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905.OUTCOMES RESEARCH-LYMPHOID MALIGNANCIES

A Real-World Evidence Study of the Temporal Evolution in Treatment Patterns and Outcomes for Chronic Lymphocytic Leukemia

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INTRODUCTION Chronic lymphocytic leukemia (CLL) is the most common lymphoproliferative disorder in North America. Treatment of CLL is currently indicated only for patients with disease-related symptoms or organ compromise, such as cytopenias, with no evidence of survival benefit for the treatment of asymptomatic patients. Patients with CLL are not cured with conventional therapy and typically require repeated treatments over their lifetime. Median overall survival (OS) is difficult to estimate given recent advances in therapy options but is dependent upon disease features, patient characteristics, and treatment choice. Since the recent introduction of targeted therapy for CLL, there has been limited Canadian data on the evolution of management approaches in a real-world setting. Data are needed to improve the current understanding of the treatment landscape of CLL.

METHODS This retrospective observational cohort study used real-world, population-level data to describe the baseline characteristics, treatment patterns, clinical outcomes, and healthcare resource use of individuals diagnosed with CLL in Alberta, Canada. The study cohort included all individuals in Alberta over 18 diagnosed with CLL between 2010-2020 and who subsequently initiated systemic therapy. Data were collected through electronic health records and administrative databases. OS was defined as the date of diagnosis to death from any cause or last known contact with the health care system.

RESULTS A total of 890 individuals diagnosed with CLL between 2010-2020 who initiated first-line (1L) systemic therapy were included in the analyses. The mean age at initiation of 1L therapy was 69 years, and 68% were male. Among individuals who initiated 1L therapy in 2020+, the primary form of 1L systemic therapy was ibrutinib monotherapy (IBR) (29%), followed by bendamustine plus rituximab (BR) (21%). A considerable number of individuals did not initiate subsequent lines of therapy, with a drop of approximately 40-45% between each successive line. The treatment landscape changed over time, particularly with respect to decreased use of 1L fludarabine, cyclophosphamide, and rituximab (FCR; 40% in 2010-2013 vs. 9% in 2020+) and increased use of 1L IBR (6% in 2014-2017 vs. 29% in 2020+). Individuals treated at an academic centre were more likely to receive 1L IBR than those treated at a community centre. The median duration of 1L therapy was considerably longer for patients treated with targeted therapy (IBR: 9.8 months) compared to chemoimmunotherapy (BR: 5.6 months, FCR: 5.6 months). The majority of individuals did not initiate therapy immediately after diagnosis, with a median time from diagnosis to initiation of 1L therapy of 24 months (recognizing that the population described includes only those who initiated 1L therapy such that time to first therapy would be much longer for the entire CLL population). The time to next line of therapy (from the start of each line to the start of the subsequent line) was 17 months from 1L to second-line (2L), 14 months from 2L to third-line (3L), and 12 months from 3L to fourth-line. Median OS from initiation of 1L was 104 months, 2L was 70 months, and 3L was 64 months. On average, individuals had 39 healthcare encounters within the first year of initiating 1L systemic therapy, with an average of one hospitalization, six ambulatory care encounters, 25 non-cancer practitioner encounters, and seven cancer physician visits. The mean number of healthcare encounters within the first year of front-line therapy tended to decrease over time, which may be attributable to the changing treatment landscape.

CONCLUSIONS These findings highlight the rapid changes in CLL therapy that have occurred over the last decade. Our results demonstrate the significantly smaller cohorts of real-world patients receiving 2L or later therapies compared to 1L and highlight declining survival with subsequent lines of therapy, and a decreasing trend of healthcare resource use over time.

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