

# C-31

## Impact of Ga-68 DOTATATE Imaging on Clinical Management of Neuroendocrine Tumor Patients: Post FDA-Approval Analysis of First 200 Clinical Patients

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**BACKGROUND:** Gallium 68 dotatate (Ga-68 DOTA) provides physiologic imaging and assists in the localization of disease in somatostatin (SSA) receptor positive neuroendocrine tumor (NET) patients. We present our experience with 200 Ga-DOTATATE scans performed at University of Kentucky.

**METHODS:** A retrospective review of the first 200 patients who had undergone Ga-68 DOTA imaging at the Markey Cancer Center from Dec 2016 to Dec 2017 was conducted.

**RESULTS:** Of these 200 patients, 59.5% were females and the median age was 62 (30-84 years). The study cohort included the following primary tumor sites: small bowel 37.5%, pancreas 18.5%, bronchial 14%, colon 3.5%, rectum 2%, appendix 1.5%, adrenal 0.5%, prostate 0.5%, others 3% and unknown primary 19%. Ga-68 DOTA scan influenced clinical decisions in 39% (n = 78) patients. Ga-68 DOTA imaging identified primary tumors in 17 of 38 patients who were classified as NET of unknown primary based on CT imaging.

Subgroup analysis of mean standardized uptake value (SUV) for hepatic metastatic lesions revealed 37.3 for G1 (n = 20) as compared to 32.3 for G2 (n = 37) and 17.46 for G3 (n = 4) Mean hepatic SUV of the lesion with the greatest radiolabel uptake in 96 patients was similar irrespective of exposure to SSA LAR; 31.3 vs 27.8 for SSA vs the no SSA cohorts

**CONCLUSION:** Ga-68 DOTA imaging impacted clinical decision making in 39% of NET patients (n = 200), identified the primary site in 38 patients and assisted with differentiating G3 NET from G1/G2 based on mean SUV in a subgroup analysis (n = 61). Serial Ga-68 DOTA monitoring for disease progression in our subset analysis (n = 17) revealed a 58% discordancy between anatomic (CT) vs physiologic imaging. Systemic exposure to long acting SSA does not seem to impact quality of Ga-68 DOTA scan