

## Chronic kidney disease in relation to diabetes

Chronic kidney disease (CKD) describes abnormal kidney function and/or structure. It is common, frequently unrecognized and often exists together with other conditions (such as cardiovascular disease and diabetes).

Its classification has evolved with time, the latest change occurring in 2013 (Kidney Disease: Improving Global Outcomes guidance) when 3 ACR categories were added to the previously adopted GFR categories in order to improve sub-classification and predicted risk of adverse outcomes.

Multiply the eGFR by 1.159 in people of African-Caribbean or African family origin.

Be aware that reduce muscle mass will lead to an overestimation and increased muscle mass an underestimation of eGFR.

GFR and ACR categories and risk of adverse outcomes  (eg patient with an eGFR of 35 ml/min and an ACR of 25 mg/mmol is classified as CKD G3bA2)			ACR categories (mg/mmol), description and range		
			<3 Normal to mildly increased	3-30 Moderately increased	>30 Severely increased
			A1	A2	A3
GFR categories (ml/min/1.73m <sup>2</sup> , description and range	≥90 Normal and high	G1	No CKD in the absence of markers of kidney damage		
	60-89 Mild reduction related to normal range for a young adult	G2			
	45-59 Mild-moderate reduction	G3a			
	30-44 Moderate-severe reduction	G3b			
	15-29 Severe reduction	G4			
	<15 Kidney failure	G5			

Increasing risk

Increasing risk

ACR: albumin:creatinine ratio; CKD: chronic kidney disease; GFR: glomerular filtration rate  
 Reproduced from NICE guidance: Chronic kidney disease (CG182, 2014)

**References:** NICE Guidance: CKD ([CG182, 2014](#)), Hypertension ([CG127, 2011](#))

Reviewed by Dr Merza Jan 2020