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Patterns of Treatment and Outcomes in CLL Patients in Australia: An Analysis of the Population-Wide Pharmaceutical Benefits Scheme Dataset

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DECLARATION OF INTERESTS

Constantine Tam

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Study Objective and Key Research Questions

Study Objective:

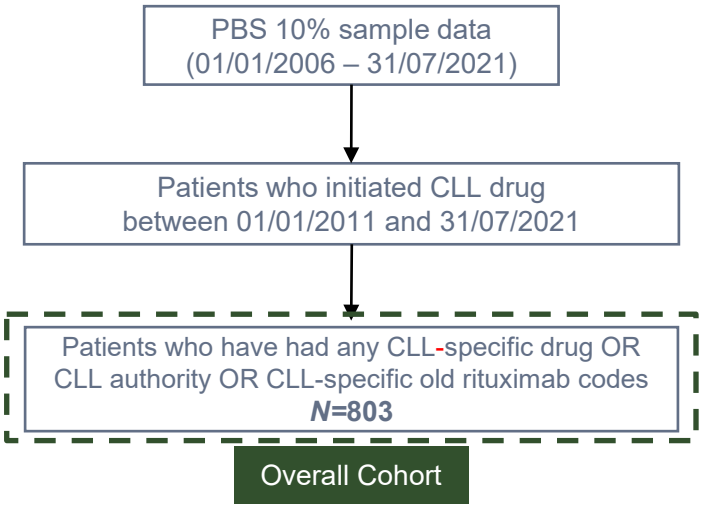
- To understand the treatment patterns and outcomes of patients with CLL in Australia using the PBS 10% dataset

Key Research Questions:

- Treatment patterns – patient characteristics and usage of various 1L and R/R regimens
- Time to next treatment – time from initiation on 1L treatment to initiation of first R/R treatment
- Duration on treatment – time on oral treatments
- Overall survival – time from initiation on 1L or R/R treatment to death

1L, first-line; CLL, chronic lymphocytic leukemia; PBS, Pharmaceutical Benefits Scheme; R/R, relapsed/refractory.

Cohort Selection and Patient Characteristics

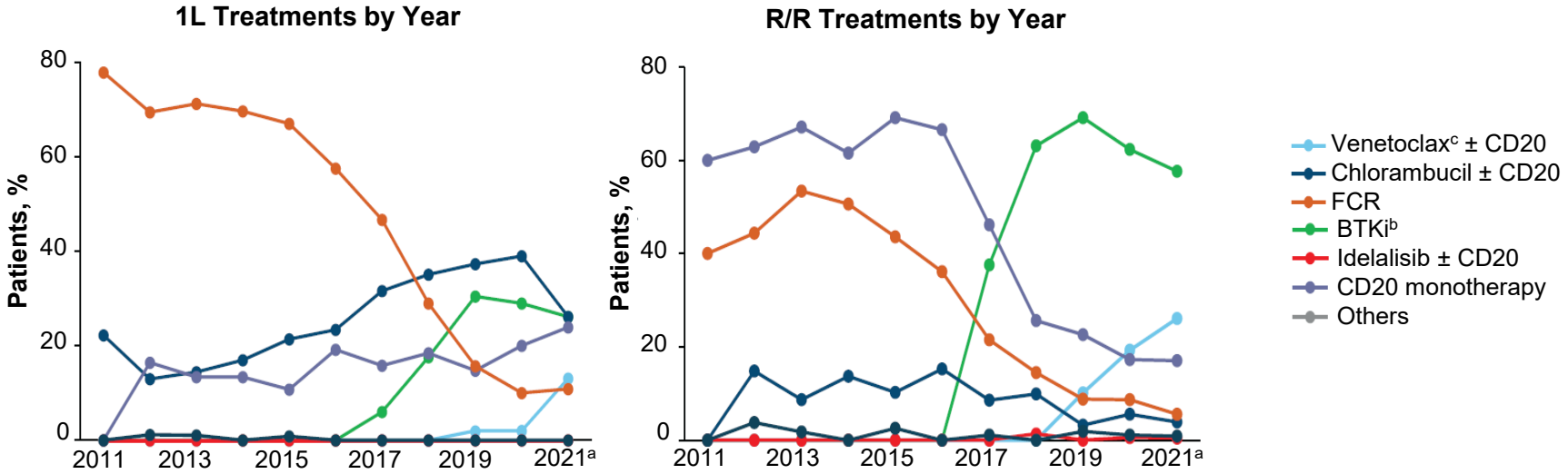


CLL main cohort	All patients (N=803)
Age at index date[a]	
Mean (SD), y	68.3 (12.5)
Median (range), y	70 (6-94)
Age ranges, n (%)	
0-59 y	182 (22.7)
60-69 y	209 (26.0)
70-79 y	263 (32.8)
80+ y	149 (18.6)
Sex, n (%)	
Women	284 (35.4)
Men	519 (64.6)
Comedications at baseline, n (%)	
Antihypertensives	374 (46.6)
Anticoagulants	107 (13.3)
Antiplatelets	46 (5.7)
Antiarrhythmics	20 (2.5)
Antidiabetics	87 (10.8)
Antipsychotics/antidepressants	134 (16.7)

- Most patients were male (65%) and 60+ years old (77%)
- Anti-hypertensives were the most common comedications at baseline

[a] Defined as the start date of any CLL treatment.
CLL, chronic lymphocytic leukemia; PBS, Pharmaceutical Benefits Scheme.

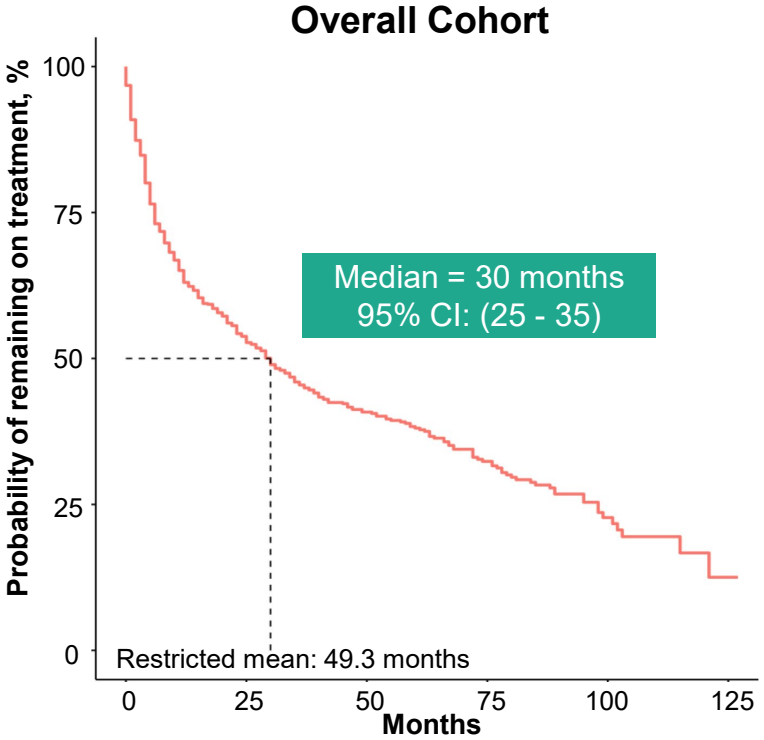
CLL Treatment Patterns in the PBS 10% Data Set



- For 1L, FCR usage decreased; chlorambucil ± CD20 is currently the most common treatment
- For R/R, CD20 monotherapy usage decreased and BTKi and venetoclax ± CD20 usage increased; BTKis are currently the most common treatment

[a]Data for 2021 ended in July; [b]Ibrutinib was listed on the PBS in December 2017; [c]Venetoclax 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, first-line; BTKi, Bruton tyrosine kinase inhibitor; CLL, chronic lymphocytic leukemia; FCR, fludarabine, cyclophosphamide, and rituximab; PBS, Pharmaceutical Benefits Scheme; R/R, relapsed/refractory.

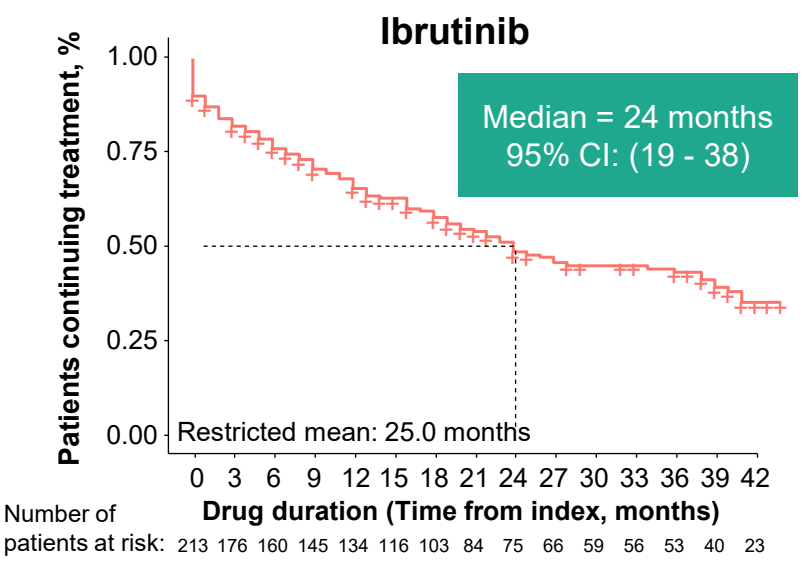
Median Time to Next Treatment

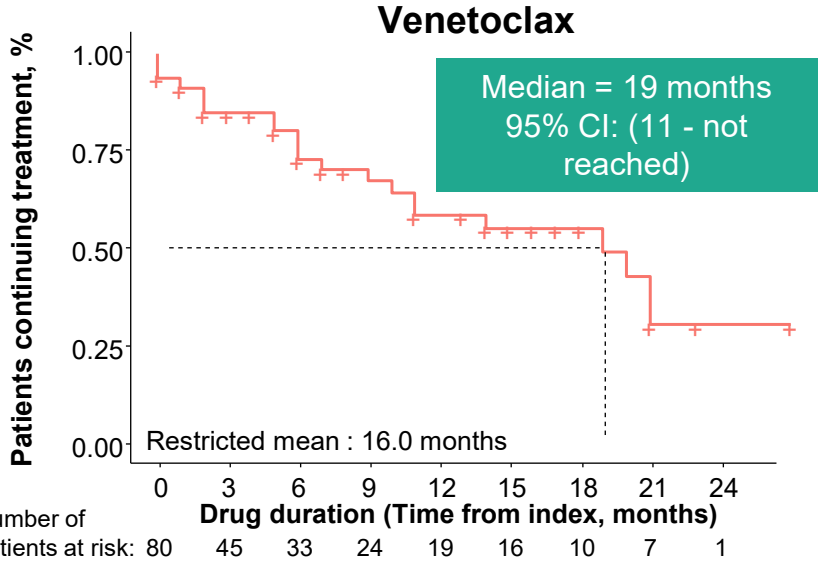


- Median time to start R/R treatment: 30 months
- Patients on either CD20 monotherapy or chlorambucil ± CD20 were more likely to start R/R treatment compared with those on FCR
- Patients taking antihypertensive drugs were more likely to start R/R treatment compared with those not taking antihypertensives

TTNT is defined as the time in consecutive days between the commencement of index therapy in front line to commencement of subsequent line of therapy (R/R). An event is defined as commencement of R/R therapy. Patients were censored at the last date of data extraction (July 2021) or death.
BTKi, Bruton tyrosine kinase inhibitor; CI, confidence interval; FCR, fludarabine, cyclophosphamide, and rituximab; R/R, relapsed/refractory; TTNT, time to next treatment.

Duration on Therapy

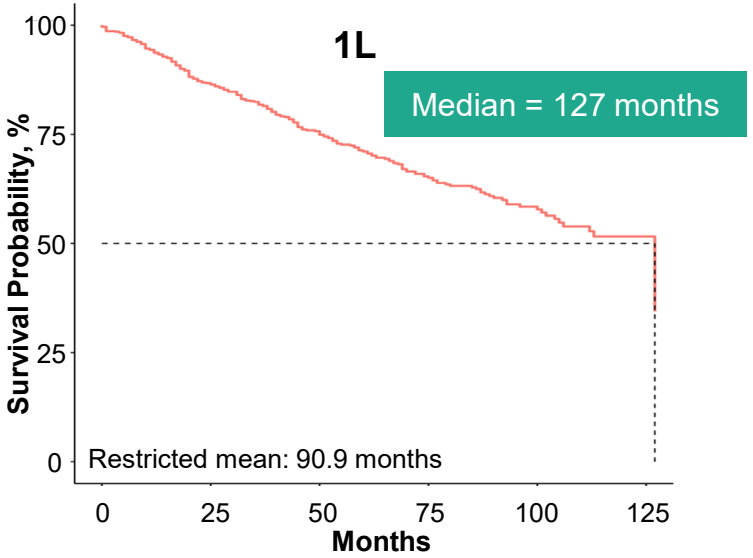




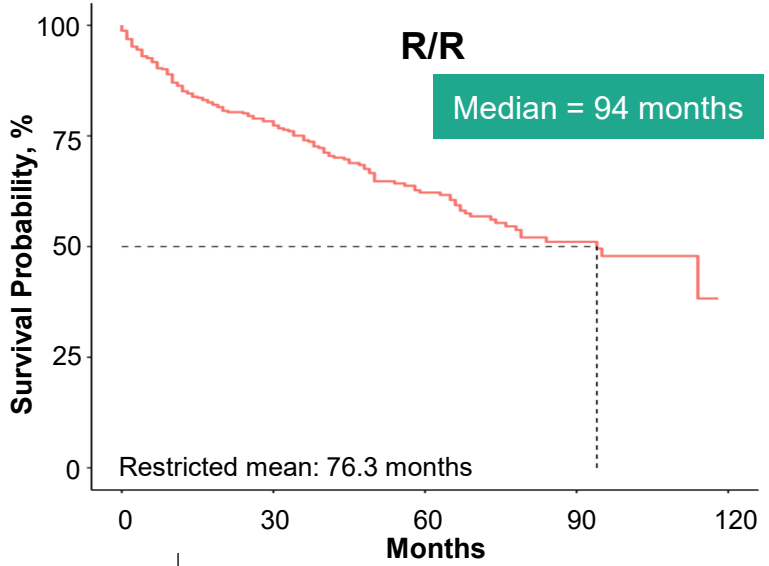
- The median duration on ibrutinib and venetoclax were 24 and 19 months, respectively
- Patients on antiplatelet drugs were more likely to discontinue ibrutinib than those not on antiplatelet drugs; patients on antihypertensive drugs were more likely to discontinue venetoclax compared with patients not taking antihypertensives

Patients were considered to have discontinued treatment if there was no dispensing of the treatment of interest for 180 days.
CI, confidence interval.

Overall Survival



Months	0	12	24	36	48	60
Number at risk (Survival probability %)	803 (99.6%)	705 (93.7%)	596 (86.7%)	512 (81.8%)	401 (75.9%)	310 (71.1%)
Number deceased	3	46	50	32	34	23



Months	0	12	24	36	48	60
Number at risk (Survival probability %)	480 (99.2%)	356 (85.1%)	276 (71.5%)	221 (74.0%)	154 (67.5%)	118 (39.5%)

Overall survival is defined as the time from commencement of the index treatment in 1L until the time of death from any cause measured in consecutive days. Patients are censored at the last date of data extraction (July 2021).
1L, first-line; R/R, relapsed/refractory.

Conclusions

- In Australia, CLL treatment patterns have significantly changed since the introduction of novel therapies, including BTKis
- Use of FCR as 1L treatment for CLL has decreased, while use of novel therapies such as BTKis for R/R CLL has increased
- The median TTNT was 30 months
- The median duration on therapy was 24 months for ibrutinib and 19 months for venetoclax
    - The duration observed in this study was shorter than what has been seen in clinical trials, likely due to the comparatively shorter follow-up time in this analysis
- The median overall survival in the 1L setting was more than 10 years, while a shorter survival was observed for the R/R population
- Limitations of this analysis included the likelihood of missing data since the PBS 10% data set tracked data back to only 2006; also, potential errors in data entry (eg, wrong authority code for a given drug since International Classification of Disease numbers were not provided) may have affected selection of eligible patients

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