

# Impact of Ga-68 DOTATATE imaging on clinical management of neuroendocrine tumor patients: Post FDA-approval analysis of first 200 clinical patients at Markey Cancer Center.

Aman Chauhan<sup>1</sup>, Riham El Khouli<sup>2</sup>, Tim Waits<sup>2</sup>, Heidi Weiss<sup>3</sup>, Elizabeth Oates<sup>2</sup>, Lowell Brian Anthony<sup>1</sup>;

1: Division of Medical Oncology, University of Kentucky, Lexington, KY, 2: Department of Radiology, University of Kentucky, Lexington, KY.



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## Study Question

To evaluate impact of Ga-68 DOTATATE on clinical decision making.

Demographics	N (Percentage) Total = 200
Gender*	
Male	81 (40.5%)
Females	119 (59.5%)
Median Age	62+/-12 (30-84)
Primary Site*	Prevalence
Small Bowel	75 (37.5%)
Pancreas	37 (18.5%)
Lung	28 (14%)
Colon	7 (3.5%)
Rectum	4 (2%)
Appendix	3 (1.5%)
Adrenal	1 (0.5%)
Prostate	1 (0.5%)
Others	6 (3%)
Unknown Primary	38 (19%)
Functional Status*	Prevalence
Carcinoid Syndrome	52 (26%)
No carcinoid Syndrome	45 (22.5%)
Functional Status Unknown	103 (51.5%)

## Change in Clinical Management Post- <sup>68</sup>Ga-DOTATATE Scan.

Change in management	N=78	%
Surgery	18	23.1
Placed on Antitumor Agent	17	21.8
Placed on Clinical Trial	9	11.5
PRRT Referral	8	10.3
Further Imaging/Procedures	8	10.3
Other	7	9.0
Radiation	5	6.4
Taken Off Chemo	4	5.1
Observation on SSA	2	2.6
Could Not Be Assessed	20	10

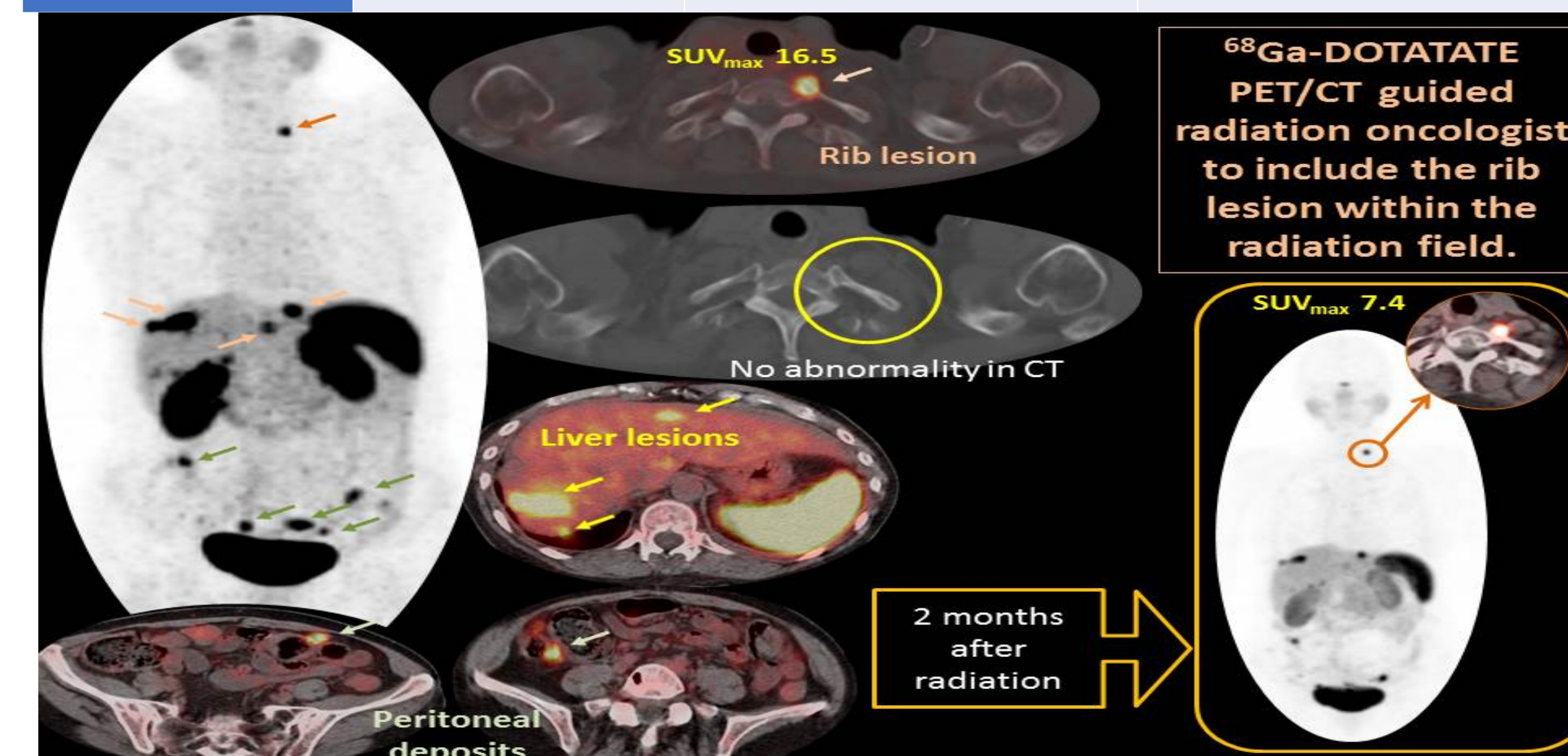
## Results

### Subgroup analysis of median SUV for hepatic metastatic lesions.

	Grade 1 (N = 20)	Grade 2 (N = 37)	Grade 3 (N = 5)
Liver SUV <sub>max</sub>		Liver SUV <sub>max</sub>	Liver SUV <sub>max</sub>
Mean ± SD	37.3 ± 31.91	Mean ± SD 32.3 ± 23.19	Mean ± SD 17.46 ± 25.89

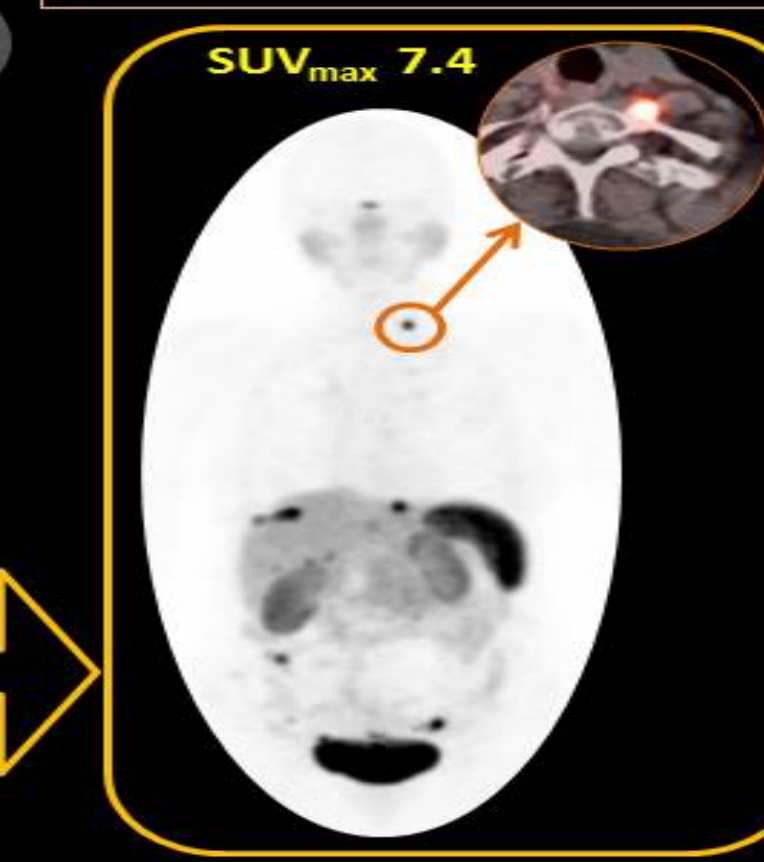
No difference in the mean SUV was noted in hepatic metastasis regardless of presence or absence of systemic long acting somatostatin analogs.

	N	Mean mSUV	Median mSUV
With SSA	62.0	35.1 ± 23.3	31.3
Without SSA	34.0	32.9 ± 25.6	27.8



<sup>68</sup>Ga-DOTATATE PET/CT guided radiation oncologist to include the rib lesion within the radiation field.

2 months after radiation



**Figure on right:** A 69 year old female patient known to have small bowel well differentiated neuroendocrine tumor metastatic to liver and peritoneum. <sup>68</sup>Ga-DOTATATE showed intensely avid metastatic focus at the proximal costovertebral end of the left 1<sup>st</sup> rib (orange arrows), which on clinical correlation was found to cause pain. Case was discussed in multidisciplinary conference and consensus was to proceed with external beam radiation for symptoms control. <sup>68</sup>Ga-DOTATATE PET/CT scan 2 months after completing radiation showed 55% decrease in uptake value (SUV<sub>max</sub> 7.4 versus 16.5). On the follow up visit patient reported resolution of rib pain after radiation.