

14 - Stage of renal impairment

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Prescribing in hepatic and renal impairment CHAPTER 8 Stage of renal impairment Figure 8.1 indicates how to classify the stage of renal impairment.2 Box 8.2 Cockcroft and Gault equation* CrCl ml/ F age in years ideal body weight kg Ser (min) (()) () um creatinine mol/L ()

Where F = 1.23 (men) and 1.04 (women) Ideal body weight should be used for patients at extremes of body weight or else the result of the calculation is a poor estimate For men, ideal body weight (kg) = 50kg + 2.3kg per inch over 5 feet For women, ideal body weight (kg) = 45.5kg + 2.3kg per inch over 5 feet ■ ■Online calculator available at <https://www.nuh.nhs.uk/staff--area/antibiotics/creatinine-clearance-calculator> * This equation is not accurate if plasma creatinine is unstable (e.g. acute renal failure), in obesity, in pregnant women, in children or in diseases causing the production of abnormal amounts of creatinine. It has only been validated in white patients. Creatinine clearance is not the same as GFR and is relatively less representative of GFR in severe renal failure. ACR categories (mg/mmol) Description and range GFR categories (mL/min/1.73m²) Description and range A1 A2 A3 Normal to mildly increased Moderately increased Severely increased <3 ≥90 60–89 45–59 30–44 15–29 <15 Normal and high Mild reduction related to normal range for a young adult Mild–moderate reduction Moderate–severe reduction Severe reduction Kidney failure G1 G2 G3a G3b G4 G5 No CKD in the absence of markers of kidney damage Refer for specialist assessment 3–30 Refer for specialist assessment if the person has: • a sustained decrease in GFR of 25% or more and a change in GFR category or sustained decrease in GFR of 15 mL/min/1.73 m² or more within 12 months • hypertension that remains poorly controlled despite the use of at least 4 antihypertensive drugs at therapeutic doses (see also ‘Hypertension’ NICE clinical guideline 127) • known or suspected rare or genetic causes of CKD • suspected renal artery stenosis Refer for specialist assessment if the person has any of the criteria in A2, or: • ACR 70mg/mmol or more, unless known to be caused by diabetes and already appropriately treated • haematuria Manage in primary care according to recommendations

“ 30 Figure 8.1 Classification of renal impairment. ACR, albumin : creatinine ratio; CKD, chronic kidney disease; GFR, glomerular filtration rate.

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