A. Al-Huraiji1, R. M. Soliman2, M. A. Samra2, S. M. Alamoudi3, A. Abdi2, H. M. Alshehri4, B. P. Bagal5, Y. Buyukasik6, P. Kantharaju7, F. J. Gonzalez8, A. Ishikawa9, A. Y. Alhejazi10

1Kuwait Cancer Control Center (KCCC), Kuwait, Shuwaikh, Kuwait, 2National Cancer Institute, Giza, Egypt, 3King Khalid National Guard Hospital, Jeddah, Saudi Arabia, 4King Fahad Medical City, Riyadh, Saudi Arabia, 5Tata Memorial Centre, Mumbai, India, 6Hacettepe University, Ankara, Turkey, 7AstraZeneca, Bengaluru, India, 8Astrazeneca PLC, Baar, Switzerland, 9AstraZeneca Periferico Sur, Mexico, 10King Abdulaziz Medical City, Riyadh, Saudi Arabia

Introduction: The rapidly expanding treatment landscape for Chronic Lymphocytic Leukemia (CLL) calls for appropriate patient and treatment selection and sequencing with existing agents. Data describing CLL management are fragmented across different regions, with marked cross-country differences in treatment practices and patient outcomes. Therefore, we have established the observational study CREEK. CLL retrospective real-world evidence key data from the Middle East and North Africa, Asia, and Latin America. This interim analysis aimed to describe the patient and disease characteristics of CLL-treated (CLL-Tx) patients in international countries and CLL treatment-naïve (CLL-N) patients in the Gulf Cooperation Council (GCC) states.

Methods: Data from 976 patients were collected, including 845 CLL-Tx patients who started treatment between 01 June 2016 and 12 months before data collection and a pilot cohort of 131 CLL-N patients. Patients’ demographics, disease characteristics, laboratory assessments, and comorbidities were recorded.

Results: The average age for CLL-Tx and CLL-N was 63.5 and 63.4 years, respectively. Most patients were males, 66.7% in CLL-Tx and 71.0% in CLL-N. Around 11% of patients in CLL-Tx and 12% in CLL-N were current smokers. Most CLL-Tx (62%) had an Eastern Cooperative Oncology Group (ECOG) score of 0 or 1, and the same was for CLL-N (56.4%). As per the Cumulative Illness Rating Scale (CIRS), moderate to severe musculoskeletal (p < 0.0025), and endocrine-metabolic (p < 0.0001) comorbidities were more frequent in CLL-Tx. All laboratory parameters, except neutrophils and eGFR categories, showed a significant difference (p < 0.05) between CLL-Tx and CLL-N. The average days from diagnosis to enrollment were 475 and 59 days in CLL-Tx and CLL-N (p < 0.0001), respectively. Patients with CLL-Tx had a worse prognosis compared to CLL-N based on Rai and Binet Staging Scores (p < 0.0001). The testing rate for IGHV mutation status was low, with 23.5% in CLL-Tx and 38.9% in CLL-N, and the percentage of mutated IGHV was significantly lower (p = 0.0006) in CLL-Tx (9.8%) compared to CLL-N (26.7%). Whereas cytogenetic abnormalities (del "17p"—del "11q"—Complex karyotype), TP53 Aberrations, and cytogenetic abnormalities and TP53 aberrations (del "17p" and TP53 aberrations—TP53 aberrations without del "17p") didn’t show a significant difference (p > 0.05) between CLL-Tx and CLL-N. The testing rate for IGHV mutation status was low, with 23.5% in CLL-Tx and 38.9% in CLL-N, and the percentage of mutated IGHV was significantly lower (p = 0.0006) in CLL-Tx (9.8%) compared to CLL-N (26.7%). Whereas cytogenetic abnormalities (del "17p"—del "11q"—Complex karyotype), TP53 Aberrations, and cytogenetic abnormalities and TP53 aberrations (del "17p" and TP53 aberrations—TP53 aberrations without del "17p") didn’t show a significant difference (p > 0.05) between CLL-Tx and CLL-N.

Conclusions: This interim analysis demonstrated a preliminary understanding of the patients and disease characteristics of CLL-Tx and CLL-N patients. The study showed that patients with CLL-Tx and CLL-N had comparable demographic characteristics; however, patients with CLL-Tx had a higher prevalence of moderate to severe comorbidities, worse ECOG scores, worse prognosis based on Rai and Binet staging scores, and a lower prevalence of mutated IGHV.

Keywords: chronic lymphocytic leukemia (CLL), CLL treatment naïve, cytogenetic abnormalities

The research was funded by AstraZeneca UK Limited

Conflict of interest

P. Kantharaju
Employment or leadership position: Pushpalata Kantharaju is an employee for AstraZeneca

F. J Gonzalez
Employment or leadership position: Francisco Gonzalez is an employee for AstraZeneca

A. Ishikawa
Employment or leadership position: Akemi Ishikawa is an employee for AstraZeneca