

Creatinine (serum)	
Description	It is used to assess kidney function and to monitor treatment for kidney disease.
Indication	Screening for kidney disease, monitoring treatment for kidney disease, monitoring patients on nephrotoxic drugs
Additional Info	<p>Creatinine is synthesised endogenously from creatine and creatine phosphate. If renal function is normal, creatinine is excreted by glomerular filtration.</p> <p>Creatinine is measured to diagnose and monitor acute and chronic renal disease and the efficiency of renal dialysis.</p>
Concurrent Tests	Creatinine clearance.
Dietary Requirements	Eating large amounts of meat may cause short-lived increases in blood creatinine levels. Taking creatine supplements may also increase creatinine.
Interpretation	<p>Creatinine is produced from skeletal muscle creatine in proportion to the amount of muscle present. The quantity of creatinine produced each day is fairly constant for each individual. Creatinine is freely filtered by the glomerulus, it is minimally reabsorbed by the tubules and there is some tubular secretion of creatinine. The rate of creatinine excretion therefore depends mainly on the glomerular filtration rate (GFR) and its clearance is a reasonable estimate of the GFR but, because of tubular secretion it tends to be an overestimate.</p> <p>Creatinine rises when there is a fall in GFR. As creatinine production is a function of muscle mass, subjects with low muscle mass e.g. small elderly females, may have significant renal disease with creatinine within the reference range. Conversely, ingestion of meats can cause a slight increase in the plasma level of creatinine and subjects with a large muscle mass may have a plasma creatinine just above the upper end of the reference range despite normal renal function.</p> <p>Creatinine (and urea) rise due to decreased renal excretion in pre-renal uraemia (dehydration, blood loss, congestive cardiac failure) in intrinsic renal disease and in postrenal uraemia (bilateral ureteric obstruction, bladder neck obstruction).</p>
Collection Conditions	N/A
Frequency of testing	As required