

Editorial

Overall survival of Non-Hodgkin lymphoma in HIV-infected patients at Siriraj Hospital

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Individuals with HIV infection have an increased incidence of several cancers including lymphomas. The pathogenesis of HIV-associated lymphoma is complex and influenced by host-mediated and viral factors.¹ The introduction of antiretroviral therapy (ARV) has changed the natural history, the type of malignancies, and the outcome of these patients. Nowadays, cancer is the leading cause of death in HIV-infected patients in developed countries.² In the United States, non-Hodgkin lymphoma (NHL) is the most common malignancy.^{3,4}

In this issue of the Journal of Hematology and Transfusion Medicine, Kanin Reanthonglert et al. retrospectively studied the outcome of HIV-infected patients with NHL during 2006 and 2016 at Siriraj Hospital. One hundred and twenty patients were included in the study. The median age was 42 years (range 19-76) with approximately a 2:1 male-to-female ratio and a median CD4+ T-cell count of 135 cells/ μ L. NHL and HIV infection were diagnosed at the same time in half of the patients; and NHL were diagnosed after HIV infection (at a median time of 3.7 years) in the other half of the patients. More than 95% were B-cell NHL. Common histologic subtypes were diffuse large B-cell lymphoma (66%), Burkitt lymphoma (11%) and plasmablastic lymphoma (11%). Nine patients had primary central nervous system (CNS) lymphoma. Majority of patients presented with B-symptoms (56%) and advanced stage III-IV (83%). Extranodal involvement included bone marrow in 57%, and CNS involvement in 15% of patients. Majority of patients (81%) received CHOP-like chemotherapy in this

study. Rituximab treatment was used in 48% of cases. In the era of ARV, the patients in this cohort received ARV treatment in 75.5% of cases. The 2-year and 5-year progression-free survival was 44.8% and 37.6%, respectively. The 2-year and 5-year overall survival was 73.2% and 67%, respectively.

The authors reported NCCN-IPI to be significant prognostic factor in HIV-infected patients with NHL. The NCCN-IPI is a useful tool to stratify prognostically relevant subgroups of diffuse large B-cell lymphoma patients in the current era of rituximab-based therapy. It consisted of 5 factors including age (> 40-60 years, 1 point (pt); > 60-75 years, 2 pts; > 75 years, 3 pts), LDH ratio (> 1-3, 1 pt; > 3, 2 pts) upper limit of normal, stage III-IV (1 pt), extranodal site (bone marrow, CNS, liver/gastrointestinal tract, or lung; 1 pt), and performance status ≥ 2 (1 pt). Four risk groups were formed: low (0-1), low-intermediate (2-3), high-intermediate (4-5), and high (6-8).⁵ The patients with greater than 3 points of NCCN-IPI in this report had poor prognosis. Adjusted hazard ratio of NCCN-IPI score were 10.44 (95%CI: 1.27-86.06) for high-intermediate risk group and 28.74 (95%CI: 2.42-341.05) for high risk group. The use of ARV also significantly improved outcomes in term of treatment responses, progression-free survival and overall survival in this study. Most experts recommend to give ARV concomitantly during chemotherapy, because ARV treatment has been shown to decrease the risk of death and improve the prognosis of lymphoma.⁶ It is recommended to collaborate with physicians experienced in HIV treat-

ment to evaluate the possible drug interactions and to modify, if necessary, the ARV regimen when used together with chemotherapy. In this study, however, the use of Rituximab had no significant impact on the treatment outcomes. Data regarding the use of rituximab in patients with CD20-positive NHL have shown that it can be safely administered without an increase of toxicity. However, in HIV patients with a CD4+ T-cell count below 50 cells/ μ L, its use is cautious because an increase of the infectious complications has been reported in this setting.⁷

In the pre-ARV era, the unfavorable lymphoma prognostic factors were mainly related to the HIV-infection and the performance status of the patients, rather than to the lymphoma. With the advent of ARV, lymphoma-related factors became more important and HIV-related features were losing impact on the prognosis. In the ARV era, the outcome of HIV-infected patients with NHL has improved as reported by Kanin Reanthonglert et al. in this issue of the journal.

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