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Poster # ALL-716

Treatment Patterns of Asciminib in Philadelphia Chromosome-Positive (Ph+) Acute Lymphoblastic Leukemia (ALL): A Retrospective Cohort Analysis

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KEY FINDINGS & CONCLUSIONS

- In this US real-world setting, asciminib has been used mainly as part of combination therapy in later lines among relapsed or refractory patients with Ph+ ALL
- Further studies are warranted to explore the unmet needs of patients with Ph+ ALL treated with TKIs and the clinical benefits of asciminib

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BACKGROUND

- The introduction of tyrosine kinase inhibitors (TKIs) targeting BCR::ABL1 has improved overall survival rates in patients with Philadelphia-positive (Ph+) acute lymphoblastic leukemia (ALL), which accounts for 20-30% of ALL cases and up to 50% of cases in older adults[1]
- Asciminib, a BCR::ABL1 inhibitor that specifically targets the ABL myristoyl pocket, was initially approved by the US Food and Drug Administration (FDA) in 2021 for patients with previously treated Ph+ chronic myeloid leukemia in chronic phase (CML-CP) who had received two or more prior TKIs or with the T315I mutation.[2,3] In 2024, the FDA approved asciminib for the treatment of newly diagnosed Ph+ CML-CP[4,5]
- Asciminib is currently under investigation in Ph+ ALL, with early-phase clinical trials (NCT06308588, NCT03595917) showing high rates of complete cytogenetic remission and measurable disease negativity (MRD) by 84 days[6]
- Asciminib-based therapy has recently been included as an NCCN® recommended treatment option for patients with relapsed or refractory Ph+ ALL (Version 1.2025)[7], based on the study by Luskin et al. 2025[6]

OBJECTIVES

- This study describes real-world treatment patterns of patients with Ph+ ALL treated with asciminib following initial US FDA approval for CML-CP

METHODS

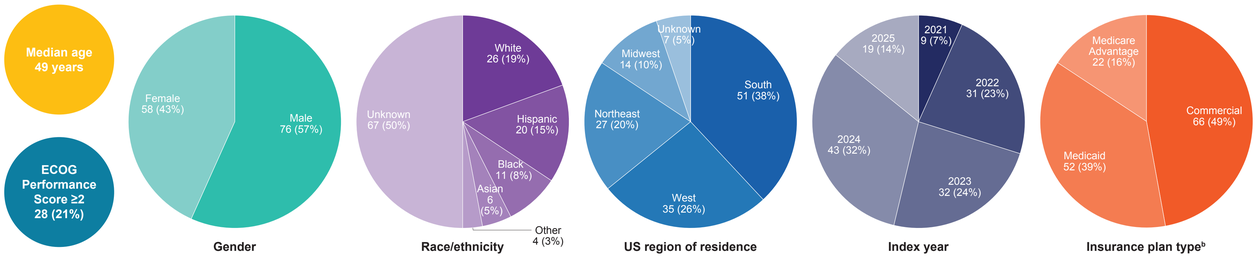
- This study was a retrospective longitudinal cohort study of adult patients with Ph+ ALL treated with a TKI
- Administrative data were obtained from HealthVerity, a large US nationwide health insurance claims database (coverage period: January 1, 2016 to March 31, 2025)
- Data were de-identified and Health Insurance Portability and Accountability Act (HIPAA) compliant
- Patients aged ≥18 years were included if they had ≥1 diagnosis code for ALL (ICD-10-CM diagnosis code: C91.0) in an inpatient setting or ≥2 diagnoses code on different days in other settings (e.g., outpatient, emergency room), and had ≥1 pharmacy claim for asciminib on or after October 29, 2021 (i.e., initial US FDA approval for asciminib)
- The index date was defined as the initiation of asciminib-based therapy (index period: October 29, 2021 to March 31, 2025)
- Patient demographic and clinical characteristics were descriptively reported on the index date, along with treatment patterns involving asciminib and treatment sequences from the first TKI observed in the pharmacy claims

RESULTS

Patient characteristics

- A total of 134 patients with Ph+ ALL received treatment with asciminib (**Figure 1**)
- The mean pre-index observation period was 62 months (median: 69 months) and the mean post-index follow-up period following asciminib initiation was 11 months (median: 7 months)

Figure 1. Baseline demographic characteristics[a] (n=134)

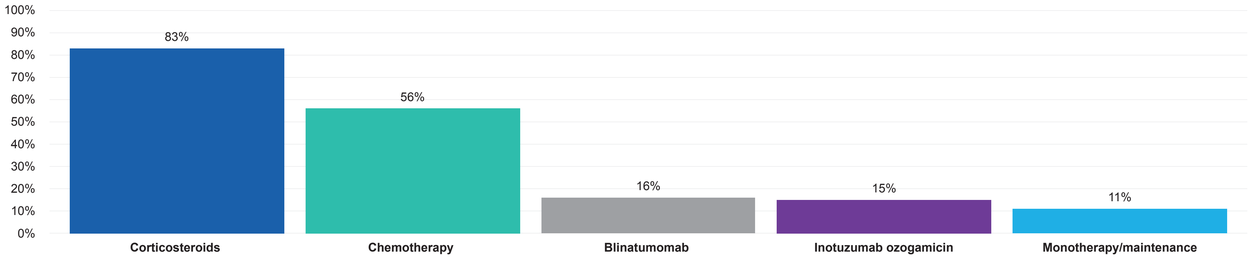


[a] Demographic characteristics were evaluated on the index date.
[b] The categories are not mutually exclusive. There were 2 patients with unknown insurance plan type.

Treatment patterns

- Most patients started asciminib with 80 mg total daily dose (72%), and approximately one-fifth started with 400 mg total daily dose (22%)
- The mean duration of asciminib use observed in the pharmacy claims was 8 months
- Most patients (89%) were treated with asciminib-based combination therapy, with the remaining patients treated in monotherapy/maintenance therapy (**Figure 2**)

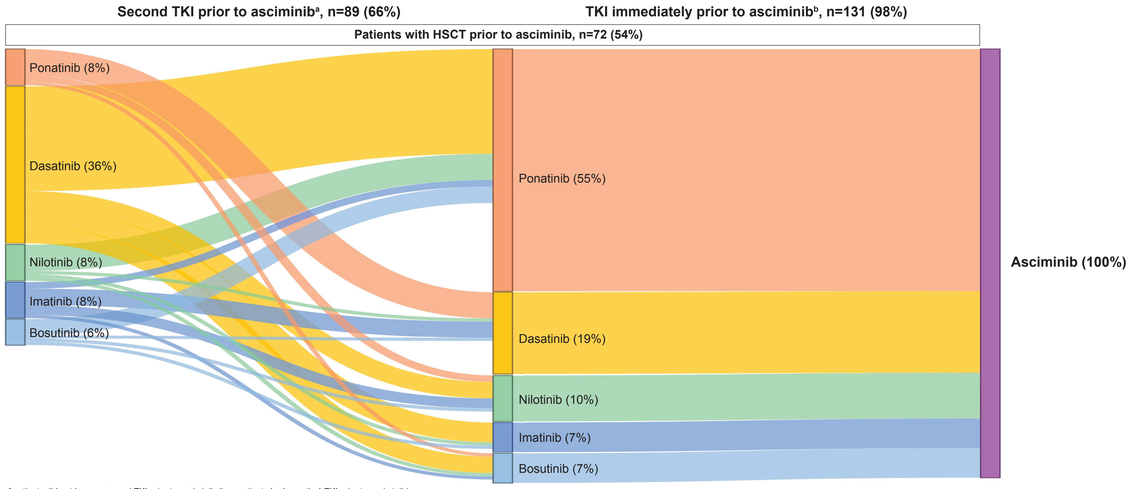
Figure 2. Combination therapy options used with asciminib[a] (n=134)



[a] Combination therapy options were not mutually exclusive.

- The majority of patients (98%) were treated with asciminib after ≥1 prior TKI, with 66% treated with asciminib after ≥2 prior TKIs (**Figure 3**)
- Among patients with prior TKI use (n=131), ponatinib (57%) and dasatinib (19%) were the most used TKIs immediately prior to asciminib
- Most patients (64%) had ≥1 hematopoietic stem-cell transplant (HSCT), with 54% of patients having ≥1 HSCT prior to asciminib and 27% of patients having ≥1 HSCT after starting asciminib (**Figure 3**)
- A diagnosis of ALL relapse was observed among 45% of patients before asciminib initiation

Figure 3. TKI sequencing prior to asciminib (n=134)



[a] 34% of patients did not have a second TKI prior to asciminib (i.e., patients had exactly 1 TKI prior to asciminib).
[b] 2% of patients did not have a TKI immediately prior to asciminib (i.e., patients with asciminib as their first observed TKI).

Limitations

- Claims databases only record diagnostic and procedure codes that are recorded for reimbursement purposes and may contain coding errors or data omissions
- Laboratory testing results are not available in claims databases, therefore Ph+ cannot be confirmed and molecular/cytogenetic response and MRD cannot be assessed

Acknowledgements

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