Icahn School of Medicine at Mount Sinai

*The Mount Sinai Center for Carcinoid and Neuroendocrine Tumors*

# Clinical significance of multifocal primary tumors in small bowel neuroendocrine tumors

Tahsin M. Khan, Susheian Kelly, Jeffrey Aalberg, Michelle Kim, Celia M. Divino

Department of Surgery, The Mount Sinai Hospital, New York, NY, 10029

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## BACKGROUND

- Multifocal primary tumors are reported to occur in up to 30% of cases of small bowel neuroendocrine tumors.
- Existing retrospective studies suggest that patients with multifocal disease are younger at time of diagnosis, have higher likelihood of experiencing carcinoid syndrome, have worse prognosis and/or disease burden at 36 months, and have shorter disease free survival.
- This study aims to contribute to the understanding of multifocal disease by presenting our experience with this phenomenon at a single institution academic medical center.

## METHODS

- Retrospective review of medical records of patients undergoing surgical resection of small bowel neuroendocrine tumor and with complete pathology reports between 2012 and 2017 at a single urban, academic medical center with a dedicated center for neuroendocrine tumor management (The Mount Sinai Hospital, NY) was performed.
- Clinico-pathologic features of patients with multifocal disease were compared to those with single primary tumors.

## RESULTS

- Data was abstracted from 62 patients.
- Multifocal disease was seen in 39% of patients.
- As detailed in Table 1, patients with multifocal disease were of the same age as patients with single primary at time of diagnosis and surgical intervention.
- Abdominal pain, diarrhea, and carcinoid syndrome were the most common clinical symptoms in both groups.
- Multifocal disease tended to be well differentiated and have lower Ki67 index. The average size of the primary tumor was similar in both groups.
- Overall survival was similar in both groups.

## CONCLUSIONS

- The prevalence of multifocal disease was higher at our institution/series than previously reported.
- No differences in the clinico-pathological features between multifocal and single disease were identified; however, the statistical significance of our findings is limited by small sample size.

## RESULTS

| | Single | Multifocal |
|---|---|---|
| **Demographics** | | |
| **n** | 38 (61%) | 24 (39%) |
| **Female** | 24 (63%) | 13 (54%) |
| **Age at Diagnosis (years +/- st dev)** | 59.8 +/- 10.5 | 59.5 +/- 12.8 |
| **Age at Surgery (years +/- st dev)** | 60.6 +/- 10.2 | 60.3 +/- 13.3 |
| **Clinical Symptoms** | | |
| **Weight Loss** | 16% | 33% |
| **Abdominal Pain** | 42% | 58% |
| **Bowel Obstruction** | 16% | 17% |
| **Diarrhea** | 61% | 50% |
| **Carcinoid Syndrome** | 45% | 46% |
| **Carcinoid Heart Disease** | 8% | 8% |
| **Pathology** | | |
| **Stage** | | |
| **I** | 5% | 0 |
| **II** | 0 | 8% |
| **III** | 37% | 25% |
| **IV** | 58% | 66% |
| **Grade** | | |
| **G1** | 66% | 80% |
| **G2** | 32% | 20% |
| **G3** | 3% | 0 |
| **Ki67 Index** | | |
| **<2%** | 65% | 86% |
| **2-30%** | 35% | 14% |
| **Size of primary (cm +/- st dev)** | 1.76 + 0.96 | 2.39 + 1.63 |
| **Outcomes** | | |
| **Overall survival (as of 2017)** | 31 (82%) | 19 (79%) |