

# Hypercalcaemia due to Pelvic Sarcoidosis

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## Introduction

Sarcoidosis is a chronic inflammatory multisystem disease of unknown aetiology, characterised by formation of non-caseating granulomas in affected organs. Virtually any organ in the body can be affected, with pulmonary involvement being the most common. Asymptomatic organ involvement is common in extrapulmonary sarcoidosis and can complicate diagnosis and long-term prognosis. Hypercalcaemia and hypercalciuria frequently feature in patients with sarcoidosis due to the ectopic production of 1,25-dihydroxy-vitamin D by sarcoid granulomas.

Clinical presentation and severity varies, ranging from non-specific symptoms such as lethargy to specific symptoms according to the organ system affected.

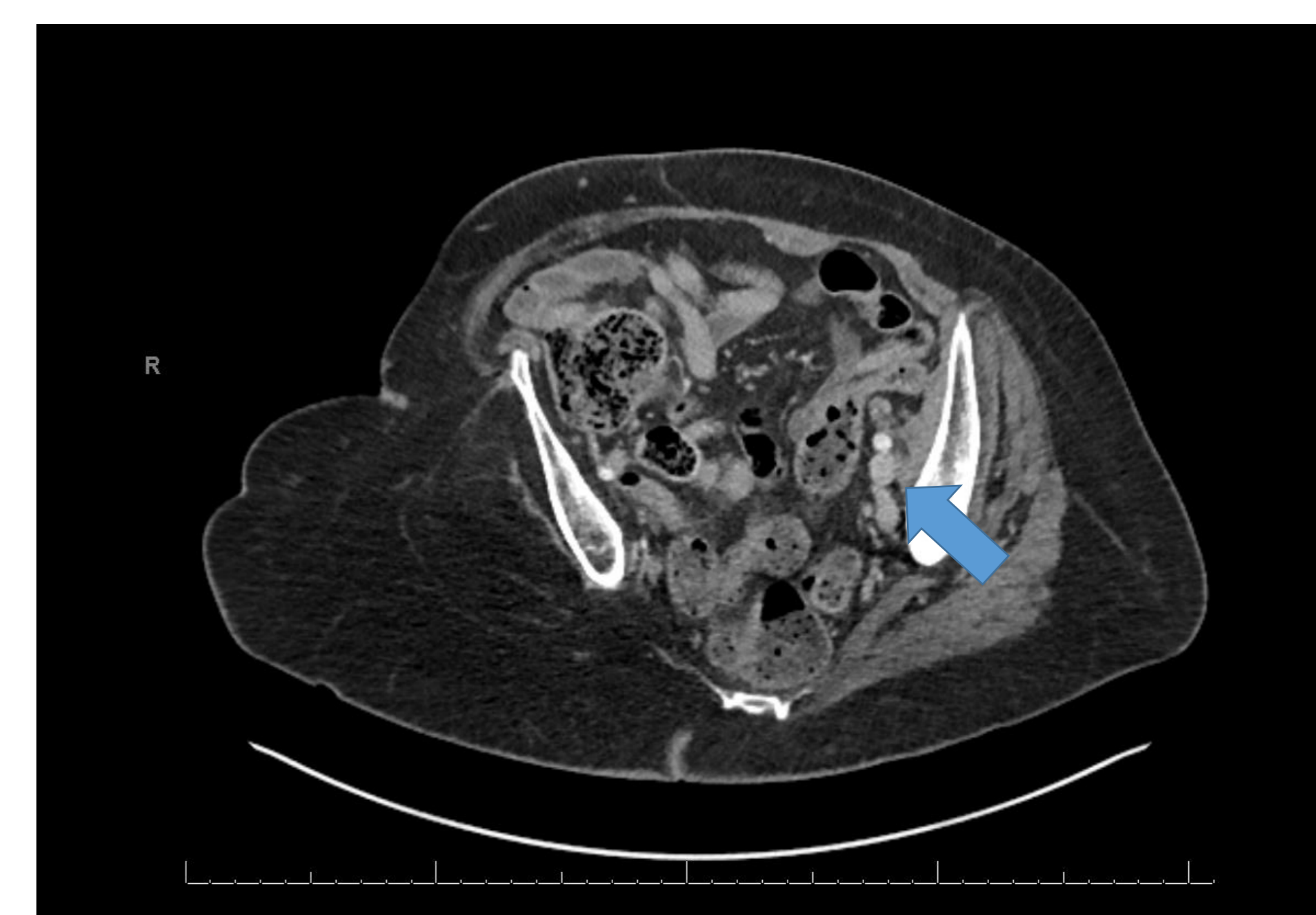
Diagnosis is based on a combination of biochemical markers (serum corrected Calcium, ACE), imaging (bilateral lymphadenopathy), and histology (non-caseating granulomas)

The multitude of clinical presentations brings with it a large scope for misdiagnosis and delayed diagnosis due to the potential mimicry of malignancy, inflammatory disease and other granulomatous disease.

## Patient description

A 51-year-old lady presented as an emergency with disabling, recurrent hypercalcaemia in July and August, 2015 with a peak corrected calcium of 3.94mmol/l (2.2-2.6). Significant pelvic and left groin lymphadenopathy was noted, and was found to be enlarging on surveillance CT of July 2015.

She had previously been diagnosed with a stage 1A endometrial cancer, treated with hysterectomy and bilateral salpingo-oophorectomy in April 2014. She also has a left kidney lesion, from which biopsy of February 2015 showed a low grade neoplasm, consistent with renal oncocytoma.



CT pelvis of Feb 2015; enlarged lymph nodes shown by arrow

## Investigations and Results

PTH was appropriately suppressed and a myeloma screen was negative. PTH-rp was undetectable

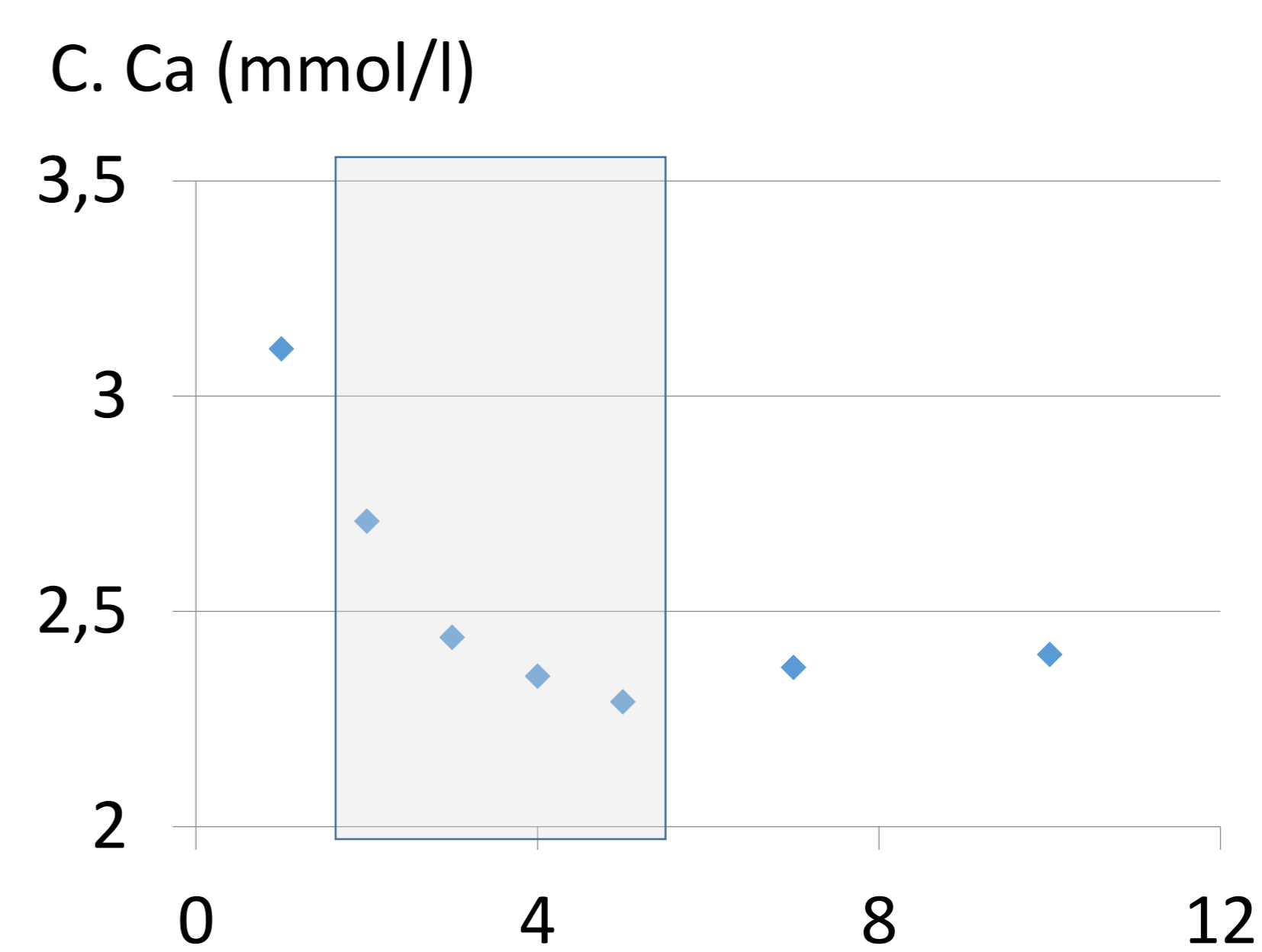
Review of the histology from the hysterectomy of 2014 revealed abundant non-caseating granulomata in nine lymph nodes without evidence of malignancy. Serum ACE was elevated at 113U/l (NR 16-85) and 1,25 (OH)<sub>2</sub> vitamin D was elevated at 253pmol/l (NR 43-143)

There was no evidence of pulmonary sarcoidosis on the CT thorax of July 2015.

At MDT, it was agreed that there was sufficient evidence to make a diagnosis of pelvic sarcoidosis.

## Treatment and outcome

The patient was started on Prednisolone 35mg daily (0.5mg/kg). Six weeks later, she was back at work. The serum calcium had fallen into the normal range and a CT scan showed reduction in the size of the pelvic and groin lymph nodes. Over the next five months, Prednisolone was successfully withdrawn and then stopped, without further elevation of serum calcium.



Graph of Corrected calcium over time in months. Shaded bar represents time on Prednisolone therapy

## Discussion

In the literature, undiagnosed sarcoidosis has been reported to delay the correct staging, prognosis and management of a newly diagnosed cancer. This case illustrates the importance of considering extra-pulmonary sarcoidosis as a cause of hypercalcaemia, especially in the context of concurrent malignancy.

Rare cases exist of cancer and sarcoidosis occurring in the same individual. In these cases, the absence of typical pulmonary features of sarcoidosis can lead to misdiagnosis as metastatic disease with severe implications on advice about prognosis and treatment.