Recent patterns of care with BTK inhibitors and distribution of social determinants of health among patients with CLL/SLL in the US community setting

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ABSTRACT

Objective: Few real-world studies have examined Bruton tyrosine kinase (BTK) inhibitor sequencing patterns for chronic lymphocytic leukemia/small lymphocytic lymphoma (CLL/SLL). This study examined characteristics, treatment patterns, and social determinants of health (SDOH) of BTK inhibitor-treated patients with CLL/SLL in a community practice network.

Methods: This was a retrospective study in adults with CLL/SLL who were prescribed a BTK inhibitor between 1/1/2020–4/30/2023 in The US Oncology Network. Structured study data from the iKnowMed electronic health record system were analyzed. Area Deprivation Index (ADI) scores for socioeconomic status (SES) levels were determined using community-specific income, education, employment, and housing data; low SES was defined as the top 20% of state- and national-level ADI scores. Rural/urban status was classified using US Department of Agriculture Rural-Urban Community Area codes. Insurance coverage was reported "as is"; Medicaid was considered a low SES indicator. Results were assessed by treatment sequences and the data were evaluated for treatment subgroups with at least 30 eligible patients. SDOH results were reported as counts or frequencies. Chi-square *P*-values were reported for selected SDOH measures.

Results: Patients with CLL/SLL were included (N=2082; median age, 73 years; 61.9% male; median follow-up, 14.1 months). Most patients received acalabrutinib (n=1159) or ibrutinib (n=628) only; subsequent BTK inhibitors were reported for 8.7% (n=182). Patient characteristics across treatment sequences were similar. Among 597 BTK inhibitor-treated patients in 2020, 62.3% (n=372) received ibrutinib; 1 received zanubrutinib. Among 206 BTK inhibitor–treated patients in 2023, 6.8% (n=14) and 28.6% (n=59) received ibrutinib and zanubrutinib, respectively. Low SES per state and national indicators was observed for 361 (17.3%) and 125 patients (6.0%), respectively, and was similar across subgroups. Most had Medicare (n=877 [42.1%]), followed by managed Medicare (n=508 [24.4%]). A statistical difference between treatments was seen for rural/urban status (*P*<.01) but not for state ADI (*P*=.52), national ADI (*P*=.36), or Medicaid vs other insurance (*P*=.18).

Conclusions: Between 1/1/2020–4/30/2023, ibrutinib use decreased while acalabrutinib and zanubrutinib use increased. SDOH were similar across BTK inhibitor sequence subgroups, although rural/urban status, and not SES or Medicaid, was associated with differences in prescribing patterns. Further real-world research and longitudinal follow-up are needed to examine the impact of SDOH on BTK inhibitor choice, switching, reasons for switching, and outcomes.
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