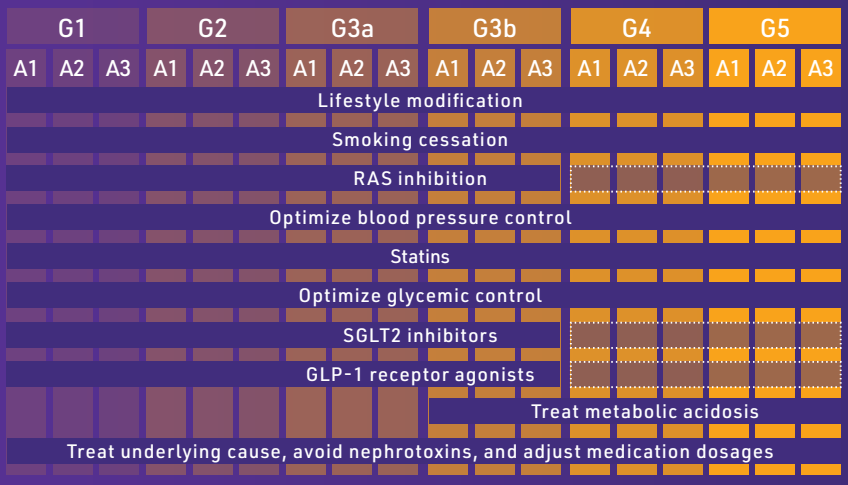
Low risk (if no other markers of kidney disease, no CKD)
Moderately increased risk
High risk
Very high risk

GFR categories (mL/min/1.73m^2) 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		Screen (1)	Treat (1)	Treat and refer (3)
G2	Mildly decreased	60–89		Screen (1)	Treat (1)	Treat and refer (3)
G3a	Mildly to moderately decreased	45–59		Treat (1)	Treat (2)	Treat and refer (3)
G3b	Mildly to severely decreased	30–44		Treat (2)	Treat and refer (3)	Treat and refer (3)
G4	Severely decreased	15–29		Treat and refer (3)	Treat and refer (3)	Treat and refer (4+)
G5	Kidney failure	<15		Treat and refer (4+)	Treat and refer (4+)	Treat and refer (4+)

Numbers: Indicate how often (per year) you should be screening or monitoring. Monitor, treat, or refer: Indicates the recommended course of action. CKD is classified based on Cause (C), GFR (G), Albuminuria (A).

Management of CKD in primary care

Aim of treatment: Slow CKD progression and reduce complications.



Adapted from Shlipak MG, et al. 2021

Regular risk factor reassessment (every 3-6 months)

Management pearls

- RAS inhibitors (ACEi or ARB) should be initiated/continued as first-line therapy at the maximal tolerated dose in those with hypertension and albuminuria
- Adults with high BP and CKD should be treated with a target systolic blood pressure of <120 mmHg but less intensive targets should be recommended on an individualized basis
- Intensification of statin therapy for primary prevention is recommended based on ASCVD risk and LDL cholesterol concentrations.
- SGLT2 inhibitors are now indicated in those with CKD without diabetes due to their cardio- and reno-protective benefits independent of glucose levels

Refer to or consult nephrology

Consult/refer to nephrology if:

- KFRE score rises above 3-5%
- Developing a treatment plan and primary care practitioner not confident in the recommended first-line treatment
- Unexplained decline in eGFR (≥5 mL/min/1.73m^2) over 12 months or sudden decline over days to weeks
- Unexplained significant albuminuria or hematuria
- Persistent hyperkalemia
- Resistant hypertension
- Hereditary kidney disease
- Recurring kidney stones

References: De Boer IH, et al. *Diabetes Care 2022*; 45(12): 3075-3090; ISN & KDIGO. ISN-KDIGO Early identification and intervention in primary care. Accessible at: https://www.theisn.org/initiatives/toolkits/ckd-early-screening-intervention/#PrimaryCare (accessed November 2023); Kidney Disease: Improving Global Outcomes (KDIGO) CKD Work Group. Kidney Int Suppl. 2013; 3: 1–150; Kidney Disease: Improving Global Outcomes (KDIGO) Blood Pressure Work Group. Kidney Int 2021;99(3S):S1-S87; Merchant AA, Ling E. CMAJ 2023; 195(17): E612-E618; Shlipak MG, et al. Kidney Int 2021; 99: 34-47.

Acronyms: ACEi: angiotensin-converting enzyme inhibitor; ARB: angiotensin receptor blockers; ASCVD: atherosclerotic cardiovascular disease; CKD: chronic kidney disease; eGFR: estimated glomerular filtration rate; GLP-1: glucagon-like peptide 1; HbA1c: glycated hemoglobin; HTN: hypertension; KFRE: kidney failure risk equation; RAS: renin-angiotensin-system; SGLT2: sodium-glucose co-transporter-2; T2D: type 2 diabetes; UACR: urine albumin-creatinine ratio.

PCDE primary care diabetes europe
KDIGO Kidney Disease: Improving Global Outcomes
Springer Healthcare IME