

Population-Wide Patterns of Care in Chronic Lymphocytic Leukemia in Australia: An Analysis of the Pharmaceutical Benefits Scheme Dataset

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Background. The treatment landscape in patients with chronic lymphocytic leukemia (CLL) is changing with the approvals of Bruton's tyrosine kinase inhibitors (BTKis) in Australia. We sought to understand the practice impact of the introduction of publicly funded novel agents for the treatment of CLL. The objective of this study was to describe the evolving treatment patterns of Australian patients with CLL over the last 10 years using population-wide prescription records.

Methods. Patients who initiated a treatment for CLL between 01/01/2011 and 07/31/2021 were extracted from the Services Australia 10% Pharmaceuticals Benefits Scheme (PBS) dataset. This dataset includes the dispensing records for 10% of the Australian population and captures all publicly funded treatments in Australia. The index date was defined as the commencement of any drug for the treatment of CLL. First-line (1L) therapy was defined as the first treatments prescribed for CLL. A patient was defined as relapsed/refractory (R/R) if they had commenced a drug which was in a different therapeutic category, or if they re-started the same regimen after a gap of more than 180 days. Descriptive analyses were conducted to examine the use of treatment regimens for the overall 10-year population by line of therapy. Analyses by calendar year were also performed to assess changes in treatment patterns.

Results. Overall, 803 patients with CLL were identified. The majority of patients were male (65%) and age > 60 years (77%), with most being aged 70-79 years (33% of total). Many patients were receiving comedications at baseline, including antihypertensives (47%), antipsychotics or antidepressants (17%), and/or anticoagulants (13%). In the overall population (2011-2021), the majority of patients had received 1L treatment with fludarabine-cyclophosphamide-rituximab (FCR, 49%), chlorambucil ± CD20 (27%), or CD20 monotherapy (17%). The most commonly used regimens in R/R patients at any subsequent episode of treatment included CD20 monotherapy (56%), BTKi (41%) or FCR (33%). A trend in adoption of novel agents was observed throughout the years following their PBS listing. Analysis by calendar year showed that from 2011 to 2020 use of FCR in 1L decreased from 78% to 10%; and use of BTKis in R/R increased from 0% to 62%.

Conclusions. CLL treatment patterns have significantly changed in Australia since the introduction of the BTKis (e.g., ibrutinib, acalabrutinib). The use of FCR in 1L CLL has decreased and use of BTKis in R/R patients has increased.