B-Cell Lymphomas

What are B-Cell Lymphomas?

B-cell lymphomas are a type non-Hodgkin lymphoma (NHL), a blood cancer that starts in lymphocytes, which are part of the body's immune system.[1] B-cell lymphomas form from B-cells, which normally help protect the body against bacteria or viruses by making proteins called antibodies. The B-cell lymphomas make up most (about 85%) of non-Hodgkin lymphomas in the United States.[1] There are many types of B-cell lymphomas including: chronic lymphocytic leukaemia (CLL), mantle cell lymphoma (MCL) and Waldenström macroglobulinaemia (WM).

Chronic Lymphocytic Leukaemia (CLL)

CLL is a type of leukaemia in adults and it accounts for about one in four cases of leukaemia.[2] The average age at the time of diagnosis is approximately 71 years of age.[2] In CLL, blood stem cells in the bone marrow become abnormal lymphocytes and these abnormal cells have difficulty fighting infections. As the number of abnormal cells grows there is less room for healthy white blood cells, red blood cells and platelets. This could result in anaemia, infection and bleeding.[3]

Treatment options for CLL vary and depend on the person's age, the disease risk group, and the reason for treating (i.e., which symptoms it is causing). Many people can live a long time with CLL, but in general it is very difficult to cure and early treatment has not been shown to prolong life. Additionally, treatments can cause side effects that are often intolerable to some people particularly those who are older. For this reason, many doctors recommend forgoing treatment until disease progression or the appearance of bothersome symptoms.[3]

Mantle Cell Lymphoma (MCL)

MCL is a rare, aggressive, B-cell NHL that represents around 5% of all NHLs and primarily affects men over the age of 60.[4] MCL results from a malignant transformation of a B lymphocyte in the outer edge of a lymph node follicle (the mantle zone). The transformed B lymphocyte grows in an uncontrolled way, resulting in the accumulation of lymphoma cells, which causes enlargement of lymph nodes.[5] MCL is usually diagnosed in a later stage, once the cancer has spread to a person's gastrointestinal tract and bone marrow.[5]

MCL is a fast-growing type of lymphoma. The treatment plan for people with MCL is based on several factors including how fit they are. Treatment for aggressive MCL in younger and older fit people may include combination chemotherapy regimens. However, for most people the cancer eventually returns. Research continues to aim at discovering new therapies for people with MCL.[6]

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Waldenström macroglobulinaemia (WM) is a rare slow-growing B-cell lymphoma that occurs in less than 2% of people with NHL.[6] The disease mainly impacts older people, with a median age of at diagnosis in the 60s.[7] It is primarily found in the bone marrow, although it can also be seen in lymph nodes and the spleen.[8] WM cells make large amounts of a certain type of antibody (immunoglobulin M, or IgM), which is known as a macroglobulin. Each antibody made by the WM cells is the same, so it is called a monoclonal protein, or just an M protein. The build-up of this M protein in the body can cause symptoms such as excess bleeding, problems with vision, and nervous system problems.[9]

WM is not curable. There are a number of therapy options available to manage the symptoms of WM including a variety of chemotherapy regimens and targeted therapies. Watchful waiting is recommended in many cases.[7] Because the disease is slow growing, the cancer will eventually return for most people requiring additional treatment.

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[1] American Cancer Society. What is Non-Hogking Lymphoma. http://www.cancer.org/cancer/non-hodgkinlymphoma/detailedguide/non-hodgkin-lymphoma-what-is-non-hodgkin-lymphoma Accessed November 30, 2016.
[2] American Cancer Society. What are the key statistics for chronic lymphocytic leukemia? http://www.cancer.org/cancer/leukemia-chroniclymphocyticcll/detailedguide/leukemia-chronic-lymphocytic-key-statistics. Accessed November 30, 2016.
[3] American Cancer Society. Typical treatment of chronic lymphocytic leukemia. http://www.cancer.org/cancer/leukemia-chroniclymphocyticcll/detailedguide/leukemia-chronic-lymphocytic-treating-treatment-by-risk-group. Accessed November 30, 2016.
[4] Lymphoma Research Foundation. Mantle Cell Lymphoma. http://www.lymphoma.org/site/pp.asp?c=bkLTKaOQLmK8E&b=6300157. Accessed November 30, 2016.
[5] Leukemia Lymphoma Society. Mantle Cell Lymphoma Facts. https://www.lls.org/sites/default/files/file_assets/FS4_Mantle%20Cell%20Lymphoma%20Facts.pdf. Accessed May 16, 2016.
[6] Lymphoma Research Foundation. Waldenström Macroglobulinemia. http://www.lymphoma.org/site/pp.asp?c=bkLTKaOQLmK8E&b=6300163. Accessed November 30, 2016.
[7] Oza and Rajkumar. Waldenstrom macroglobulinemia: prognosis and management. Blood Cancer Journal (2015) 5, e394; doi:10.1038/bcj.2015.28.
[8] American Cancer Society. What is Waldenstrom macroglobulinemia? http://www.cancer.org/cancer/waldenstrommacroglobulinemia/detailedguide/waldenstrom-macroglobulinemia-w-m. Accessed November 30, 2016.