

Study reveals no impact of age on outcome in chronic myeloid leukemia patients treated with imatinib

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While the median age at diagnosis for chronic myeloid leukemia (CML) is over 60 years old and incidence increases dramatically with age, limited data are available about the long-term outcome for older patients treated with imatinib, the standard first-line therapy used to treat CML. Results from a [study](#) published today in *Blood*, the Journal of the

Two widely used prognostic scores for CML, the Sokal and EURO risk scores, have historically identified older age as a predicting factor of lower response rate and poorer outcome. However, these risk scores were validated before imatinib was introduced as a therapy for CML and may now hold less relevance, as imatinib has dramatically improved the prognosis for CML patients.

"Older age has typically been considered a poor prognostic factor in patients with CML and has a negative impact on response rates and long-term survival, regardless of treatment," said Gabriele Gugliotta, MD, co-author of the study and Fellow in the Department of Hematology and Oncology at St. Orsola-Malpighi Hospital at the University of Bologna in Bologna, Italy. "Our study focused on disease progression, treatment response, and survival of this specific patient population to assess the role of imatinib in older patients."

To test whether age at diagnosis is a valid predictor of response, researchers from several institutions in Italy conducted an analysis of

559 patients with early chronic phase CML (six months or less from diagnosis to start of imatinib treatment) who were enrolled in three concurrent clinical trials in the Gruppo Italiano Malattie Ematologiche dell'Adulto CML Working Party, between May 2003 and April 2007. Trial participants over age 65 were defined as "older" patients and those under age 65 were classified as "younger" patients.

Results from the patient analysis revealed that complete hematologic response, or a return to normal blood cell and platelet counts, was observed at three-month follow-up in 97 percent of the older age group and 96 percent of the younger age group. At six, 12, and 24 months follow-up, 69 percent, 78 percent, and 74 percent of older patients and 67 percent, 77 percent, and 78 percent of younger patients, respectively, achieved complete cytogenetic response, or the point when no [leukemic cells](#) are detected in the blood. As for long-term survival, after discounting deaths unrelated to CML in both the older and younger patients, researchers found no significant difference in mortality rates between the two age groups. The adjusted overall survival rate for the older patients was 94 percent, compared to 96 percent for the younger patients ($p=0.4$), further demonstrating that age was not a significant factor in imatinib response and did not affect patient survival.

"This is the first study that has specifically analyzed the long-term outcome of older patients with early chronic phase CML treated with imatinib," said Gianantonio Rosti, MD, lead study author and hematologist in the Department of Hematology and Oncology at St. Orsola-Malpighi Hospital at the University of Bologna. "While increasing age is generally associated with higher mortality, the results of our analysis demonstrate that when it comes to treating CML patients, older age must not be a limitation for treatment with imatinib, as it is a very effective therapy for this patient population."

Provided by American Society of Hematology

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