

## Survival of patients diagnosed with subsets of lymphoid neoplasms and acute myeloid leukemia from 2000 to 2010 in the Vale do Paraíba, State of São Paulo: are we going the right way?

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We recently reported on the demographic characteristics, prevalence and incidence of oncohematological diseases in the Vale do Paraíba, State of São Paulo.<sup>(1)</sup> However, there are insufficient data to provide specific information on survival rates of patients with oncohematological diseases in this region. Against this background, the *Grupo de Onco-Hematologia do Vale do Paraíba* (GOHV) set out to assess the survival of patients with subtypes of lymphoid neoplasms and acute non-promyelocytic leukemia (AML).

The GOHV consists of medical oncohematological representatives of the following services: *Hospital Frei Galvão* of Guaratinguetá, *Hospital Regional de Vale do Paraíba* located in the city of Taubaté, *Oncovida*, *Centro de Oncohematologia* of Taubaté, *Hospital PIO XII* in São José dos Campos and the *Serviço de Hematologia de São José dos Campos*. The services of *Hospital Frei Galvão*, *Hospital Regional de Vale do Paraíba* and *Hospital PIO XII* in São José dos Campos are referral centers in the Regional Health Division XVII, composed of 39 municipalities in the Vale do Paraíba. Together, the services that comprise the GOHV attend all adult Brazilian National Health Service patients in the region as well as more than 90 percent of adult patients of other healthcare insurers.

A retrospective study was carried out from January 2000 to December 2010 and a total of 682 over 19-year-old patients were

enrolled. The diagnoses of lymphomas, multiple myeloma (MM) and AML were based on the criteria of the World Health Organization and the French-American-British classifications.<sup>(2,3)</sup>

The subtypes of lymphoid neoplasms analyzed were diffuse large B cell non-Hodgkin lymphoma (DLBCL - n = 212; median age 59 years; range: 20-86), follicular lymphoma (FL - n = 112; median age 63 years; range: 47-85), Hodgkin's lymphoma (HL - n = 132; median age 32 years; range: 19-74) and multiple myeloma (MM - n = 129; median age 65 years; range: 38-94). Among the patients with AML (n = 97) the median age was 67 years (range: 19-84). Overall survival (OS) was defined as the time interval from the date of diagnosis to death from any cause or to the last follow-up in censored patients. Survival analysis was carried out according to the Kaplan-Meier method.

The median time of follow-up was 58 months. The median survival rates were undefined for DLBCL, FL and HL, 38 months for MM and four months for AML. The OS curves according to diagnosis are shown in Figure 1. The estimated 5-year OS obtained from the survival curves of the patients diagnosed with lymphoid neoplasms and AML were compared with the results of the European Cancer Registry based project on hematologic malignancies (HAEMACARE)<sup>(4)</sup> and the specialized registry of hematologic malignancies of Côte d'Or, France,<sup>(5)</sup> respectively. The HAEMACARE project

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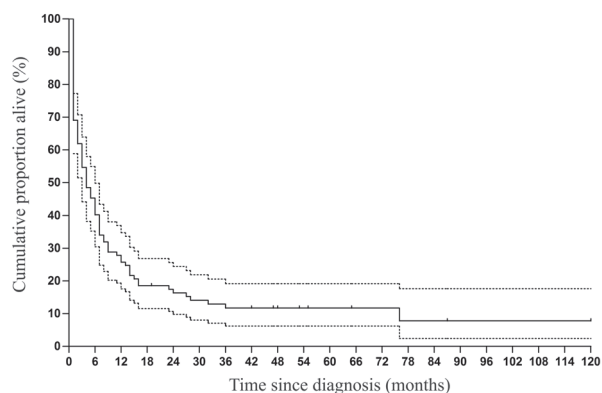


Figure 1 – OS curves (—) and 95% confidence interval (....) according to diagnosis  
 A - Diffuse large B-cell lymphoma (n = 212)

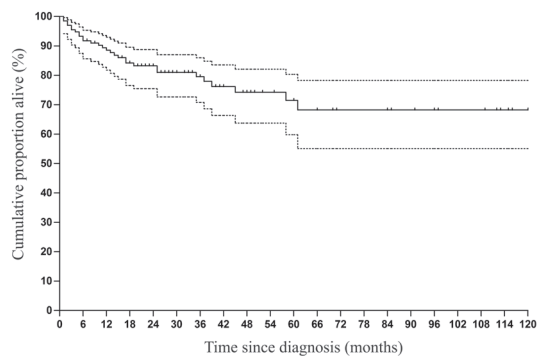


Figure 1B – Follicular lymphoma (n = 112)

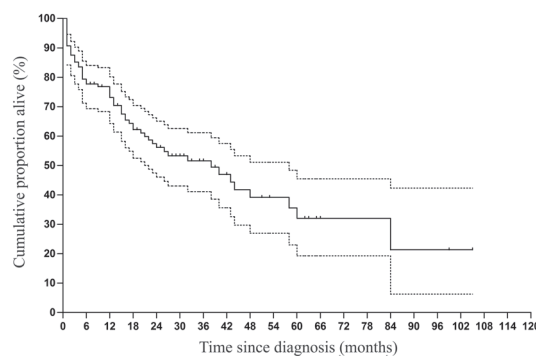


Figure 1C – Multiple myeloma (n = 129)

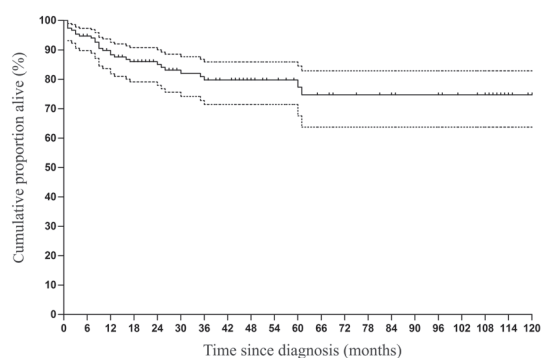


Figure 1D – Hodgkin's lymphoma (n = 132)

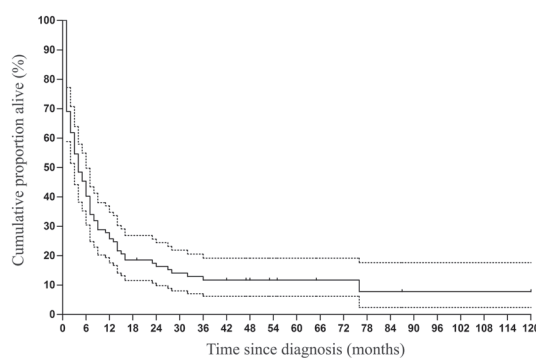


Figure 1E – Acute myeloid leukemia (n = 97)

Table 1 - Grupo de Onco-Hematologia do Vale do Paraíba (GOHV), European Cancer Registry based project on hematologic malignancies (HAEMACARE) and the specialized registry of hematologic malignancies of Côte d'Or, France 5-year overall survival of patients with subtypes of lymphoid neoplasms and acute non-promyelocytic leukemia

	GOHV			HAEMACARE			Cotê D'or Registry		
	n	5-year OS (%)	95% CI	n	5-year OS (%)	95% CI	n	5-year OS (%)	95% CI
DLBCL	212	52.9	43.7-61.2	18,685	49.3	47.8-50.6			
FL	112	71.4	62.4-81.4	9,392	72.8	71.0-74.6			
HL	132	74.4	63.4-82.5	12,405	84.5	83.2-85.7			
MM	129	32.0	19.3-45.4	28,721	32.6	31.5-33.7			
AML	97	11.7	6.2-19.1				468	18	15-22

95% CI: 95% Confidence interval; DLBCL: Diffuse large B cell non-Hodgkin lymphoma; FL: Follicular lymphoma; HL: Hodgkin's lymphoma; MM: Multiple myeloma; AML: Acute non-promyelocytic leukemia

enrolled 184, 166 patients diagnosed with lymphoid neoplasms between 1995 and 2002 in 48 European cancer registries and the French study reported twenty-five years (1980-2004) of data on 5086 patients with myeloid malignancies, including AML (Table 1).

This study does not allow a critical comparative analysis because of the limited number of patients studied. Besides, it should be reinforced that comparisons of survival of patients require that individual neoplastic entities be grouped into clinical categories with similar prognoses. However, in general our data compare favorably to these reports. The possible reasons for

this are based on the improvements in the quality of care which have been introduced in the Vale do Paraíba over the last decade, new treatment options such as rituximab, thalidomide and proteasome inhibitors and more intensive chemotherapy followed by autologous hematopoietic stem cell transplantation (which has been used in this region since 2004) as well as the practice guidelines for the use of antimicrobial agents in neutropenic patients with cancer, hospital environmental precautions and allogeneic bone marrow transplant from related or unrelated donors probably should have led to a better survival rates for our patients.

Finally, despite the limitations of our study, we suggest that the survival of patients with lymphoid and myeloid neoplasm subtypes achieved at services that comprise the GOHV represent what is expected according to the literature.

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