Real-world chronic lymphocytic leukemia/small lymphocytic lymphoma treatment patterns at Florida Cancer Specialists & Research Institute among patients receiving zanubrutinib immediately following prior BTKi therapy

Authors: Amanda Warner[1], Xiaoliang Wang[2], Ashley Hernandez[1], Christian Okitondo[1], Karen Carr[2], Gregory A. Maglinte[2], Judah Friedman[1]

Affiliations: [1]Florida Cancer Specialists & Research Institute, Tampa, FL, USA; [2]BeOne Medicines Ltd., San Carlos, CA, USA

ABSTRACT

Introduction

Zanubrutinib, a second-generation Bruton tyrosine kinase inhibitor (BTKi), is approved for the treatment of previously-treated chronic lymphocytic leukemia/small lymphocytic lymphoma (CLL/SLL) (NCT04116437). Real-world evidence, however, remains limited regarding the effectiveness of zanubrutinib in patients with CLL/SLL who switch from another BTK inhibitor. This retrospective, observational study examined the demographic and clinical characteristics, treatment patterns, reasons for treatment change, and treatment-limiting treatment-related adverse events (AEs) in patients with CLL/SLL who initiated zanubrutinib following an immediate switch from ibrutinib or acalabrutinib. The study utilized electronic medical record data from the Florida Cancer Specialists & Research Institute (FCS), one of the largest medical oncology/hematology practices in Florida with over 90 facilities across the state, serving nearly 100,000 new patients annually, with over 500 providers.

Method

Patients were identified in the FCS database using structured criteria, including ICD-10 codes of C91.1 or C83.0, treatment with zanubrutinib between November 1, 2019, through March 1, 2025, and treatment with acalabrutinib or ibrutinib immediately prior to zanubrutinib. A total of 145 patients were identified, but upon chart review 45 patients were excluded due to an incorrect diagnosis code, never starting zanubrutinib, no prior BTKi, or having another treatment between the previous BTKi and zanubrutinib. The index date was the date of zanubrutinib initiation, and patients had a minimum of 3 months follow-up. The end of the follow-up period was defined as the date of death, the last contact date, or the last day of the study observation period, June 30, 2025. Baseline demographic and clinical characteristics were assessed, and treatment patterns prior to zanubrutinib were summarized. Next, the occurrence of treatment-limiting treatment-related AEs during the previous BTKi treatment, and reason(s) for treatment discontinuation were summarized. Finally, treatment discontinuation and AEs associated with zanubrutinib were evaluated.

Results

Of the 100 patients included in the study, 57.0% were male and 43.0% were female. ECOG status at index date was 0-1 (72.0%), 2+ (6.0%), or unknown (22.0%). Most commonly, patients received zanubrutinib as a second line of treatment (LOT) (78.0%), followed by third LOT (12.0%), and 4+ (10.0%). Immediately prior to zanubrutinib, patients received ibrutinib (54.0%) or acalabrutinib (46.0%), which included ibrutinib monotherapy (61.0%), acalabrutinib monotherapy (41.0%), or either BTKi in combination with another agent (16.0%).

For patients who received ibrutinib immediately prior to zanubrutinib, the leading reason for ibrutinib discontinuation was AEs (68.5%), followed by physician decision (16.7%), disease progression (7.4%), and other factors (7.5%). Patients who switched from acalabrutinib most commonly discontinued due to AEs (60.9%), followed by disease progression (17.4%), physician decision (10.9%), and other reasons (10.9%). The most common AEs attributed to ibrutinib were atrial fibrillation (40.5%), fatigue (10.8%), and rash (10.8%). The most common AEs attributed to acalabrutinib were rash (21.4%), myalgias (17.9%), and fatigue (17.9%). Recurrence of AEs after switching to zanubrutinib was not common, occurring at an overall rate of less than 5%.

Following the switch to zanubrutinib, most (60.0%) remained on treatment to the end of the study period. The rate of discontinuation did not differ by prior BTKi; 61.1% of patients who switched from ibrutinib and 58.7% who switched from acalabrutinib, remained on treatment. Of the 40.0% of patients who discontinued zanubrutinib therapy, reasons for discontinuation included AEs (40.0%), disease progression (22.5%), patient choice (10.0%), or another reason (27.5%). The most common treatment-related AE was rash (18.8%; n=3).

Conclusion

This real-world study examined initiation of zanubrutinib following an immediate switch from a previous BTKi among patients with CLL/SLL. The primary reason patients switched from their previous BTKi was AEs, including atrial fibrillation, fatigue, and rash. Following the switch to zanubrutinib, recurrence of AEs was uncommon, and most patients stayed on treatment. These results support previously reported findings that zanubrutinib for CLL/SLL is well-tolerated despite prior BTKi therapy.