# Health-related quality of life, symptom burden, and comorbidity in long-term survivors of acute promyelocytic leukemia 

Fabio Efficace, Massimo Breccia, Giuseppe Avvisati, Francesco Cottone, Tamara Intermesoli, Erika Borlenghi, Paola Carluccio, Francesco Rodeghiero, Francesco Fabbiano, Mario Luppi, Claudio Romani, Marco Sborgia, Stefano D'Ardia, Francesco Nobile, Nicola Cantore, Monica Crugnola, Gianpaolo Nadali, Marco Vignetti, Sergio Amadori, Francesco Lo Coco


#### Abstract

The objective of this study was to investigate health-related quality of life (HRQOL), symptom burden, and comorbidity profile in long-term acute promyelocytic leukemia (APL) survivors treated with standard chemotherapy. Overall, 307 long-term APL survivors were invited to participate. HRQOL was assessed with the Medical Outcomes Study 36-Item Short-Form Health Survey (SF-36) and compared with that of age and sex-matched controls from the general population. Symptom burden was assessed with the MD Anderson Symptom Inventory (MDASI) questionnaire and comorbidity profile was also investigated. Median follow-up time since diagnosis was 14.3 years (interquartile range: 11.1-16.9 years). APL survivors had a statistically and clinically meaningful worse score for the role physical scale of the SF-36 ( -9.5 ; $95 \% \mathrm{Cl},-15.7$ to $-3.2, \mathrm{P}=0.003$ ) than their peers in the general population. Fatigue was reported as moderate to severe by $29 \%$ of patients and $84.4 \%$ reported at least one comorbidity. Prevalence of comorbidity in APL survivors was higher than that reported by the general population. Also, marked variations were found in the HRQOL profile by number of comorbidities. Even many years after treatment ends, APL survivors treated with standard chemotherapy do not fully recover as they report HRQOL limitations and a substantial burden of symptoms.


