

MDRD (eGFR)

Description	Estimated Glomerular Filtration Rate
Indication	Monitoring / detection of chronic kidney disease (CKD)
Additional Info	<p>This is a calculated result using the 4-variable formula derived in the Modification of Diet in Renal Disease (MDRD) study. It estimates the glomerular filtration rate (GFR) using the serum creatinine, age, gender and ethnicity.</p> <p>$eGFR \text{ (ml/min/1.73m}^2\text{)} = 175 \times ((\text{plasma creatinine (umol/l)/88.4})^{-1.154}) \times \text{age (years)}^{-0.203} \times 0.742 \text{ if female and } \times 1.21 \text{ if African American.}$</p> <p>Unless stated on the request form the eGFR provided assumes Caucasian race and it should be multiplied by 1.21 in African, African-Caribbean or African-Americans. The calculation has not been validated in other ethnic groups or patients of mixed race.</p> <p>eGFR calculation is based on an average body mass and should not be used in the following: pregnancy, oedematous states, amputees, malnourished or morbidly obese patients. The equation is not validated in children <18 yrs and the elderly >75yrs. It is not applicable for use in acute renal failure.</p>
Concurrent Tests	Serum U&E
Dietary Requirements	N/A
Interpretation	<p>eGFR values between 60 and 89 ml/min/1.73m² do not indicate kidney disease unless there is other evidence of kidney damage. The eGFR underestimates at normal / near normal renal function, so slightly low values should be interpreted with caution.</p> <p>The variability (CV) of the eGFR calculation is approximately 30%. However, intra-individual variation is much tighter, so for example a 20% change in the eGFR of an individual is likely to reflect a significant change in renal function. The eGFR may be affected by food intake.</p>
Collection Conditions	N/A
Frequency of testing	As required