The presentation of renal cell carcinoma (RCC) is highly variable. There is an increased occurrence of asymptomatic individuals diagnosed by incidental imaging. We present an interesting case of a patient with history of hyperparathyroidism and hypercalcemia who presented with altered mental status as initial presentation of advanced metastatic RCC.

An 85-year-old Caucasian female with a past medical history of hyperparathyroidism, hypercalcemia, and osteoarthritis presented with altered mental status after a fall. Initial evaluation revealed hypovolemic hyponatremia which corrected with crystalloid fluids, anemia (Hb: 11.2 g/dL), hypercalcemia (Ca: 11.7 mg/dl, corrected Ca: 12.4 mg/dl, ionized calcium: 1.43 mmol/L), hyperparathyroidism (PTH: 76 pg/ml), with normal Vitamin D and liver function test. Urine analysis revealed hematuria.

Computer tomography imaging (CT) head and cervical spine showed a mass in the left frontal lobe. CT of thorax and abdomen showed a large mass of about 10 cm in the left kidney, multiple pulmonary nodules, and multiple liver lesions.

Left frontal craniotomy performed for tumor excision and biopsy showed metastatic renal cell carcinoma.

The patient received palliative radiation therapy and completed a steroid taper. Chemotherapy/immunotherapy was given as an option, but the patient declined.

CONCLUSION
- RCC is a highly aggressive tumor, with major metastasis sites being lungs, lymphatic ganglions, bones, liver, and brain.
- Hypercalcemia is a poor prognostic indicator and proven to decrease survival compared to those without hypercalcemia.
- MSKCC/Motzer criteria can be used for the estimation of prognosis.

**Poor Prognostic factors**
- Time from diagnosis to systemic therapy > 12 months
- Low hemoglobin
- Ca > 10 mg/dl
- LDH > 1.5x upper limit of normal
- Performance status < 80% (Karnofsky)

In our patient, the most likely cause of hypercalcemia appeared to be due to a combination of primary hyperparathyroidism and widespread metastasis, causing osteolytic bone lesions.

REFERENCES