

## C-35

# <sup>177</sup>Lu Dotatate Peptide Receptor Radionuclide Therapy in Chronic Kidney Disease Patients: a Single Center Experience

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**BACKGROUND:** Chronic Kidney Disease (CKD) is common in metastatic neuroendocrine tumors. Unfortunately, therapy with <sup>177</sup>Lu-dotatate PRRT has not been well studied in this group. Our objective was to evaluate the incidence of acute kidney injury (AKI) and the risk of hematological toxicity among the CKD patients.

**METHODS:** A retrospective review of all consecutive adult patients that received <sup>177</sup>Lu-dotatate at our center between April 1, 2018 to April 30, 2019. We defined CKD as eGFR <60 ml/min or eGFR >60 ml/min with proteinuria and AKI as an increase in creatinine > 0.3 mg/dl within 48 hours or > 50% within 7 days.

**RESULTS:** 86 patients were included. Of these, 39 (45%) had pre-existing CKD. Average dose received was 632.1 mCi in CKD and 696 mCi in non-CKD patients (p 0.1675). AKI was reported in 4 (4.6%) patients with predominant cause being hypotension and were not attributed to <sup>177</sup>Lu-dotatate. In CKD group, the mean eGFR improved after Cycle 1 cycle from baseline of 49 (13) to 53.5 (17) ml/min (p 0.01). No statistically significant decline of kidney function was found at 3- and 6-month follow up. Higher rates of thrombocytopenia and leukopenia were noted in the CKD group but reached statistical significance only for platelets with median change in platelet count between baseline labs and pre-cycle 4 of -78 (-45 to -130) vs -37 (-10.25 to -96.75) cells/ml, p 0.0371. No significant correlation to cumulative drug dose or prior chemotherapeutic regimen received was found.

**CONCLUSION:** CKD patients are at an increased risk of acute hematological toxicity with possibly a cumulative effect. Drug dosing and monitoring may need to be individualized based on unique patient bone marrow health profile by factoring in their age, comorbidities, and prior marrow toxic drug use. Long term impact of <sup>177</sup>Lu-dotatate in the CKD patients is still unclear.

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