OUTCOMES OF PATIENTS WITH CHRONIC MYELOID LEUKEMIA RECEIVING SECOND-LINE THERAPY AFTER FAILURE OF FRONTLINE SECOND-GENERATION TYROSINE KINASE INHIBITOR

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Introduction

- Some patients with chronic myeloid leukemia (CML) eventually develop resistance or intolerance after first-line therapy (1L) with a second-generation tyrosine kinase inhibitor (2G-TKI).
- Second-line (2L) with a 2G-TKI is standard of care. However, outcomes with 2L after 1L 2G-TKI failure are not well described.

Aim

- To analyze the outcomes of CML patients after 2L.

Methods

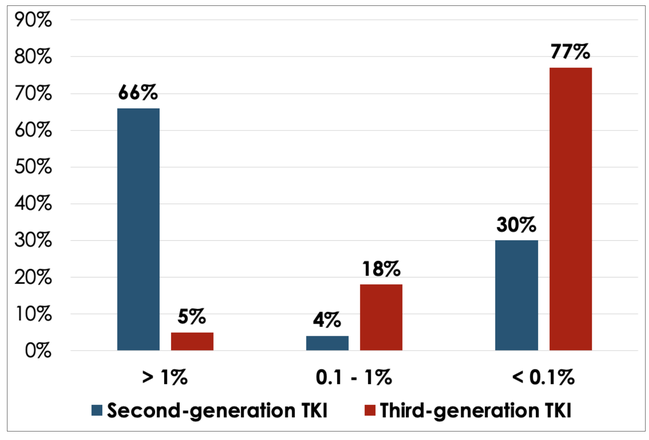
- Retrospective analysis of patients diagnosed with CML in chronic phase (CP) or accelerated phase (clonal evolution only).
- 1L with 2G-TKIs.
- Analysis of reasons for switching TKI and the associated responses and survival after 2L thearpy.

Results

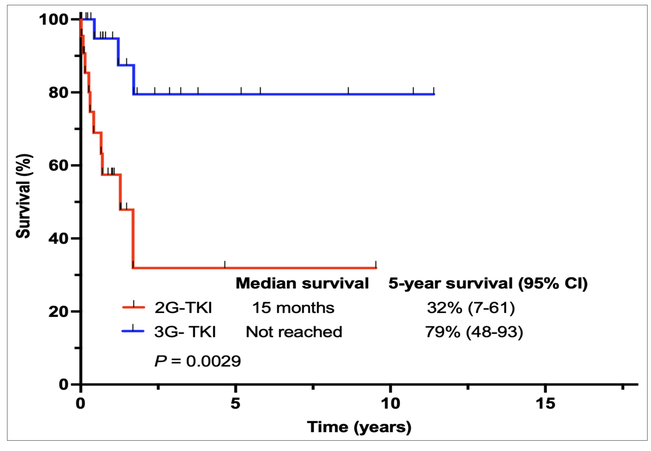
Characteristics	N (%) Median [range]
Age	14.8 [51.4-83.3]
Male sex	149 (54)
First-line TKI	
Dasatinib	181 (65.5)
Nilotinib	84 (30.4)
Bosutinib	11 (4)
Cause of switch to 2L	
Intolerance	133 (48.2)
Resistance	51 (18.5)
Both	65 (23.6)
Other	22 (7.9)
Second-line TKI	
Imatinib	74 (26.8)
Bosutinib	64 (23.2)
Nilotinib	57 (20.7)
Dasatinib	43 (15.6)
Ponatinib	31 (11.2)
Asciminib	6 (2.2)

Results

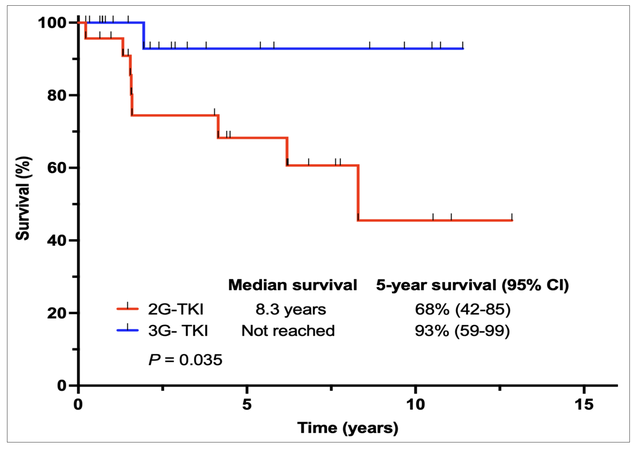
Responses by *BCR::ABL1* transcripts and TKIs among 45 patients with resistance to 1L



Event-Free Survival after 2L Therapy



Overall Survival after 2L Therapy



Discussion

- In the 2L setting after failing 1L second-generation TKIs, treatment with third-generation TKIs (ponatinib, asciminib) resulted in higher response rates and better survival.

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