Abstract Title

Changes in real-world treatment patterns over time by patient characteristics and time burden of treatment in CLL/SLL

Authors

Mengyang Di,[1] Xiaoliang Wang,[2] Qianhong Fu,[2] Dong Yuan,[2] Gregory A. Maglinte,[2] Erlene K. Seymour,[2] Joanna M. Rhodes[3]

Affiliations

1. Fred Hutch Cancer Center, Seattle, WA, USA
2. BeOne Medicines Ltd, San Carlos, CA, USA
3. Rutgers Cancer Institute, New Brunswick, NJ, USA

Background

The chronic lymphocytic leukemia/small lymphocytic lymphoma (CLL/SLL) treatment (tx) landscape has changed recently. The choice of treatment a CLL patient receives is often based on patient (pt) characteristics and prognostic factors. Additionally, time toxicity, or a pt's time burden required for tx (days with clinical visit for appointments, labs, infusions), may differ by tx. This study aimed to describe first-line (1L) CLL tx patterns over time by key pt characteristics and to understand the pt time burdens for tx during the first 3 years of tx and management.

Methods

This was a retrospective, observational study utilizing the US Flatiron Health electronic health record-derived de-identified database, using structured and unstructured data. Adult pts with CLL/SLL who started 1L tx 01/01/2020-12/31/2024 were eligible. Key subgroups included age at 1L (<65, ≥65 years), ECOG PS (0, 1, 2-4, unknown), del17p or *TP53*m status (positive, negative, not tested), IGHV status (unmutated, mutated, not tested), and baseline comorbidities (0, 1, ≥2). Descriptive statistics were used to summarize baseline characteristics and chi-square tests were performed between tx groups. Common tx regimens were summarized by year of 1L tx start and pt characteristics. Time burden was defined as average number of days of clinical visits per person-year (pyr) in Years 1-3 during 1L tx and follow-up (initiation of next tx, death, or end of Year 3, whichever occurred first). Wilcoxon rank sum test was performed for time burden across tx groups.

Results

A total of 4929 pts were assessed. Most pts were ≥65 years at 1L (74.6%; median 72 years), male (62.3%), White (72.8%), had ECOG PS of 0 (41.6%) or 1 (28.3%), and were treated at a community practice (80.8%). A total of 11% of pts had del17p/*TP53*m, and 29.9% had unmutated IGHV.

Most pts (3171; 64.3%) received covalent Bruton tyrosine kinase inhibitor (BTKi) monotherapy (mono; 405 zanubrutinib [zanu], 1475 acalabrutinib [acala], 1291 ibrutinib [ibr]) at 1L; 17.3% received B-cell lymphoma 2 (BCL2)-based therapy (855) and 5.8% received

chemoimmunotherapy (CIT; 287). Pts with BCL2-based tx tended to be younger than pts who received BTKi (median age: 69 years vs 74 zanu, 73 acala, and 71 ibr; *P*<.0001), were more likely to have ECOG PS 0 (50.3% vs 43.5% zanu, 37.4% acala, 41.1% ibr; *P*<.0001) or 1 (30.9% vs 25.4% zanu, 27.1% acala, 26.6% ibr; *P*=.0140), and less likely to have del17p/*TP53*m (9.4% vs 14.6% zanu, 13.2% acala, 11.2% ibr; *P*=.0140).

Tx patterns changed dramatically in the past 5 years: in 2020, ibr mono was the most common 1L tx (42.3%) followed by acala mono (12.7%) and venetoclax+obinutuzumab (VO; 11.0%). However, use of ibr dropped over time and by 2024, next-generation BTKi mono was the most common 1L tx (zanu: 23.9%; acala 20.5%), followed by VO (24.9%). Zanu mono was the most common 1L tx in 2024 among pts ≥65 years (25.0%), with del17p/*TP53*m (26.4%), or with ≥2 comorbidities (28.6%). In contrast, VO was more common in 2024 than BTKi mono in pts <65 years (32.7%), ECOG PS 0 (30.7%) or 1 (26.1%), no del17p/*TP53*m (26.3%), or 0 or 1 comorbidities (24.8%; 26.5%, respectively). In 2024, VO and zanu mono were the most common for both mutated and unmutated IGHV and acala mono was the most common in pts untested for del17p/*TP53* or IGHV.

Infusion-containing regimens had higher time burden for pts, especially in the first year. Pts that received CIT or VO/venetoclax+rituximab (VR) had the highest average number of clinical visit days per pyr in the first year (34.2 and 31.3 days, respectively), followed by BTKi+anti-CD20 (27.7 days), nearly double the clinic time with BTKi mono (17.9 days; overall *P*<.0001). By the second year, the number of clinical visit days per pyr was similar between tx groups (VO/VR 12.9 vs BTKi mono 12.8 days; *P*=.7287), and VO/VR had slightly fewer days per pyr in the third year (VO/VR 9.2 vs BTKi mono 11.6 days; *P*=.0002) during follow-up.

Conclusion

Zanubrutinib and acalabrutinib monotherapy were the most commonly prescribed frontline CLL therapies and use of time limited BCL2-based therapies increased over time among younger, fitter pts. Total time burden was higher for patients treated with infusion-containing regimens in the first year but become similar in following years between treatment despite discontinuation of fixed-duration therapies.