

Evaluating uptake of targeted agents by race/ethnicity in patients receiving first-line treatment for chronic lymphocytic leukemia

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ABSTRACT

Objectives: The NCCN guidelines for first-line (1L) regimens in chronic lymphocytic leukemia (CLL) have evolved over the past decade, shifting from ibrutinib (ibr) and chemoimmunotherapy (CIT) to second-generation Bruton tyrosine kinase inhibitor and venetoclax combinations. We evaluated real-world use of preferred 1L treatment (tx) since 2016 in CLL patients (pts) in routine care to identify differences in prescribing based on race/ethnicity and practice type.

Methods: This retrospective observational study utilized the US nationwide Flatiron Health electronic health record-derived de-identified database. Eligible pts had confirmed CLL and initiated 1L tx between 01/01/16–07/31/24. Primary outcome was receipt of preferred 1L tx, defined as the initiation of 1L treatment based on the contemporaneous NCCN guidelines across four time periods, by race/ethnicity (Hispanic, White, Black, Asian/Other). Odds ratios (ORs) were estimated using logistic regression, additionally adjusting for age, sex, ECOG performance status, immunoglobulin heavy chain variable region (IGHV), del17p/TP53 mutation status, time period, and practice type.

Results: A total of 7528 pts were included. Compared with White pts (n=5472), Black pts (n=640) were younger (median age in years at 1L: 68 vs 71). More Black and Hispanic (n=290) pts were treated at community practices compared with academic centers (86% vs 80% White). Of those pts tested, more Black pts had unmutated IGHV than White (77% vs 56%). Presence of del17p/TP53 mutation was similar across races/ethnicities (11% overall). Only 19% of pts were young and fit (age ≤65 years, ECOG 0-2) and without del17p/TP53 mutation. Pts with venetoclax and obinutuzumab (VO) combination were more likely to be younger (median age in years at 1L: 68.5 vs 71 overall) and fitter (ECOG 0-1: 84% vs 68% overall) than the overall population and without del17p/TP53 mutation (86%). The proportion of pts receiving preferred 1L tx based on the NCCN guidelines significantly differed by race/ethnicity ($P=0.0021$). Hispanic pts had the lowest proportion receiving preferred 1L tx across the four time periods, and the gap widened in more recent 6-month periods (Figure). The proportion of Hispanic pts treated with preferred 1L tx was significantly lower than White pts (OR, 0.61; 95% CI: 0.47, 0.79), and there was no difference in proportions between Black and White pts (OR, 1.07; 95% CI: 0.89, 1.30). From 2016 to 2018, 44% of community practices and 55% of academic centers adopted targeted therapies (TTs); in 2019, ibr use increased in both practices (77% vs 68%, respectively). Adherence to preferred tx, defined by NCCN guidelines, improved across practices in 2020 but decreased with the prioritization of second-generation therapies. After the approval of zanu, use of TTs was 71% in community practices and 74% in academic centers. Updates to NCCN guidelines were significantly associated with pts receiving preferred 1L tx by practice type ($P=0.0005$).

Conclusions: Inequities in pts with CLL receiving preferred 1L tx suggests disproportionate use of CIT and ibr by race/ethnicity. Use of preferred TTs also differed by practice type and time period, with increased adoption after pivotal trials.

