

Advances in Non-Hodgkin's Lymphoma

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Non-Hodgkin lymphomas (NHLs) are a heterogeneous group of malignancies of the lymphoid system. Based on the World Health Organization classification of hematological and lymphoid tumors, NHLs are a heterogeneous group of lymphoproliferative disorders originating in B lymphocytes, T lymphocytes, or natural killer cells. At the NCCN 18th Annual Conference, Dr. Jeremy Abramson and Dr. Andrew Dr. Zelenetz discuss 3 specific B-cell NHLs: follicular lymphoma, mantle cell lymphoma, and chronic lymphocytic leukemia. Follicular lymphoma (FL) is the most common subtype of indolent NHL, accounting for approximately 22% of all newly diagnosed cases of NHL. B-cell lymphomas account for approximately 90% of all lymphomas, and the 2 most common histological disease entities are follicular lymphoma and diffuse large B-cell lymphoma. Approximately 55,000 to 60,000 new cases of non-Hodgkin lymphoma are diagnosed annually in the United States, a number that has nearly doubled during the past 3 decades. Also, NHL arise either in lymph nodes and in other lymphatic tissues, such as the tonsils, spleen, Waldeyer's ring and thymus ("nodal" lymphomas), or in lymphatic cells in other organs ("extra-nodal" lymphomas). (Epstein-Barr virus (EBV) is associated with several different types of aggressive non-Hodgkin lymphoma (NHL). Individuals with primary or secondary immunodeficiency are susceptible to developing B cell

lymphoproliferation due to outgrowth of EBV-infected B cells that express type III latency characterized by expression of all nine latent-cycle EBV antigens. These cells would normally be susceptible to control by EBV-specific T cells, and strategies to restore EBV-specific immune responses may be effective therapeutically. EBV-associated lymphomas occurring in individuals who do not have a known immunodeficiency include NK and T malignancies with cytotoxic phenotypes, sporadic cases of B-NHL and lymphomatoid granulomatosis. The Ki67 antigen was first described by Gerdes & colleagues in the early 1980s, by use of a mouse monoclonal antibody against a nuclear antigen from a Hodgkins lymphoma (HL) derived cell line. Immunohistochemical expression of Ki67 antigen in paraffin section called Ki67 proliferative index, represents the active growth fraction of the tumor. As various studies confirmed the correlation of Ki67 index with tumor grade and clinical behavior of the tumors, it became the routine part of various tumor workup especially breast cancer and lymphoid neoplasms.

This short special issue of American Journal of Cancer Prevention brings together a couple of insightful papers that address some of these issues related to various strategies which can help to treatment of NHL patients. The aim of this special issue is evidence-based guidelines on survival, tumor markers, case reports and prevalence of *Epstein-Barr virus (EBV)* for NHL patients.