

Hodgkin Lymphoma, Non-Hodgkin Lymphoma, Burkitt's lymphoma

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Abstract: Lymphoma is a general name for a group of cancers that affect the lymphatic system. The two major types of lymphoma are Hodgkin lymphoma (HL) and Non-Hodgkin lymphoma (NHL). Most forms of HL are highly curable. HL is a unique hematopoietic neoplasm characterized by cancerous Reed-Sternberg cells in an inflammatory background. Patients are commonly diagnosed with HL in their 20s and 30s, and they present with supradiaphragmatic lymphadenopathy, often with systemic B symptoms. Even in advanced-stage disease, HL is highly curable with combination chemotherapy, radiation, or combined-modality treatment. Although the same doxorubicin, bleomycin, vinblastine, and dacarbazine chemotherapeutic regimen has been the mainstay of therapy over the last 30 years, risk-adapted approaches have helped de-escalate therapy in low-risk patients while intensifying treatment for higher risk patients. Even patients who are not cured with initial therapy can often be salvaged with alternate chemotherapy combinations, the novel antibody-drug conjugate brentuximab, or high-dose autologous or allogeneic hematopoietic stem cell transplantation. The programmed death-1 inhibitors nivolumab and pembrolizumab have both demonstrated high response rates and durable remissions in patients with relapsed/refractory HL. NHL includes a diverse and complex group of malignancies of lymphoreticular histogenesis and differentiation. They initially arise within lymph nodes and tend to grow as solid masses. This is in contrast to lymphocytic leukemias, which begin in the bone marrow and are characterized by a large proportion of malignant cells that circulate in the peripheral blood. The NHL most commonly originates from cells of the B-lymphocyte series, with an estimated 85% of European and American lymphoid neoplasms having this derivation. Burkitt's lymphoma (BL) is a highly aggressive B-cell NHL and is the fastest growing human tumor. It's associated with Epstein-Barr virus and

was one of the first tumors shown to have a chromosomal translocation that activates an oncogene (c-MYC). BL is the most common childhood cancer in areas where malaria is holoendemic. The incidence is very high in immunosuppressed patients in non-endemic areas, especially when associated with HIV infection. Outcome with intensive chemotherapy has improved and is now excellent in children, but the prognosis is poor in elderly adults. The success of intensive treatment relies on good supportive care. The therapy offered in oncology units in low-income countries is not as aggressive as in centers in high-income countries and outcomes are less successful. Adjuvant monoclonal antibody therapy with rituximab shows promise for improved outcomes and reduced toxic effects in the future.

Key words: Lymphoma, Hodgkin lymphoma (HL), Non-Hodgkin's lymphoma (NHL), Reed-Sternberg cells & Burkitt's lymphoma.