Clinical History
A 55 year-old female patient presented with bilateral hip and rib pain. A chest radiograph revealed multiple, bilateral rib fractures with callus formation. Additional radiographs revealed insufficiency fractures of the right superior and inferior pubic rami, ischium and possibly sacrum. MRI showed avascular necrosis of the left femoral head. Laboratory studies were remarkable for hypophosphatemia. Parathyroid scan, octreotide body scan, and whole body sestamibi scan were normal. A left total hip arthroplasty was performed for symptom relief.

The patient was lost to follow up until six years later when, at the age of 61, she presented with bilateral weakness and shooting pains in her legs precipitated by a fall. She denied back pain, bowel or bladder dysfunction. Full body positron emission tomography/computed tomography (PET/CT), revealed a 4.3 X 1.7 cm fluoro-deoxyglucose (FDG18)-avid expansile lytic lesion involving the left posterior T12 neural arch. The patient’s serum fibroblast growth factor-23 (FGF-23) level was elevated. MRI of the spine revealed a multi-lobulated, vividly enhancing, heterogeneous mass centered in the left pedicle and lamina of T12, with extension into the epidural space and posterior paraspinal musculature. The patient underwent T11 to L1 laminectomies and tumor resection.

Material Submitted
H&E section
Virtual Slide (click here)

Points for Discussion
1. Differential diagnosis
2. Pathogenesis
3. Clinical presentation
4. Treatment