EBV 関連リンパ腫:リンパ腫原性におけるウイルスの役割

Epstein-Barr virus-associated lymphomas: the role of viruses in lymphomagenesis

木村 宏 先生 Hiroshi Kimura, M.D., Ph.D. 名古屋大学 大学院医学系研究科 ウイルス学 Department of Virology, Nagoya University Graduate School of Medicine

An estimated 17% of the worldwide incidence of cancer can be attributed to infections with bacteria and viruses. Currently, 7 human viruses are categorized as tumor viruses: Epstein-Barr virus (EBV), hepatitis B virus, hepatitis C virus, human herpesvirus 8, human papillomavirus, human T-cell leukemia virus type 1, and newly discovered Merkel cell polyomavirus. EBV is associated with a variety of lymphomas, such as Burkitt lymphoma, Hodgkin lymphoma, and extranodal NK/T-cell lymphoma. However, the mechanisms by which it induces lymphoid tumors other than Burkitt lymphoma are unclear. Recently, we reported that the genome of EBV present in EBV-associated lymphomas harbors frequent intragenic deletions and that the deletion of a gene essential for virus replication promotes lymphomagenesis in a mouse model. Although intragenic deletions have been detected in other tumor viruses, little is known about the effects and importance of those of EBV, a large DNA virus whose genome encodes more than 70 genes. In this lecture, I summarize the role of EBV in lymphomagenesis with a focus on the impact of intragenic deletions.