



# Prevalence of Chronic Myeloid Leukemia in the United States: A Cross-Sectional Study Using the SEER Database

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To the Editor,

Chronic myeloid leukemia (CML) is an autoimmune disorder that involves myeloid, monocytic, erythroid, megakaryocytic, B-lymphoid, and, to a lesser extent, T-lymphoid lineages. We aimed to estimate the prevalence of CML using the Surveillance, Epidemiology, and End Results (SEER) database, a recently launched initiative of the Surveillance Research Program (SRP) in National Cancer Institute's (NCI's) Division of Cancer Control and Population Sciences (DCCPS). One of the main purposes of this database is the reduction of the prevalence of cancer within the U.S. population through the utilization of cancer statistics.

The SEER database included 43,926,824 participants, of which an estimated 12,482.4 participants were diagnosed with CML. The prevalence was estimated to be the highest in participants that belonged to the 60- to 64-year age group. This finding depicted a pattern of increased prevalence of CML in age up to the 60- to 64-year age group and then a gradual decrease in later ages with a dramatic drop in participants older than 85 years. The prevalence of CML was notably higher in white and black individuals with an estimated prevalence of 0.02% in each group. In other populations such as American Indian/Alaska Natives and Asian or Pacific Islanders, the estimated prevalence was 0.01% for each group. The composition of the SEER database includes 54% white, 21% black, 18% Hispanic, and 3% Asian demographics. For comparison, the population distribution in the

United States consists of 76% white, 14% black, 19% Hispanic, and 6% Asian demographics. This could cause our prevalence calculation of CML within our black Americans to be an overestimate due to increased representation of the black population in the SEER database, whereas for white Americans it may be an underestimate due to decreased representation of the white population in the SEER database.

Altogether our data suggest that CML is prevalent among various ethnic groups and is higher in more specifically white and black Americans. The prevalence of CML also increases with age, peaking in the 60- to 64-year age group and trending downward after that. While the prevalence of CML peaks in the 60- to 64-year age group, the prevalence from ages 50 to 74 years seems to be a semi-steady range. In addition, after the age of 75 years, the prevalence drops tremendously especially after the age of 85 years. This could be due to various factors such as survival bias and comorbidities. Patients with CML who are diagnosed earlier might not survive to reach older age groups and older adults may die from other causes before being diagnosed with CML, leading to the lower observed prevalence in patients older than 85 years. In addition, socioeconomic status and access to health care services can impact the likelihood of being diagnosed with CML, which may affect prevalence estimates. Further research needs to examine data trends within the SEER database to provide more context about the prevalence of CML over time. Future studies should also compare the

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SEER database findings with other cancer registries to support or refute the prevalence estimates.

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None.

**Conflict of Interest**

None declared.

**Suggested Readings**

- 1 SEER. SEER Incidence Data, 1975–2019. Accessed January 28, 2023 at: <https://seer.cancer.gov/data/>
- 2 SEER. Number of Persons by Race and Hispanic Ethnicity for SEER Participants - SEER Registries. Accessed January 28, 2023 at: <https://seer.cancer.gov/registries/data.html>
- 3 U.S. Census Bureau. QuickFacts: United States. Accessed January 24, 2023 at: <https://www.census.gov/quickfacts/fact/table/US/PST045222>