

ENDOCRINOPATHIES ASSOCIATED WITH IBRUTINIB – A RETROSPECTIVE ANALYSIS

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INTRODUCTION

- Tyrosine Kinase Inhibitors (TKI) are used to for the targeted treatment of hematologic malignancies
- FDA approved indications for ibrutinib have been steadily increasing since 2013
- Some TKIs have been shown to have endocrine side effects (S/E)- however there is a paucity of literature regarding ibrutinib specifically

METHODOLOGY

- Retrospective observational single center study of all adults who initiated ibrutinib from Nov 2013 to Jan 2020 for treatment of any malignancy or graft vs. host disease

OUTCOMES

- **Primary Outcome:** To determine the frequency of endocrine related S/E associated with ibrutinib
- **Secondary Outcomes:** To evaluate if clinical outcomes differ among patients with pre-existing endocrine comorbidities who received ibrutinib

Total patients	N = 105
Female	18%
Age	72 ± 11 years
Stage IV cancer	39%
Prior endocrinopathy	72%

RESULTS

- Three patients (2.8%) developed endocrine related S/E after ibrutinib initiation (**Table 1**)

Endocrine related side effect	Age	Time from last ibrutinib dose to onset of S/E	Concurrent anti-neoplastic agents
Hyperparathyroidism	71y	3 months	-
Hypothyroidism	83y	6 months	Bendamustine Rituximab
Gynaecomastia	79y	10 months	Chlorambucil

- Twenty-two patients (21%) in total developed S/E attributed to ibrutinib
 - ❖ Most common non endocrine S/E - Gastrointestinal (N/V/diarrhea)
- Time to discontinuation of ibrutinib - 10.9 months
- Most common indication for use - CLL (74%)
- No statistically significant difference in mortality between those with and without endocrine comorbidities on ibrutinib (p=0.81) (**Figure 1**)

LIMITATIONS

- Small sample size
- Association of endocrinopathies and ibrutinib did not necessarily indicate causation

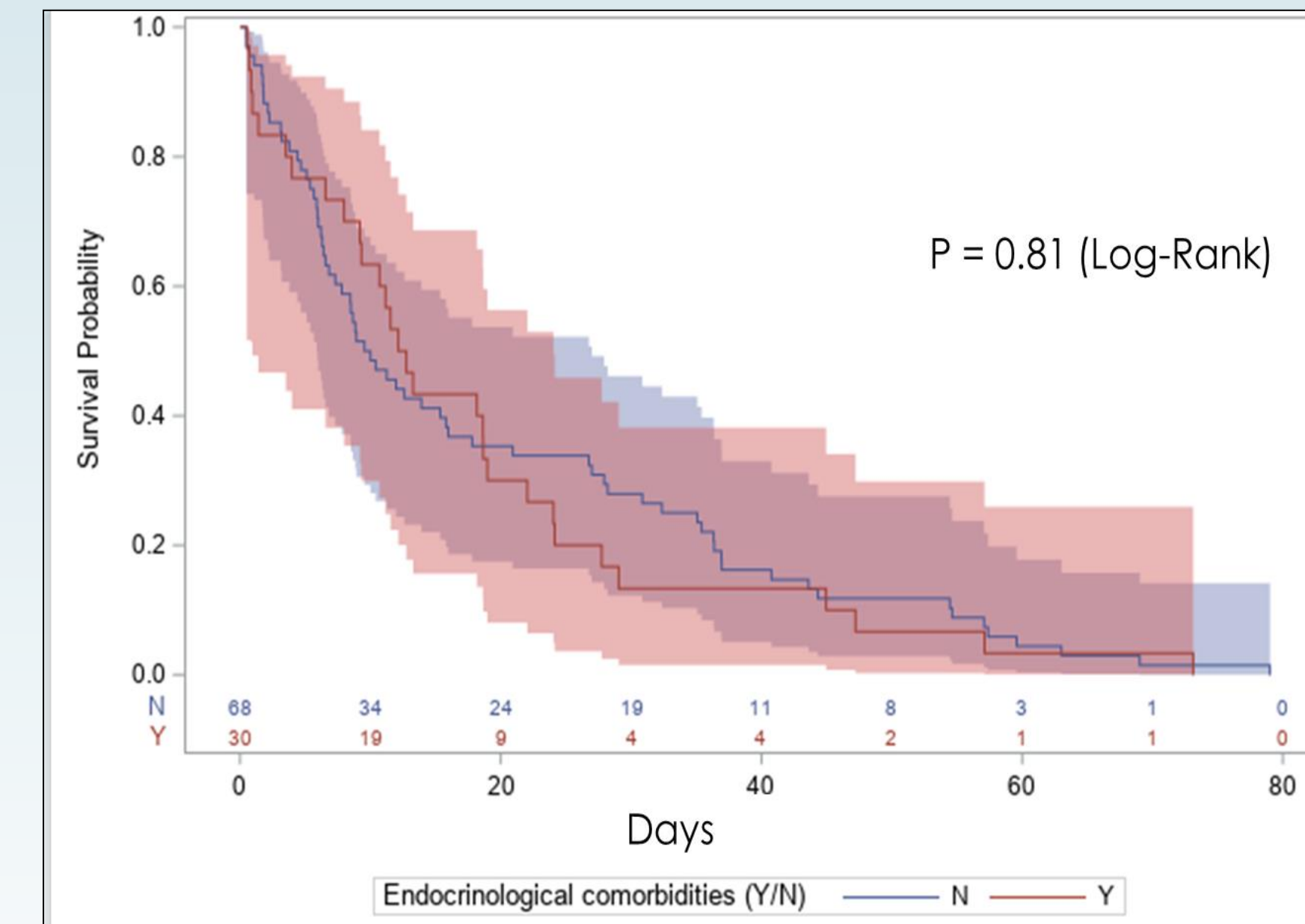


Figure 1: Kaplan-Meier survival curves comparing all-cause mortality of patients on ibrutinib with and without endocrine co-morbidities

CONCLUSIONS

- Although many TKIs have been associated with subsequent endocrinopathies, this is not a common association with ibrutinib
- Presence of pre – existing endocrine comorbidities had no effect on overall survival in patients on ibrutinib
- Although rare, early recognition of this S/E is important to facilitate prompt treatment

References

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