This computed tomography (CT) scan was obtained from a 71-year-old woman admitted for declining function and increasing pain in the right hip. She had a known diagnosis of Paget’s disease of the bone involving the right iliac crest and pubic ramus, but had previously been symptomatically stable. However, increasing pain in the hip prompted further evaluation.

On admission, she complained of significant pain in the right hip. Blood testing revealed an alkaline phosphatase level of 1218 IU/L, which 3 years earlier had been 164 IU/L. Her CT scan demonstrates a large mass emanating from and eroding the right ilium. The ilium itself shows cortical thickening consistent with Paget’s disease, while the mass shows calcifications that suggest malignant transformation. A CT scan of the chest showed innumerable pulmonary nodules, also containing calcified areas. A biopsy of the pelvic mass confirmed the clinical suspicion of osteosarcoma. The patient began chemotherapy but showed no improvement; she subsequently opted for hospice care.

Paget’s disease of the bone is common with increasing age and may be present in as many as 2% to 3% of people older than age 40. However, it is usually an asymptomatic disease discovered incidentally on X ray or on evaluation of an elevated alkaline phosphatase level. When symptomatic, Paget’s disease can cause bone pain, bone deformities, fractures, and eighth cranial nerve impairment when the skull is affected. The classically described high-output cardiac failure is an uncommon finding that is associated with extensive bony involvement.

While Paget’s disease is typically an indolent process, this case illustrates one of the feared complications: osteosarcoma. Though occurring in only 1% of patients with Paget’s disease, osteosarcoma is 1000 times more common among this population than the general populace. Increasing pain in a patient with known Paget’s disease should raise suspicion of osteosarcoma. Unfortunately, as this case illustrates, osteosarcoma arising from Paget’s disease is an aggressive tumor with a poor prognosis.