Primary hyperparathyroidism (PHPT): diagnosis

Measure albumin-adjusted serum calcium (Ca) if any features that might indicate PHPT:
- thirst, frequent or excessive urination, constipation
- osteoporosis or fragility fracture, or renal stone
- incidental Ca ≥ 2.6 mmol/litre

Consider measuring Ca if chronic non-differentiated symptoms

If Ca:
- ≥ 2.6 mmol/litre or
- ≥ 2.5 mmol/litre with features that might indicate PHPT

Re-measure Ca

If Ca on at least 2 separate occasions:
- ≥ 2.6 mmol/litre or
- ≥ 2.5 mmol/litre and PHPT suspected

Measure parathyroid hormone (PTH) with concurrent Ca measurement

- PTH above midpoint of reference range and PHPT suspected
- PTH below midpoint of reference range and concurrent Ca ≥ 2.6 mmol/litre
- PTH below midpoint, but within reference range and concurrent Ca < 2.6 mmol/litre
- PTH below lower limit of reference range

Seek advice from a specialist with expertise in PHPT

Measure vitamin D and offer supplements if needed

Measure urine calcium excretion using one of:
- 24-hour urinary calcium excretion
- random renal calcium:creatinine excretion ratio
- random calcium:creatinine clearance ratio

Exclude familial hypocalciuric hypercalcaemia

Assess after diagnosis of PHPT:
- symptoms and comorbidities
- eGFR or serum creatinine
- DXA scan of lumbar spine, distal radius and hip
- ultrasound of renal tract

Seek alternative diagnosis, including malignancy

No further investigation for PHPT

This is a summary of the recommendations on diagnosis from NICE's guideline on primary hyperparathyroidism.
See the original guidance at www.nice.org.uk/guidance/NG132