



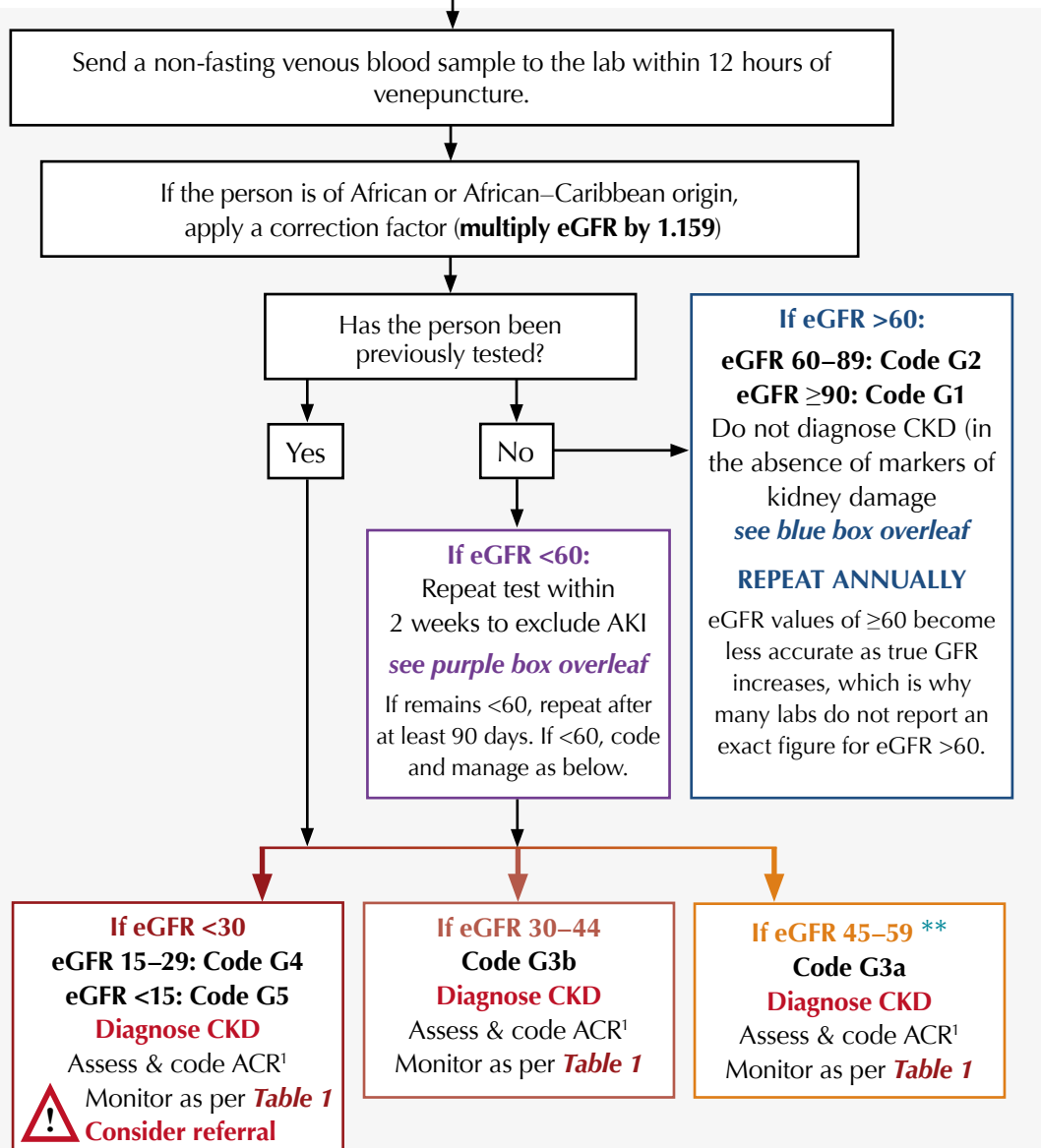
Diagnosing and monitoring CKD

About this series

The aim of the "How to" series is to provide readers with a guide to clinical procedures and aspects of diabetes care that are covered in the clinic setting.

What and why

- CKD describes abnormal kidney function or structure, present for more than 3 months.
- CKD is diagnosed and monitored using eGFR, which measures kidney function, and ACR, which measures kidney damage (see *How to test for microalbuminuria*¹).
- To diagnose CKD: an eGFR of <60 is required on at least 2 occasions over a period of at least 90 days, with or without markers of kidney damage.
- Laboratories use CKD-EPI or MDRD to estimate GFR.
- ! It is important to remember, a raised ACR indicates risk even when the eGFR is normal.



Consider referral as per local pathway or CG 182³ if:

- eGFR <30 (G4 or G5).
 - Sustained decrease in eGFR of ≥25%, and a change in eGFR category or sustained decrease in eGFR of ≥15 within 12 months.
 - Hypertension poorly controlled on at least 4 agents.
 - Suspected renal artery stenosis.
- Involve the person with diabetes in the referral decision.

Table 1. Frequency of monitoring of eGFR for people with, or at risk of, CKD (adapted from CG 182³).

eGFR categories, description and range	ACR categories (mg/mmol), description and range		
	A ₁ <3 Normal to mildly increased	A ₂ 3-30 Moderately increased	A ₃ >30 Severely increased
G1 ≥90 Normal and high	≤1	1	≥1
G2 60-89 Mild reduction	≤1	1	≥1
G3a 45-59 Mild-moderate reduction	1	1	2
G3b 30-44 Moderate-severe reduction	≤2	2	≥2
G4 15-29 Severe reduction	2	2	3
G5 <15 Kidney failure	4	≥4	≥4

**Consider using eGFR cystatinC¹

if available locally when an improved assessment of risk is needed and at initial diagnosis to confirm/exclude CKD in people with:

eGFR creatinine 45-59 sustained for at least 90 days

AND

no proteinuria or other marker of kidney disease

¹When using eGFR cystatinC, hypothyroidism may lead to overestimation, hyperthyroidism to underestimation.

