Predictive Rates of Survival Based on Ki-67 and Chemotherapy Regimens in Patients with High Grade Neuroendocrine Tumors

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INTRODUCTION

- High grade neuroendocrine tumors (HGNETs) are rare neoplasms with limited literature regarding their prognostic course.
- Ki-67 is a proliferative marker used to determine prognosis.
- Our group, the New Orleans Louisiana Neuroendocrine Tumor Specialists (NOLANETS), sought to determine the relationship between HG-NETS with a Ki-67 ≥55% and prognosis.
- Additionally, the survival based on platinum- based chemotherapy, capecitabine and temozolomide (CAPTEM) or 5-fluorouracil (5-FU) based chemotherapy was assessed.

HYPOTHESIS

- We hypothesized that patients with HGNETs with a Ki-67 labelling index of ≥55% will have a worse prognosis. We also hypothesized that patients with HGNETs who are treated with CAPTEM will have increased survival.

METHODS

- Medical records of patients seen by the NOLANETS team between June 1, 2012 and June 1, 2017diagnosed with HG-NETs were retrospectively reviewed.
- Demographics, pathologic characteristics, and treatment data were collected.
- Survival from the date of first chemotherapy to either the date of death or end of study (June 1, 2017) by chemotherapy regimen were analyzed.
- Survival based on Ki-67 (<55% or ≥55%) from date of diagnosis

RESULTS

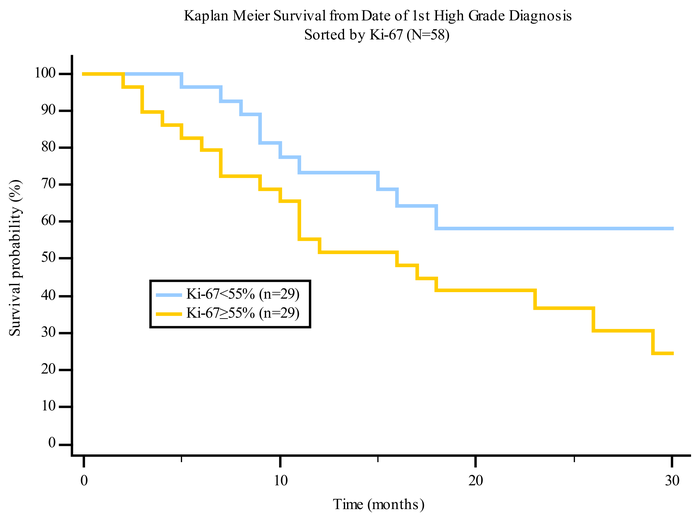
Descriptive Statistics, N=71	
Age at diagnosis	**n (years)**
• Median	57
• Range	34-85
Sex	**n (%)**
• Male	28 (48)
• Female	30 (52)
Primary Tumor Site	**n (%)**
• Pancreas	17 (29)
• Gastrointestinal	20 (34)
• Unknown	12 (21)
• Other	9 (16)
Site of Metastasis	**n (%)**
• Liver	48 (77)
• Lymph Node	22 (38)
• Bone	11 (20)

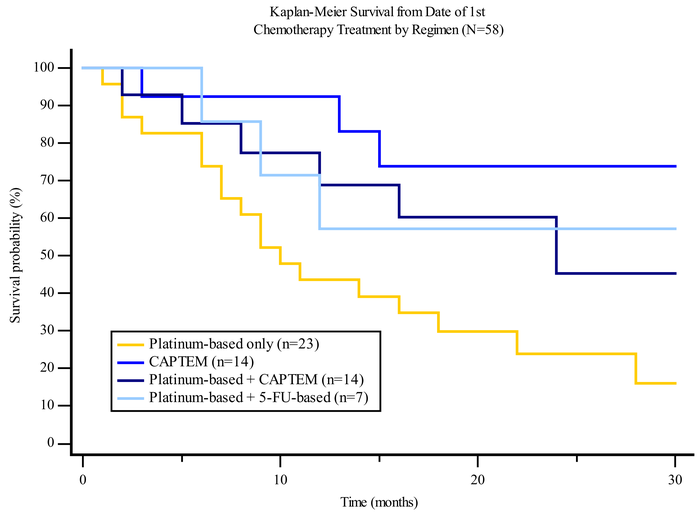
Kaplan-Meier Survival from Date of 1st Chemotherapy Treatment by Regimen

Treatment	n	Median	6-month	12-month	24-month
Platinum-based only	23	10	74%	44%	24%
CAPTEM only	14	52	92%	92%	74%
Platinum-based + CAPTEM	14	24	85%	69%	45%
Platinum-based + 5-FU-based	7	41	86%	57%	57%

Kaplan-Meier Survival from Date of High-Grade Diagnosis By Ki-67

Ki-67 Group	n	Median
Ki-67<55%	29	40
Ki-67≥55%	29	16





CONCLUSIONS

- Patients with Ki-67<55% lived significantly longer than those with Ki-67 ≥55%.These results are similar to the Nordic NEC trial, further supporting the use of Ki-67 cut off of ≥55%.
- Patients who received platinum sequenced with either 5-FU based regimens or CAPTEM had longer survival rates than platinum alone.

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