# Survival of European patients diagnosed with lymphoid neoplasms in 2000-2002: results of the HAEMACARE project

Rafael Marcos-Gragera,¹ Claudia Allemani,² Carmen Tereanu,² Roberta De Angelis,³ Riccardo Capocaccia,³ Marc Maynadie,⁴ Stefano Luminari,⁵ Stefano Ferretti,⁶ Tom Børge Johannesen,ⁿ Risto Sankila,⁶ Marja-Liisa Karjalainen-Lindsberg,⁶ Arianna Simonetti,³ Maria Carmen Martos,¹⁰,¹¹ Martine Raphaël,¹² Pilar Giraldo,¹¹¹,¹³ the HAEMACARE Working Group, and Milena Sant²,¹⁴

<sup>1</sup>Epidemiology Unit and Girona Cancer Registry, Oncology Coordination Plan, Department of Health and Catalan Institute of Oncology, Girona, Spain; <sup>2</sup>Analytical Epidemiology Unit, Department of Preventive and Predictive Medicine, Fondazione IRCCS Istituto Nazionale dei Tumori, Milan, Italy; <sup>3</sup>National Centre for Epidemiology, Surveillance and Health Promotion, Department of Cancer Epidemiology, Istituto Superiore di Sanità, Rome, Italy; <sup>4</sup>Côte d'Or Haematological Malignancies Registry, EA 4184, University of Burgundy, Dijon, France; <sup>5</sup>Department of Oncology and Haematology and Modena Cancer Registry, University of Modena and Reggio Emilia, Modena, Italy; <sup>6</sup>Ferrara Cancer Registry, Pathology Section, Department of Experimental and Diagnostic Medicine, Ferrara University, Italy; <sup>7</sup>Department of Clinical and Registry-Based Research, The Norwegian Cancer Registry; <sup>8</sup>Finnish Cancer Registry, Helsinki, Finland; <sup>9</sup>Department of Pathology, Helsinki University Central Hospital, Helsinki, Finland; <sup>10</sup>Center for Public Health Research, Valencia, Spain; <sup>11</sup>Cancer Registry of Zaragoza, Aragon Institute of Health Sciences, Zaragoza, Spain; <sup>12</sup>Department of Haematology, Le Kremlin-Bicêtre, University Paris-Sud, France; <sup>13</sup>Department of Haematology, Hospital Universitario Miguel Servet, Zaragoza, Spain; <sup>14</sup>HAEMACARE Project Leader

## **ABSTRACT**

# **Background**

The European Cancer Registry-based project on hematologic malignancies (HAEMACARE), set up to improve the availability and standardization of data on hematologic malignancies in Europe, used the European Cancer Registry-based project on survival and care of cancer patients (EUROCARE-4) database to produce a new grouping of hematologic neoplasms (defined by the International Classification of Diseases for Oncology, Third Edition and the 2001/2008 World Health Organization classifications) for epidemiological and public health purposes. We analyzed survival for lymphoid neoplasms in Europe by disease group, comparing survival between different European regions by age and sex.

#### **Design and Methods**

Incident neoplasms recorded between 1995 to 2002 in 48 population-based cancer registries in 20 countries participating in EUROCARE-4 were analyzed. The period approach was used to estimate 5-year relative survival rates for patients diagnosed in 2000-2002, who did not have 5 years of follow up.

#### **Results**

The 5-year relative survival rate was 57% overall but varied markedly between the defined groups. Variation in survival within the groups was relatively limited across European regions and less than in previous years. Survival differences between men and women were small. The relative survival for patients with all lymphoid neoplasms decreased substantially after the age of 50. The proportion of 'not otherwise specified' diagnoses increased with advancing age.

## **Conclusions**

This is the first study to analyze survival of patients with lymphoid neoplasms, divided into groups characterized by similar epidemiological and clinical characteristics, providing a benchmark for more detailed analyses. This Europe-wide study suggests that previously noted differences in survival between regions have tended to decrease. The survival of patients with all neoplasms decreased markedly with age, while the proportion of 'not otherwise specified' diagnoses increased with advancing age. Thus the quality of diagnostic work-up and care decreased with age, suggesting that older patients may not be receiving optimal treatment.

Key words: lymphoid malignancies, survival, outcome.

Citation: Marcos-Gragera R, Allemani C, Tereanu C, De Angelis R, Capocaccia R, Maynadie M, Luminari S, Ferretti S, Johannesen TB, Sankila R, Karjalainen-Lindsberg M-L, Simonetti A, Martos MC, Raphaël M, Giraldo P, the HAEMACARE Working Group, and Sant M. Survival of European patients diagnosed with lymphoid neoplasms in 2000-2002: results of the HAEMACARE project. Haematologica 2011;96(5):720-728. doi:10.3324/haematol.2010.034264

©2011 Ferrata Storti Foundation. This is an open-access paper.

Funding: this work was supported by DG Sanco Public Health & Consumer Protection, Grant agreement n. 2004131 and Compagnia di San Paolo di Torino.

Acknowledgments: the authors also take the opportunity to thank Don Ward for help with the English and Chiara Margutti and Samba Sowe for secretarial support.

Manuscript received September 28, 2010. Revised version arrived on February 10, 2011. Manuscript accepted on February 11, 2011.

Correspondence:
Rafael Marcos-Gragera,
Girona Epidemiology Unit and
Cancer Registry, Passatge
Farinera Teixidor, núm 1 1r-2a,
17005 Girona, Spain.
Phone: international
+34.972.207406;
Fax: international
+34.972.206180
Email: rmarcos@iconcologia.net

The online version of this article has a Supplementary Appendix.