

Gastrointestinal Neuroendocrine Tumor: A 28-year review of a single center

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INTRODUCTION

Gastrointestinal neuroendocrine tumors (GI NET) were originally described as being benign but are now understood to represent a spectrum of disease ranging from indolent to aggressive. Recent literature indicates that the incidence of GI NET is increasing. The reason for the increase is poorly understood, however it is important for health care providers to understand its impact on our communities and to be familiar with the care of this disease.

OBJECTIVES

- To review the number of GI NET seen at a single Midwestern institute in the United States.
- Secondly, to examine overall patient survival and conduct an exploratory review of possible contributing variables to survival status.

METHODS

A review of a single cancer center was conducted from 1989-2016 for patients with GI NET based on the local tumor registry. A time series plot of patient counts was fitted, and survival analytics calculated for the outcome of patient death from cancer or reoccurrence of cancer adjusting for competing events.

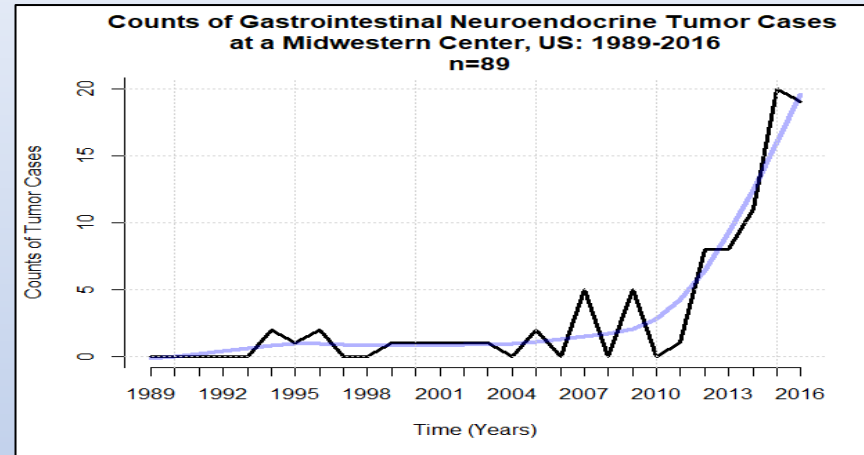


Figure 1: Review of gastrointestinal neuroendocrine tumor counts across time for a single cancer center.

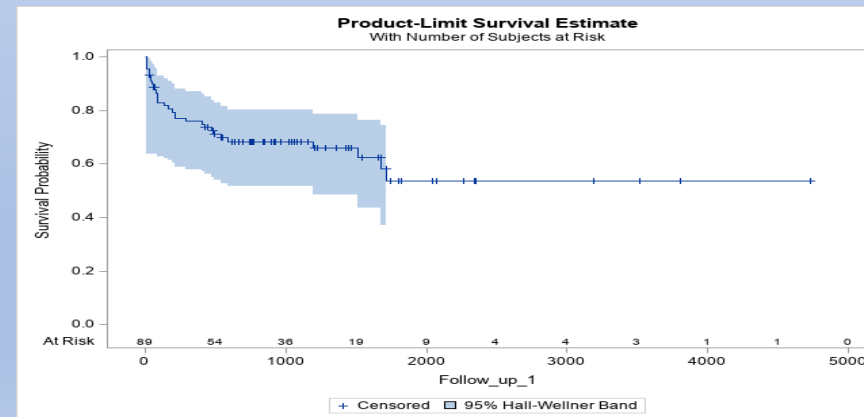


Figure 2. Plotted survival from death in days for initial or recurrence gastrointestinal neuroendocrine tumor for a single cancer center across a 28-year period.

RESULTS

- There were 89 unique adult patients with a GI NET diagnosis during the 28-year period. Forty-nine percent of patients were female, and the mean age was 61 (std: 13) years. The most common tumor site was the small intestine followed by the pancreas, 30% and 24%, respectively.
- An increasing number of cases were seen across the period (Figure 1). Thirty-one percent of patients died related to GI NET or GI NET recurrence, while 9% of patients had a competing event. Estimated probability of survival for patients was 55% (95% CI: 42%, 70%) at 4.7 years (figure 2).
- Subsequent analyses did not show a difference in survival when examining patient age (aHR: 1.07; 95% CI: 0.79, 1.45) or gender (female aHR: 1.01; 95% CI: 0.50, 2.04).

CONCLUSION

Study results revealed an increase in the number of GI NET cases seen at the study center, which corresponded with the rising incidence reported nationally. Overall patient survival was approximately half at near 5 years. Given the increasing number of cases and mortality rate, it is important for surgeons to understand the impact of this disease as the essential management for GI NET is surgical.