Life Expectancy in CML Patients Approaching General Population’s

A study covering 4 decades of patients with chronic myeloid leukemia (CML) in Sweden found dramatic improvements in life expectancy since the advent of tyrosine kinase inhibitor (TKI) therapy. Today, life expectancy with a new diagnosis of CML approaches that of the general population.

In earlier decades, treatment of CML was restricted to busulfan and hydroxyurea, then allogeneic stem cell transplantation and interferon alfa. “A dramatic improvement occurred after 2000 with the introduction of imatinib mesylate, the first TKI that specifically targeted the BCR-ABL1 oncoprotein,” wrote study authors led by Hannah Bower, MSc, of Karolinska Institutet in Stockholm. “Imatinib treatment significantly increased the survival and quality of life for patients of all ages, particularly those in the chronic phase.”

Though that improvement is well studied, the new analysis aimed to specifically assess life expectancy in CML patients over the years. It included a total of 2,662 patients diagnosed between 1973 and 2013 and included in the Swedish Cancer Registry. The results were published online ahead of print in the Journal of Clinical Oncology.

The life expectancy of all patients increased steadily over the course of the study, with larger increases after 1990 and again after 2000. The study focused on four selected ages at diagnosis: 55, 65, 75, and 85 years, each of which had slightly different patterns regarding changes to life expectancy. For example, for the 55 years group in 1980, males in the general population had a life expectancy from that point of 24.3 years, compared with only 3.5 years for the male CML patients. The general population’s expectancy rose to 26.3 years in 1990, 28.3 years in 2000, and 29.9 years in 2010; the CML patients, meanwhile, saw life expectancy increase to 5.9 years in 1990, 15.8 years in 2000, and 27.3 years in 2010, meaning only a 2.6-year loss in expectation of life with CML.

This was similar in the female CML patients in that group, and similar as well across the ages at diagnosis. The proportion of expected life lost to the disease ranged between 80% and 86% in 1990, and dropped to 9% in 2010 for the youngest age at diagnosis up to 28% for those aged 85 years at diagnosis.

“The results indicate that the life expectancy of patients with CML is now close to the life expectancy of the general population for all ages,” the authors wrote. They noted that other research has suggested higher incidences of other cancers and TKI-associated cardiovascular morbidity, which could mean CML patients may never be able to fully reach the general population’s life expectancy. Still, they concluded that this study highlights the “great success of CML treatment.”

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