Albumin

Description	Albumin is measured as part of liver function and calcium/bone profiles.
Indication	Assessment of liver function, calcium homeostasis (adjusted calcium), chronic disease, acute phase and nutritional status.
Additional info:	Albumin is a carbohydrate free protein which constitutes 55-65% of total protein in the blood. It maintains oncotic pressure, is involved in the storage and transport of a wide variety of ligands and is the source of endogenous amino acids. Albumin binds and solubilises various compounds such as bilirubin, calcium and long chain fatty acids. It is also capable of binding toxic heavy metals and numerous medications which is why low albumin concentrations have a significant effect on drug/element pharmacokinetics. Albumin is a negative acute phase protein.
Concurrent Tests	Total Protein
Dietary Requirements	N/A
Interpretation	Half life approx 20 days. Factors which affect albumin levels include rate of synthesis, rate of catabolism, changes in plasma volume and size of the extracellular pool. Hospitalised patients tend to have low albumin. Hypoalbuminuria may be due to compromised synthesis (eg liver disease), reduced protein uptake, elevated catabolism (eg burns), malabsorption, (eg Crohns) and proteinuria due to nephrotic syndrome. Albumin maintains the oncotic pressure and hypoalbuminaemia can result in oedema. LIVER DISEASE: Normal albumin makes diagnosis of cirrhosis unlikely; low levels are unlikely in acute viral hepatitis; associated diseases may render albumin measurement useless. INFLAMMATORY DISEASE: Albumin is a negative acute phase reactant and levels may decrease due to transfer to extracellular space. OEDEMA: Most cases of oedema are associated with decreased levels of albumin but very low levels may indicate that hypoalbuminaemia is the cause of oedema. MALIGNANCY: Albumin levels are low in cases of malignancy for a variety of reasons. Albumin is a useful indicator of prognosis in myeloma. MALNUTRITION: Severe cases can result in low levels of albumin.
Collection Conditions	No restrictions
Frequency of testing	As required