

CASE STUDY: Treatment patterns in chronic lymphocytic leukaemia

Geography:	Sub-National	National	Regional	Global		
Market focus:	Market/ Patient Analytics	Launch & Portfolio Strategy	Forecast & Modelling Inputs	Tactical Deployment	Performance Tracking	Evidence Generation
Therapeutic Area:	ONCOLOGY: CHRONIC LYMPHOCYTIC LEUKAEMIA					

INTRODUCTION

Chronic lymphocytic leukaemia (CLL) is a slow-growing (indolent), and usually incurable, blood cancer that causes certain cells in your body, B-cell lymphocytes or B-cells, to become cancerous.¹ Although CLL is the second most common indolent blood cancer in people over 70 years of age, there is limited real-world data on patient characteristics, outcomes and treatment strategies used to manage the condition in Australia.

OUR CLIENT'S CHALLENGE

In this case study, our client wanted to know if and how treatment patterns for CLL had changed over the past ten years, since the introduction of newer novel agents. The analysis focused specifically on current treatment patterns, time to next treatment (TTNT), duration of treatment, overall survival (OS) and outcomes of patients with CLL. This information would help our client understand the Australian treatment landscape and guide their medical engagement and access communications for the Australian market.

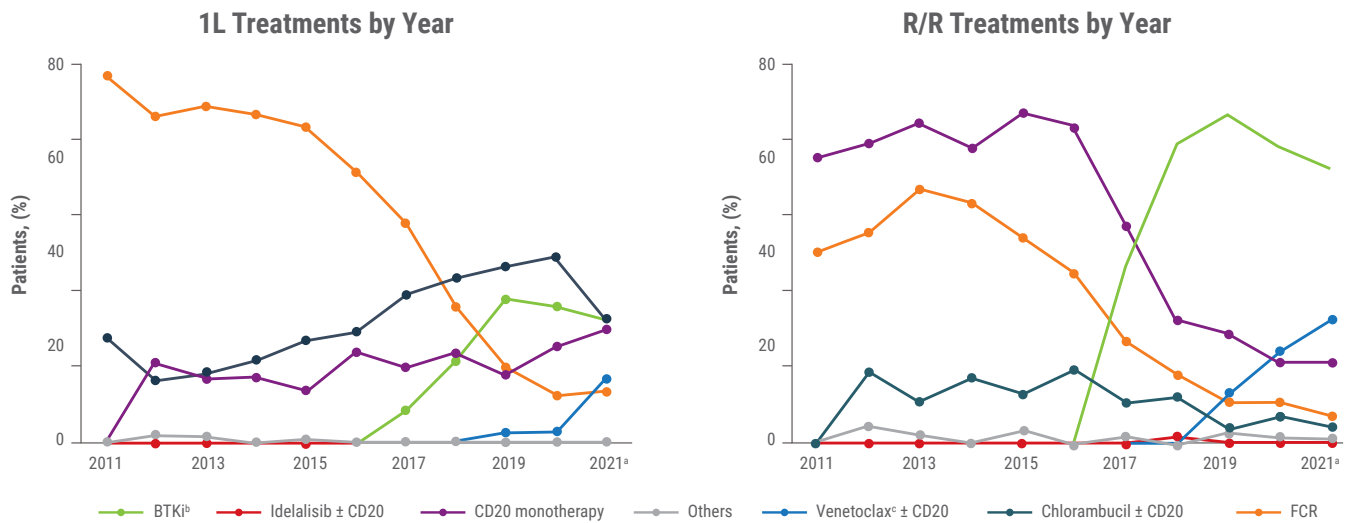
Prospection's depth of experience accessing and analysing oncology data in a real-world setting was leveraged to evaluate and identify patient treatment profiles using Australian Pharmaceutical Benefits Scheme (PBS) data.

OUR TARGETED SOLUTION

Prospection extracted and examined the 10% PBS dataset, including dispensing records for publicly funded medication for patients initiated on CLL treatment (n=803) in Australia between 2011 and 2021. Descriptive analyses provided insight into patient characteristics and treatment patterns. The Kaplan-Meier (KM) method was employed to analyse duration of therapy, TTNT and OS; whereas sub-group sensitivity and Cox proportional hazards regression analyses were used to explore the effects of baseline patient characteristics and co-medications.

Our analysis confirmed a shift in treatment to the newer novel agents in both frontline (1L) and relapsed/refractory (R/R) settings. In the 1L setting, usage of the combination fludarabine, cyclophosphamide, and rituximab (FCR) decreased while the use of newer treatments including, Bruton tyrosine kinase inhibitor (BTKi), CD20 monotherapy, venetoclax ± CD20, and chlorambucil ± CD20, increased. In the R/R setting, use of FCR decreased and use of novel agents, including BTKi and chlorambucil ± CD20, increased (Figure 1).

CLL Treatment Patterns in the PBS 10% Data Set²



^aData for 2021 ended in July; ^bbrutinib was listed on the PBS in December 2017; ^cVenetoclax was listed on the PBS in March 2019.

January 2011-July 2021. A patient could be double counted in each year if they had different treatments over the years. A patient could be double counted in 1L and R/R if they had those treatments in the same year.

1L, frontline; BTKi, Bruton tyrosine kinase inhibitor; CLL, chronic lymphocytic leukemia; FCR, fludarabine, cyclophosphamide, and rituximab; PBS, Pharmaceutical Benefits Scheme; R/R, relapsed/refractory.

OUR KEY INSIGHTS

From our analysis showing how CLL treatment patterns have significantly changed since the introduction of novel therapies, we were able to provide insights to support our client’s launch planning, submission modelling and market preparations for their new treatment. Our client has since launched their product and our data analysis supported publications used in educational and promotional activities to support clinical adoption of their drug as well as adding to the overall clinical body of evidence.

References:

1. Lymphoma Australia. Chronic Lymphocytic Leukemia (CLL) & Small Lymphocytic Lymphoma (SLL). <https://www.lymphoma.org.au/types-of-lymphoma/chronic-lymphocytic-leukemia-ctl/>. Accessed November 2022.
2. Tam C *et al*. Patterns of Treatment and Outcomes in CLL Patients in Australia: An Analysis of The Population-Wide Pharmaceutical Benefits Scheme Dataset. European Society of Medical Oncology Asia Congress 2022. Abstract # 204MO.

About Prospecation:

Prospecation is a pioneer in health data analytics technology. We are on a mission to make advancements to precision medicine through real-world evidence, with an aim to put the right patient on the right treatment at the right time. Applying advanced machine learning algorithms to real-world data we unearth health journey and treatment insights by analysing longitudinal data for hundreds of millions of patients to see how drug treatments are used after the clinical trial. Delivering actionable real-world evidence that enables better outcomes for patients, across the world.

Global Head Office: Level 6, Sydney Central, 477 Pitt Street, Haymarket, NSW 2000, Australia +61 2 9209 4035; prospecation@prospecation.com
www.prospecation.com

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