vomiting for 5 days. Patient also reported diffuse bilateral lower extremity pain for 1 year with weakness and difficulty in ambulation for 1 month. He did not see any provider in the last 2 years. He was not on any prescription or over the counter medications. He was found to have severe hypercalcemia with corrected calcium of 14.7 mg/dL, low phosphorus 1.6 mg/dL, low 25 hydroxy vitamin D <4 ng/mL, very high parathyroid hormone (PTH) 1859 pg/mL and high alkaline phosphatase 1167 U/L. No prior history of hypercalcemia. No family history of hypercalcemia, thyroid cancer, pheochromocytoma, pituitary or pancreatic tumor. CT abdomen was performed on admission due to severe gastrointestinal symptoms which revealed left nephrolithiasis, sclerotic changes in the end plates of the spines and multiple lucent lesions throughout femoral necks, symphysis pubis, and sacroiliac joints. It also showed chronic rib fractures. Knee x ray showed bilateral extensive subperiosteal, sub-tendinous and subligamentous bony resorption and brown tumors. Patient was treated with aggressive intravenous (IV) hydration, calcitonin and IV pamidronate with gradual improvement in serum calcium. Thyroid ultrasound showed left inferior 3.2 cm mass suspicious for parathyroid adenoma. Surgical team was consulted. Patient underwent left inferior parathyroidectomy along with left hemithyroidectomy due to concern for parathyroid cancer. Surgical pathology showed parathyroid adenoma. Patient required aggressive calcium supplementation, along with vitamin D, calcitriol and magnesium to prevent severe hypocalcemia and hungry bone syndrome. He recovered well and was discharged with outpatient follow up. **Conclusion:** Our case highlights that parathyroid crisis is a serious endocrine emergency associated with significant morbidity and urgent surgical intervention after stabilizing serum calcium level leads to a favorable outcome. The finding of parathyroid adenoma is interesting because the constellation of severe skeletal involvement, nephrolithiasis and significantly elevated PTH and calcium in our patient was concerning for parathyroid carcinoma. Clinicians should consider both in patients with severe hypercalcemia and PTH more than 5 times upper limit of normal. The characteristic finding of osteitis fibrosa cystica in our case is rare in United States and is seen in <2% of patients with PHPT due to routine biochemical screening leading to early diagnosis of asymptomatic cases.

**Presentation:** Saturday, June 11, 2022 1:00 p.m. - 3:00 p.m.