

Late-diagnosed primary hyperparathyroidism resulting in loss of kidney and advanced osteoporosis

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Introduction

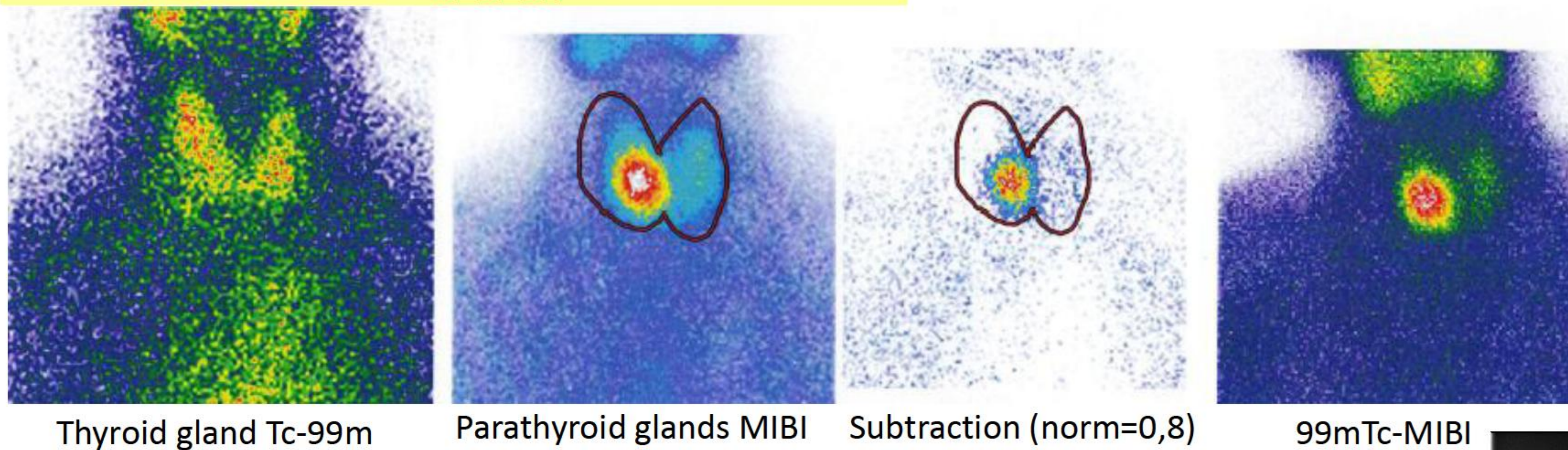
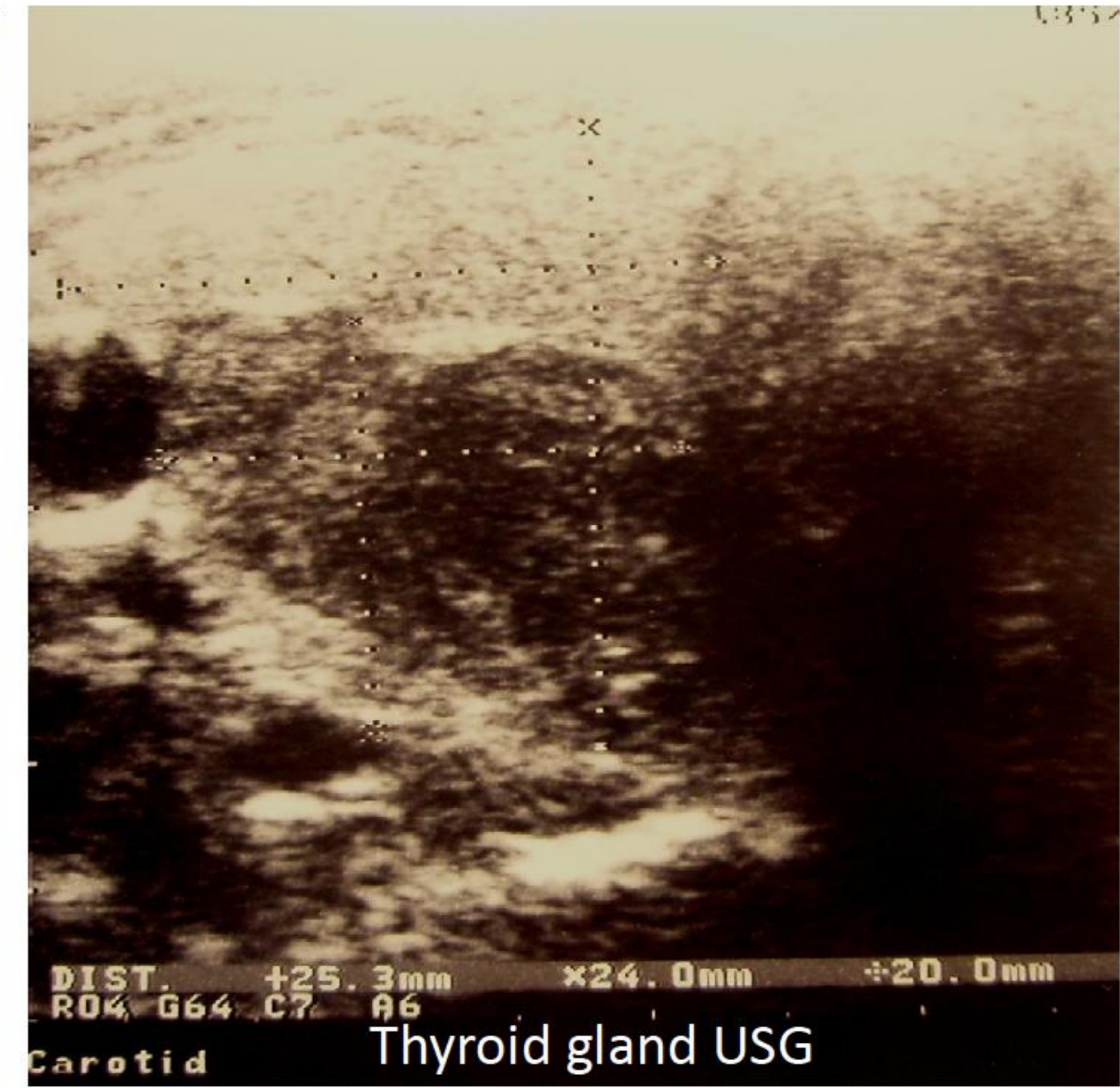
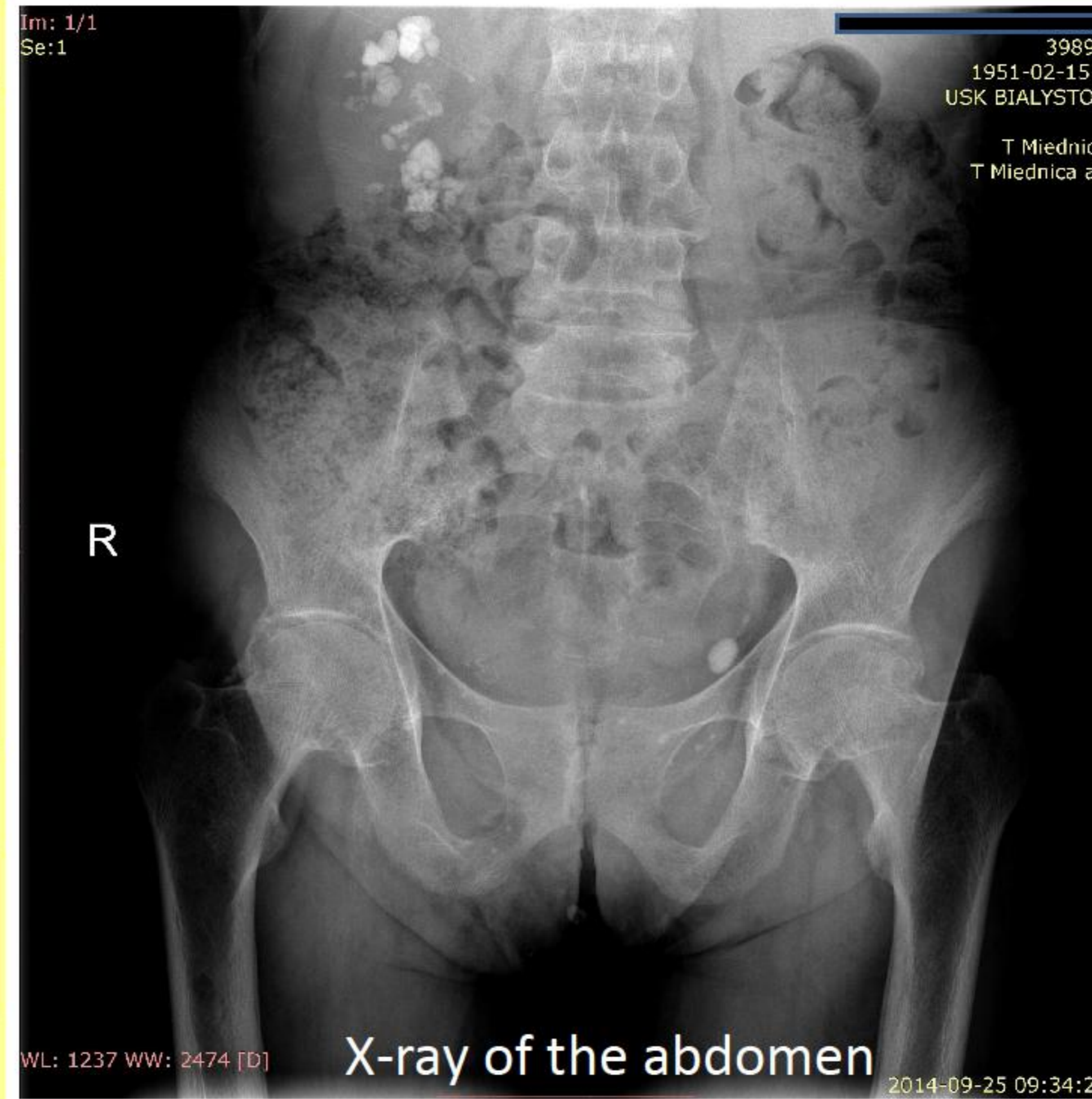
The report describes the case of a late-diagnosed primary hyperparathyroidism in the patient, who developed severe renal complications and advanced osteoporosis with hungry bone syndrome after removal of parathyroid adenoma.

Case report

Sixty-three year old woman with long-lasting nephrolithiasis was admitted to the hospital due to high serum PTH concentration detected in a routine laboratory testing. Two years before admission to the hospital she had undergone left-sided nephrectomy because of hydronephrosis. In the last year she lost 5 kg and suffered from asthenia, joint-pain and recurrent urinary tract infections.

Laboratory tests during hospitalization

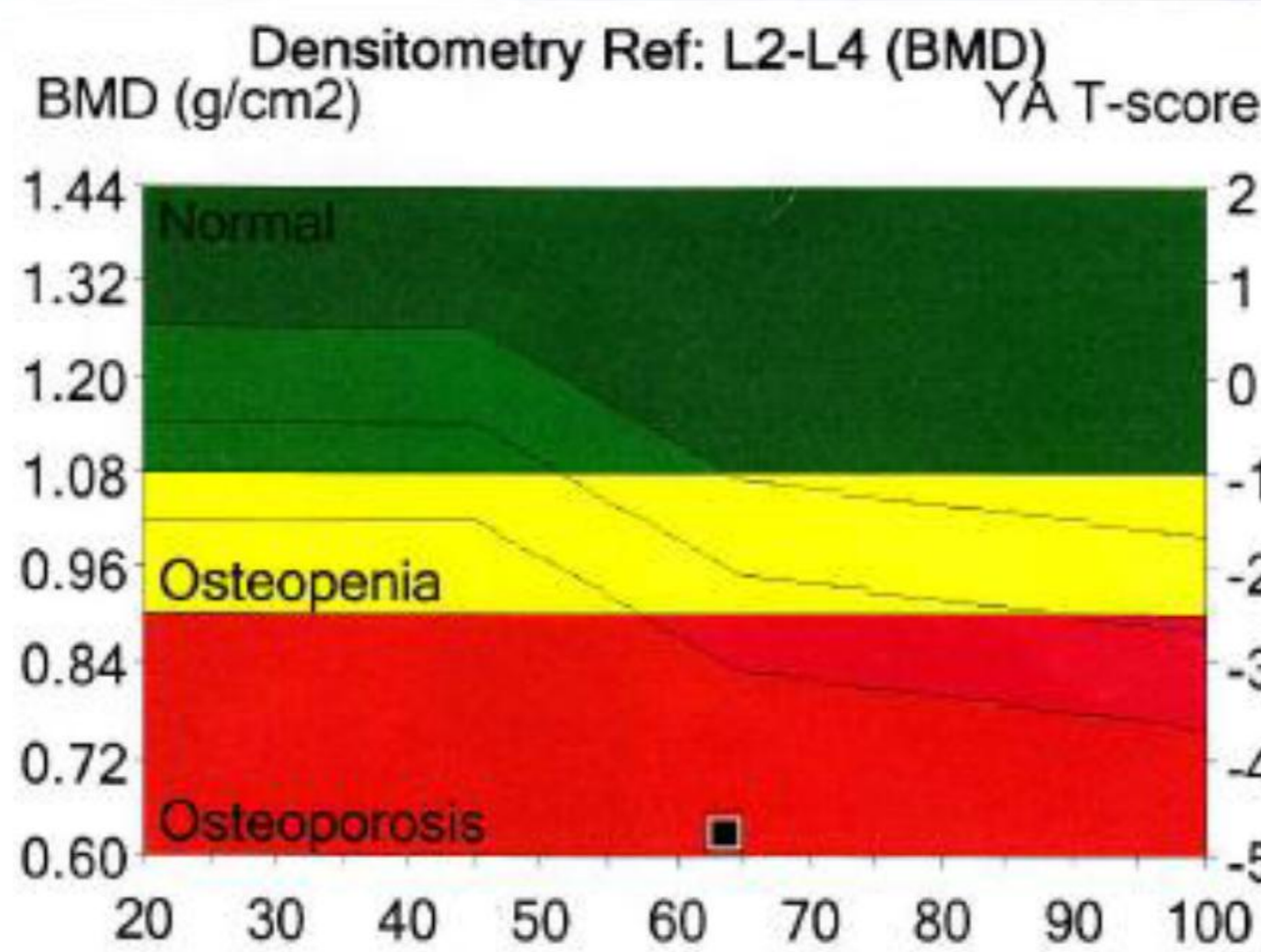
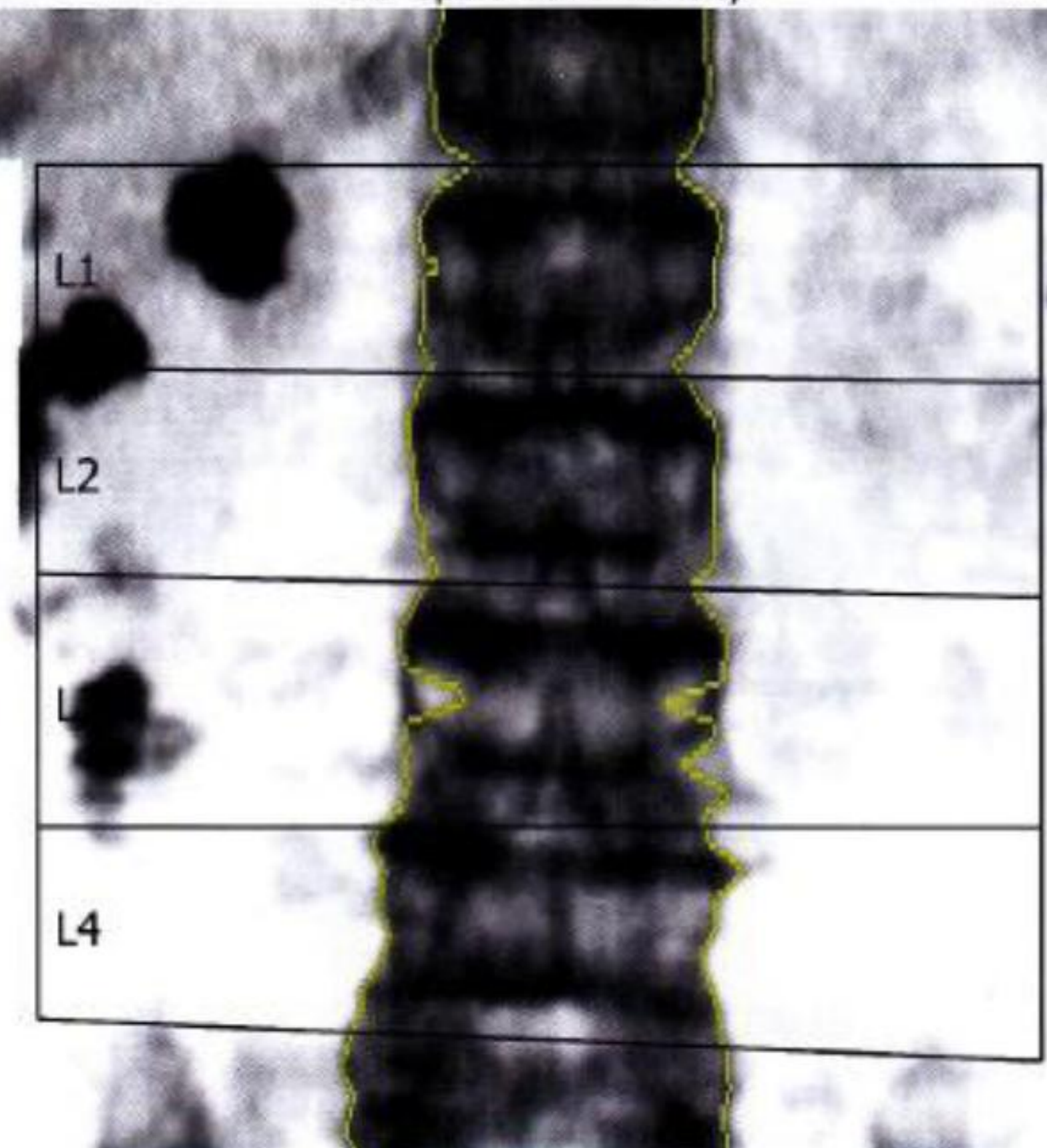
PTH	2070	N: 15-68,3 pg/ml
ALP	1047	N: 37-123 IU/l
Ca : total	3,26	N: 2,25-2,75 mmol/l
ionized	1,91	N: 1,1-1,3 mmol/l
Haemoglobin	8,8	N: 12-16 g%
Creatinine	2,12	N: 0,6-0,9 mg/dl
GFR	19	N: >90 ml/min
Calcium urine excretion	92,4	N: 100-300 mg/24h
Phosphate urine excretion	367	N: 600-1200 mg/24h
25(OH)D3	17	N: 30-40 ng/ml



Neck **ultrasonography** demonstrated multinodular goitre (thyroid function tests were normal). The biggest nodule was found in the right thyroid lobe, it was hypoechoic and had 20x16x24mm diameter.

99mTc-sestamibi scintigraphy detected abnormal lower right parathyroid gland.

AP Spine Bone Density



DXA osteodensitometry showed advanced osteoporosis (-4,8 SD lumbar and -3,6 SD femoral neck T-score).

During the parathyroidectomy rapid decrease of serum PTH was observed (to 150pg/ml). Two months postoperatively patient developed hypocalcaemia (1,93mmol/l) and again high level of PTH (946pg/ml). The diagnosis of hungry bone syndrome was made.

The treatment with vitamin D, calcium supplementation and alendronate sodium was started, which resulted in a gradual decrease in PTH and normalization of serum calcium.

X-ray of the hands

- decreased bone density
- subperiosteal resorption
- focal bone defects within phalanges and metacarpal bones
- osteolysis of ungual tuberosity
- destruction of styloid processes
- metacarpophalangeal joint space narrowing
- calcifications near the heads of metacarpal bones

Conclusion

In each case of nephrolithiasis the probability of hyperparathyroidism should be checked, otherwise it can lead to irreparable damages of human organism.

