

PTHrP	
Description	Parathyroid hormone-related protein (PTHrP) is a family of protein hormones produced by various tissues in the body and predominantly associated with hypercalcaemia of malignancy.
Indication	PTHrP is of most use in hypercalcaemic patients in whom the PTH is suppressed and malignancy is suspected.
Additional Info	PTHrP is found at levels above the reference range in patients with hypercalcaemia of malignancy with varying frequency according to tumour type. It is most frequently elevated in hypercalcaemia in patients with solid tumours and is above the reference range in 85% of such patients with breast tumours, 70% of those with tumours of lung and renal tract origin and 27% of those with gastrointestinal tract tumours.
Concurrent Tests	Adjusted calcium and PTH
Dietary Requirements	N/A
Interpretation	Elevated PTHrP levels in hypercalcaemic patients with suppressed PTH levels are highly suggestive of malignancy and are associated with a very poor prognosis for long-term survival. PTHrP <0.7 pmol/L does not exclude malignancy as a cause of hypercalcaemia.
Collection Conditions	Specimen container : Special tube - contact the Department of Clinical Biochemistry at the Royal Liverpool University Hospital (EDTA sample separated within 30 min as a minimum sample requirement) Minimum sample requirement - 0.5 ml of EDTA plasma. Haemolysed samples are unsuitable for analysis. Outside hospitals users (including Broadgreen Hospital and LWH) : The samples must be collected on ice and separated immediately. After separation plasma must be immediately frozen and sent to RLUH by courier . RLUH users: The samples must be collected and <i>immediately</i> transported to lab <i>on ice</i> .
Frequency of testing	A single elevated result may be diagnostic for a malignancy and repeat might not be necessary. PTHrP can be used in follow up of patients treated for a malignancy.