

**Table I.** Guidelines for surgical intervention in aPHPT patients(adapted from original)

<b>Measurement</b>	<b>1990</b>	<b>2002</b>	<b>2008</b>	<b>2014</b>
Serum calcium (> upper limit of normal)	A. 1-1.6 mg/dl B. Life-threatening hypercalcemia	1 mg/dl	1.0 mg/dl	1.0 mg/dl
Renal	A. eGFR reduced by >30% B. 24-h urine for calcium >400 mg/dl C. Presence of kidney stone(s) detected by abdominal radiograph	A. eGFR reduced by >30% B. 24-h urine for calcium >400 mg/dl	A. eGFR <60 ml/min B. 24-h urine for calcium not recommended	A. eGFR <60 ml/min B. 24-h urine for calcium >400 mg/dl and increased stone risk by biochemical stone risk analysis C. Presence of nephrolithiasis or nephrocalcinosis by x-ray, ultrasound, or CT
Skeletal	BMD: Z-score <-2.0 (forearm)	BMD: T-score <-2.5 at any site	BMD: T-score <-2.5 at any site and/or previous fracture fragility	A. BMD by DXA: T-score <-2.5 at lumbar spine, total hip, femoral neck, or distal 1/3 radius B. Vertebral fracture by x-ray, CT, MRI, or VFA
Age	<50y	<50y	<50y	<50y