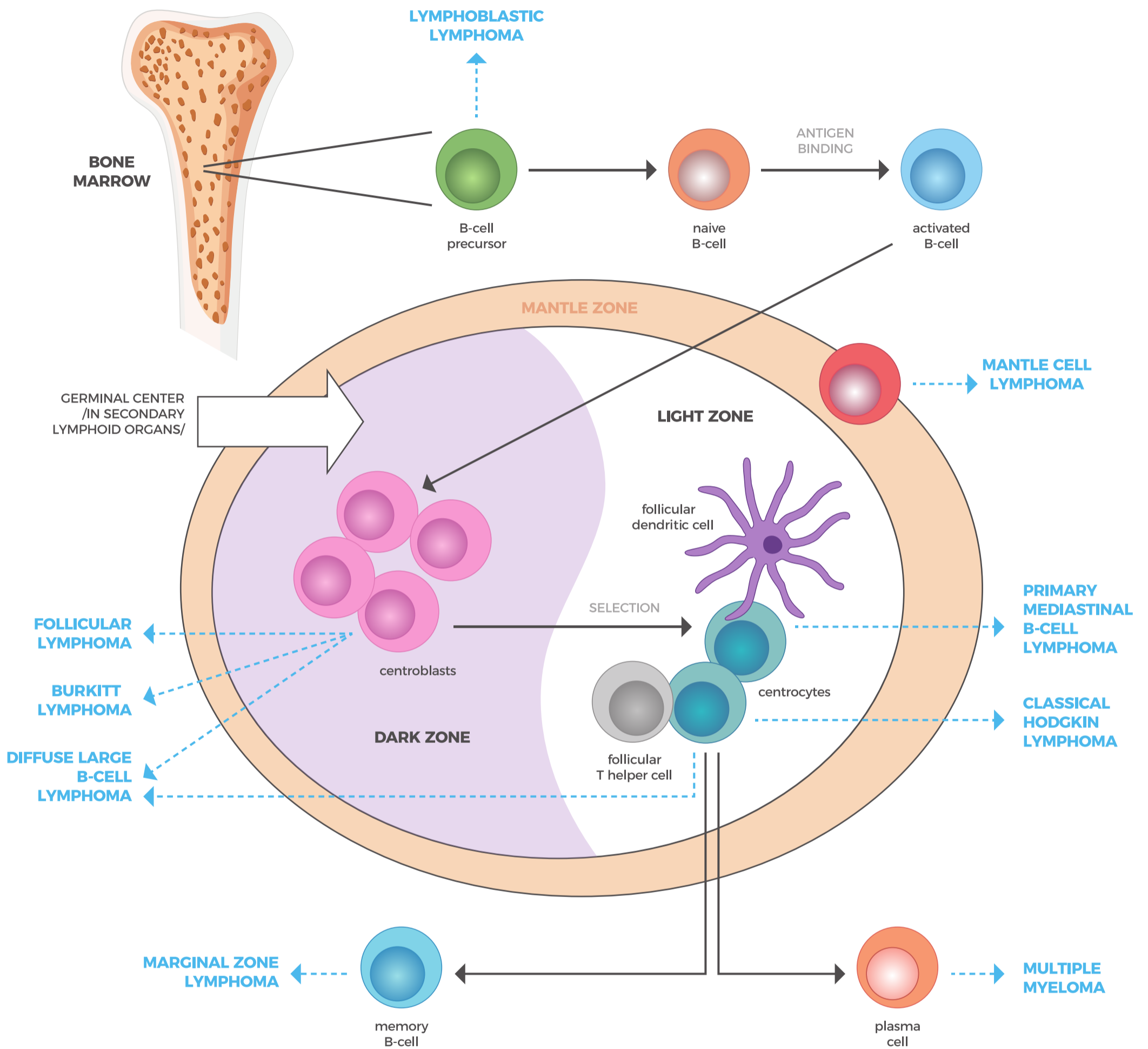


THE SCHEME PRESENTING THE PROCESS OF LYMPHOMAGENESIS IN THE CONTEXT OF B CELL ACTIVATION



B lymphocytes are responsible for the humoral immunological response, that is antibody generation. Precursor cells for B lymphocytes are formed in the bone marrow as a result of a complex maturation process. Naive B lymphocytes are cells that have not been exposed to an antigen. Exposition of B lymphocytes to antigens causes their activation, that is a series of molecular changes increasing their affinity to the recognized antigen. Activation takes place in germinal centers, structures located in the peripheral organs of the lymphatic system (e.g. lymph nodes, spleen). Activation converts B lymphocytes into plasmatic cells (antibody secreting) or memory cells (long-living cells providing immune memory). Activation of B lymphocytes is a complex process, and its disturbance (e.g. as a result of genetic mutations) may result in the development of hematological malignancies, mostly lymphomas. Blue arrows indicate stages of this process, at which disturbances may occur leading to the development of different types of lymphoma.

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