

## Incidence, prevalence, and mortality of chronic lymphocytic leukemia/small lymphocytic lymphoma (CLL/SLL) in Australia

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### Aim :

In Western countries, CLL/SLL is the most common leukemia; however, epidemiological data in Australia are limited. We aimed to quantify the incidence, prevalence, and mortality rate for CLL/SLL and predict 30-year incidence and prevalence trends in Australia.

### Method:

All CLL/SLL cases from Jan 2009 through Dec 2018 from 4 states (Victoria, Tasmania, ACT, and Queensland) were identified in the Australian cancer database using International Statistical Classification of Diseases (ICD-10-AM code C83.0/C91.1, histology code 9823). Incidence, prevalence, and mortality rates were calculated using DisMod II and Australian Institute for Health and Welfare approaches. Thirty-year incidence and prevalence rate predictions were modeled using least-squares linear regression. A Kaplan-Meier estimator was constructed for survival analysis. All analyses were stratified by sex, age group, and diagnostic year, as applicable.

### Results:

The crude annual incidence of CLL/SLL (58% in the 60- to 79-year age group) was 834-1278 and 479-786 per 10,000,000 person-years for males and females, respectively, with an increase in 10-year crude rates (male: coefficient, 44.83;  $P < .0001$ ; female: coefficient, 26.91;  $P = .014$ ). Age-standardized incidence rates were 600-888 per 10,000,000 person-years. The observed prevalence rate was highest in the  $\geq 80$ -year age group (range, 5001-8654 and 2459-4656 per 10,000,000 persons for males and females, respectively) and lower in the 40- to 49-year age group (range, 628-1041 and 314-470 per 10,000,000 persons, respectively). An increase in prevalence was predicted (male: coefficient, 647.06;  $P < .001$ ; female: coefficient, 381.97;  $P < .0001$ ). The crude annual CLL/SLL mortality rate was 83-295 per 10,000,000 persons, with the 2017 rate being highest. Over 53% of patients were alive at 10 years of follow-up, with no difference observed between sexes ( $P = .0608$ ). Patients diagnosed after 2015 had better survival than those in earlier years ( $P = .038$ ).

### Conclusion:

Incidence and prevalence of CLL in Australia have been increasing over the last decade, while survival has improved in recent years.