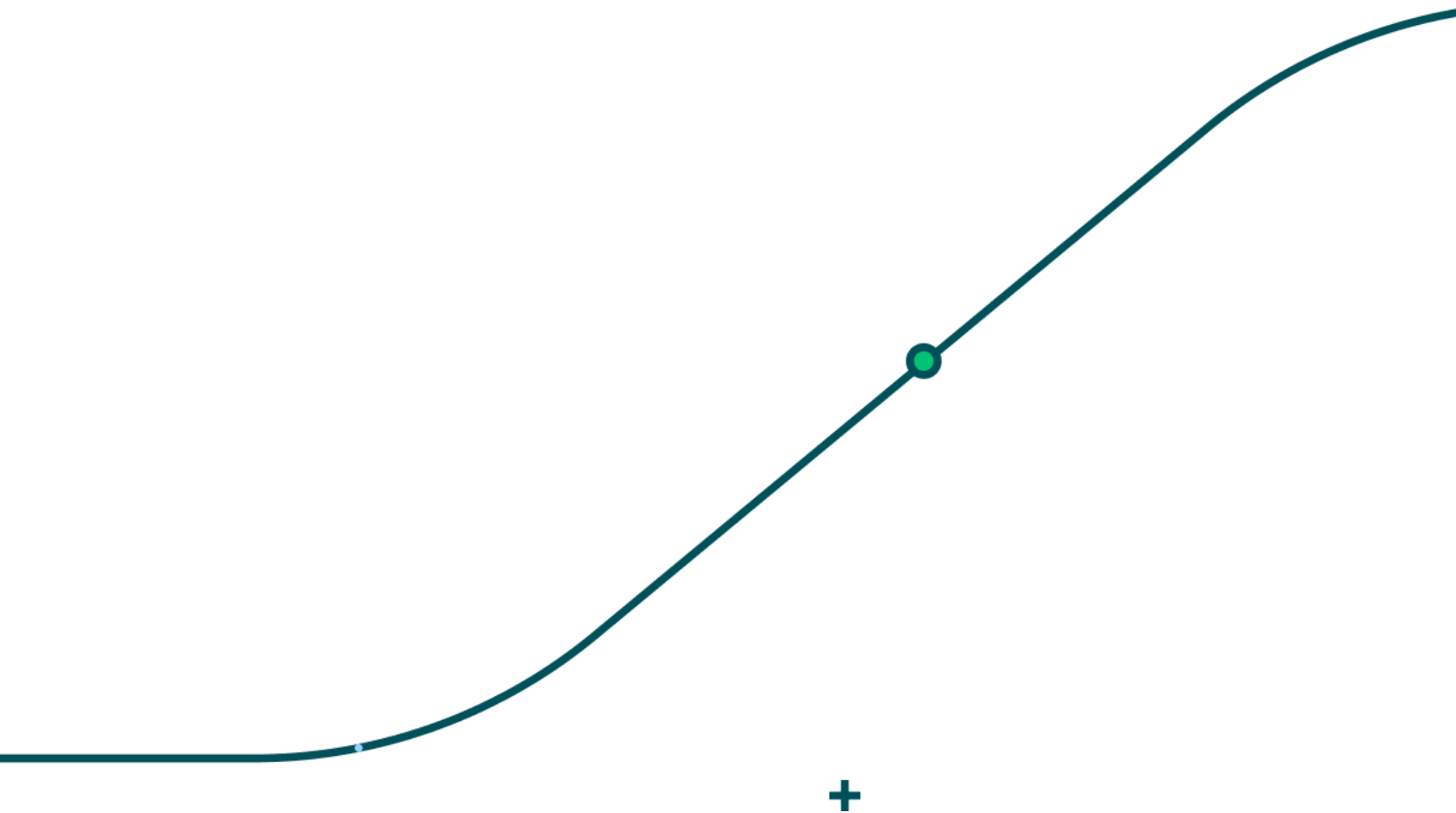


Case Study :

# Treatment patterns in mantle cell lymphoma





## Geography

National

## Market focus

Launch & Portfolio Strategy  
Forecast & Modelling Inputs  
Evidence Generation

## Therapeutic Area

Oncology:  
Mantle Cell Lymphoma

## Introduction

Mantle cell lymphoma (MCL) is a rare and usually aggressive subtype of non – Hodgkin lymphoma (NHL) affecting the outer edge (mantle) of the lymph nodes. MCL most commonly affects men over the age of 50 years and accounts for approximately 5% to 10% of all NHL cases.<sup>1</sup> As MCL is rare, limited information is available on patient characteristics, outcomes, treatment and management strategies of patients with the condition.

## Our Client's Challenge

In this case study, our client wanted to know if and how treatment patterns for MCL 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 MCL. The insights from this analysis would help our client understand the real-world utilisation of medicines in the Australian treatment setting and dictate medical engagement, access communications and launch planning.

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 all publicly funded MCL treatments in Australia for those patients initiated on treatment for MCL (n=152) 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.

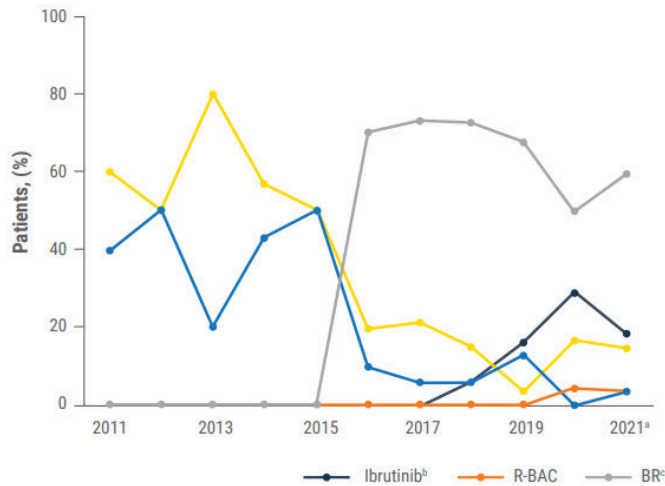
Ten years ago, rituximab, used either as monotherapy or in combination with other agents, was the most used treatment in both frontline (1L) and relapsed/refractory (R/R) settings.

Our analysis, showed treatment trends had changed over the past 10 years, since the introduction of novel agents bendamustine and ibrutinib . In the 1L setting, bendamustine, used in combination with rituximab, was now the preferred choice over rituximab alone or in combination with other agents. In the R/R setting, ibrutinib, a Bruton tyrosine kinase inhibitor (BTKi) has become the most prescribed treatment (Figure 1).

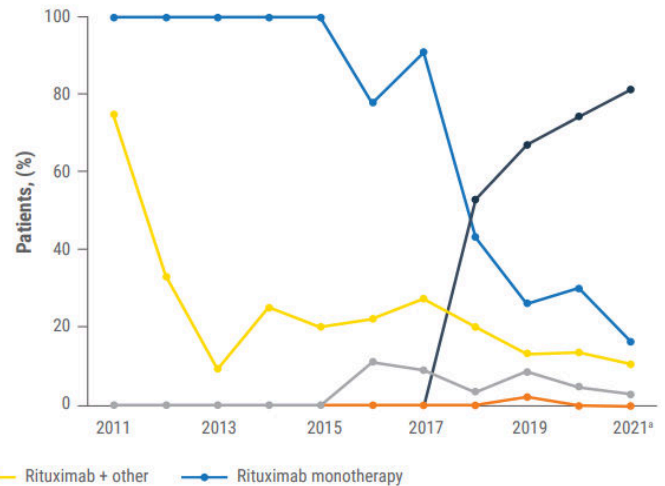


## MCL Treatment Patterns in the PBS 10% Data Set<sup>2</sup>

### IL Treatments by Year



### R/R Treatments by Year



- For IL, use of rituximab-containing regimens other than BR decreased; BR is currently the most common treatment
- For R/R, BTKis are currently the most common treatment

<sup>a</sup>Data for 2021 ended in July; <sup>b</sup>Ibrutinib was listed on the PBS for R/R treatment in August 2018; <sup>c</sup>BR was listed on the PBS for IL treatment in May 2016.

January 2011–July 2021. \*P<.0001. For R/R treatment, patients were double counted when they received multiple regimens during a year. IL, frontline; BR, bendamustine + rituximab; BTKi, Bruton tyrosine kinase inhibitor; MCL, mantle cell lymphoma; PBS, Pharmaceutical Benefits Scheme; R-BAC, rituximab + bendamustine and cytarabine; R/R, relapsed/refractory.

## Our Key Insights

From our analysis, we were able to provide insights to support our client’s launch planning, submission modelling and medical communications planning. Our client has since launched their product and our data analysis resulted in 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.

<https://www.lymphoma.org.au/types-of-lymphoma/non-hodgkin-lymphoma/aggressive-fast-growing-b-cell-nhl/mantle-celllymphoma-mcl/> Accessed November 2022. 2. Tam C *et al.* Patterns of Treatment and Outcomes in MCL Patients in Australia: An Analysis of The PopulationWide Pharmaceutical Benefits Scheme Dataset. European Society of Medical Oncology Asia Congress 2022. Abstract 205MO.



**10 Years**  
as a leader in  
healthcare data  
analytics

### **About Prospection**

Prospection 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.