AML-177

Treatment Adherence and Persistence of FLT3 Inhibitors as Post-Allogenic Hematopoietic Cell Transplant Maintenance Therapy in Patients With Acute Myeloid Leukemia in the United States: A Cohort Study Using Administrative Claims Data

V. KENNEDY[1], M. TOUYA[2], J. SPALDING[2], C. YOUNG[2], L. CAO[2], D. NIMKE[2], A. BLOCK[2], and P. PEDNEKAR[2]

[1]Stanford University, Stanford, US; [2]Astellas Pharma US, Northbrook, IL, US

INTRODUCTION

- FMS-like tyrosine kinase 3 inhibitors (FLT3-TKIs) are recommended by the National Comprehensive Cancer Network guidelines for post-allogeneic hematopoietic cell transplant (alloHCT) maintenance in patients with acute myeloid leukemia (AML) in the United States (US),[1] but real-world data on patient adherence and persistence are limited
- The aim of this study was to evaluate adherence/persistence of FLT3-TKI as post-alloHCT maintenance in patients with AML with and without pre-alloHCT relapsed/refractory (R/R) disease

METHODS

- Observational study of US Inovalon Insights payer-sourced claims database
- Adult patients with AML were followed from FLT3-TKI initiation to earliest post-alloHCT relapse, end of enrollment or study (adherence/persistence), or treatment end (persistence), whichever occurred first

- Key patient inclusion criteria:
  - Aged ≥18 years at index date (date of first FLT3-TKI claim)
  - Received ≥1 alloHCT between 01/01/2016 and 06/30/2022
  - Initiated gilteritinib, midostaurin, or sorafenib as maintenance ≤100 days post-alloHCT
- Excluded patients with ≥1 inpatient or ≥2 non-diagnostic outpatient claims with a diagnosis of acute promyelocytic leukemia prior to index date

- Adherence (proportion of days covered [PDC] with FLT3-TKI in follow-up period ≥80%) and persistence (days of FLT3-TKI with <60 days treatment gap and without switching agents) were assessed
- Adjusted multivariable regression analyses were conducted using baseline demographics, clinical characteristics, baseline treatment, history of pre-alloHCT R/R disease, and comorbidities as covariates

CONCLUSIONS

- **Real-world adherence to FLT3-TKIs was modest, particularly among patients without pre-alloHCT R/R disease**
- **Risk of discontinuation was lowest for gilteritinib regardless of R/R status after considering various patient factors**
- **Additional studies exploring patient factors, such as tolerability and toxicity, as well as disease-specific factors, that are most predictive of adherence are warranted**

RESULTS

Patient baseline demographics and clinical characteristics

- In this study, 162 patients receiving post-alloHCT FLT3-TKI maintenance were included in the combined cohort, (median age 52.0 [interquartile range (IQR): 39.0–60.0] years; 54.9% [89/162] males)
  - This cohort comprised of two groups: 65.4% (106/162) patients with pre-alloHCT R/R disease and 34.6% (56/162) without pre-alloHCT R/R disease

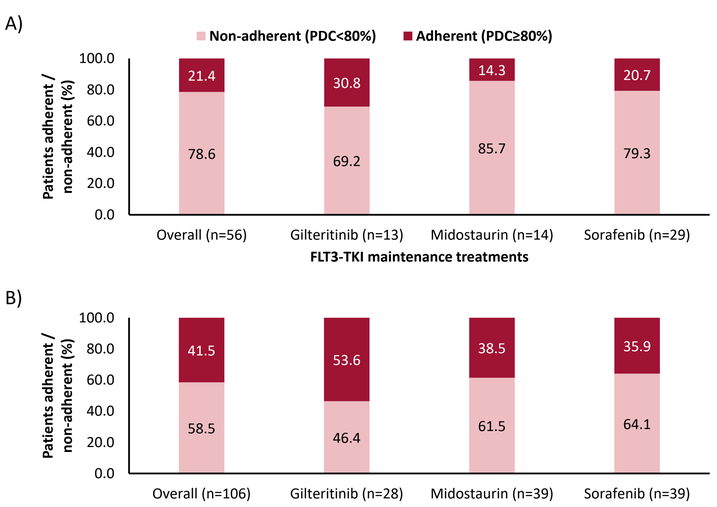
Adherence to FLT3-TKIs

- Median PDC for gilteritinib, midostaurin, and sorafenib was 61.6% (n=13), 28.9% (n=14) and 43.2% (n=29) in patients without and 80.5% (n=28), 51.8% (n=39) and 61.5% (n=39) in those with pre-alloHCT R/R disease, respectively
  - Adherence was achieved by 21.4% (12/56) of patients without and 41.5% (44/106) with pre-alloHCT R/R disease (**Figure 1**)
- Compared to patients without pre-alloHCT R/R disease, those with pre-alloHCT R/R disease were more likely to be adherent (p=0.009) in the combined cohort after adjusting for pre-defined covariates
  - Compared with gilteritinib, the risk of nonadherence was numerically greater for patients in the combined cohort receiving midostaurin (odds ratio [OR]: 2.1; 95% confidence interval [CI], 0.9–5.0; p=0.097) or sorafenib (OR: 2.0; 95% CI, 0.9-4.7; p=0.099)

Persistence to FLT3-TKIs

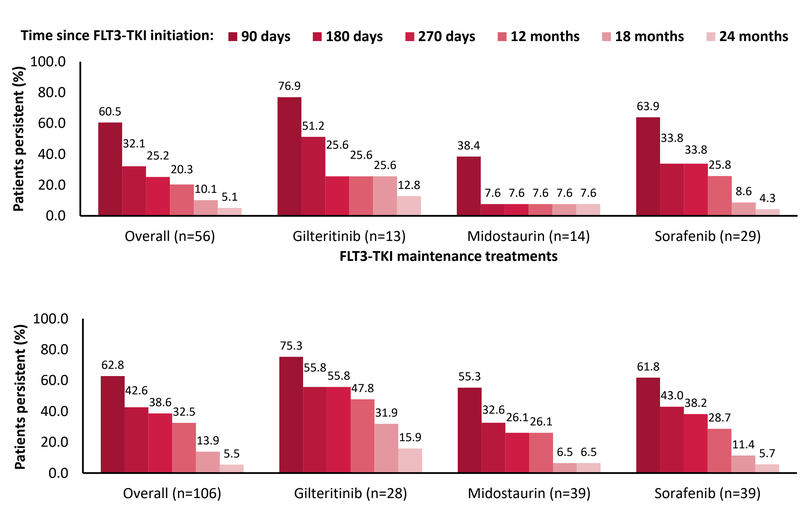
- Kaplan-Meier median (IQR) days of persistence was 188.0 (155.0–550.0) for gilteritinib, 51.0 (28.0–109.0) for midostaurin, and 113.0 (37.0–418.0) for sorafenib in patients without and 324.0 (129.0–596.0), 127.0 (51.0–415.0), and 155.0 (37.0–369.0) in patients with pre-alloHCT R/R disease, respectively
- At 180 days after FLT3-TKI initiation, 32.1% (gilteritinib: 51.2%; midostaurin: 7.6%; sorafenib: 33.8%) of patients without and 42.6% (gilteritinib: 55.8%; midostaurin: 32.6%; sorafenib: 43.0%) with pre-alloHCT R/R disease continued treatment (**Figure 2**)
- Adjusted risk of discontinuation was 2.93 times higher for midostaurin (p=0.0003) and 1.75 times higher for sorafenib (p=0.0418) than for gilteritinib in the combined cohort

Figure 1. Proportion of patients adherent/non-adherent to FLT3-TKI as post-alloHCT maintenance treatment among those A) without (n=56) or B) with (n=106) pre-alloHCT R/R disease



alloHCT, allogeneic hematopoietic cell transplant; FLT3, FMS-like tyrosine kinase 3; R/R, relapsed/refractory; TKI, tyrosine kinase inhibitor.

Figure 2. Proportion of patients persistent to FLT3-TKI as post-alloHCT maintenance treatment among those A) without (n=56) or B) with (n=106) pre-alloHCT R/R disease



A gap of greater than 60 days of FLT3-TKI maintenance treatment was considered discontinuation.
alloHCT, allogeneic hematopoietic cell transplant; FLT3, FMS-like tyrosine kinase 3; R/R, relapsed/refractory; TKI, tyrosine kinase inhibitor.

Reference: 1. National Comprehensive Cancer Network. Acute Myeloid Leukemia Version 3.2024. https://www.nccn.org/professionals/physician_gls/pdf/aml.pdf [Internet]. Accessed July 16, 2024. **Contact information:** Priti Pednekar, Lead HEOR, Oncology, Medical Affairs, US Astellas Pharma Global Development, Inc. Email: priti.pednekar@astellas.com. Phone number: +1 (510) 953-2267.
Author disclosures/funding: **JS**, **CY**, **LFC**, **DN**, **MT**, **AB** and **PP** are employees of Astellas. VEK has nothing to declare. This study was sponsored by Astellas Pharma Inc. Medical writing support was provided by Eden Godfrey-Shaw, BSc, of Lumanity, funded by Astellas Pharma Inc.