

Novel Immunophenotypic Features of Waldenström's Macroglobulinemia

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Establishing marrow involvement by a B-cell lymphoproliferative disorder with plasmacytic differentiation is fundamental in diagnosing Waldenström's macroglobulinemia (WM). A number of immunophenotyping modalities are invaluable in this regard including immunohistochemistry and flow cytometric immunophenotyping (FCIP) of B-cells and plasma cells (PC). Immunohistochemistry enhances the sensitivity of PC detection and often identifies neoplastic PCs physically dissociated from the lymphocytic component. B-cell FCIP sensitively detects the lymphoid component; however the B-cell immunophenotype does not suggest PC differentiation and has some overlap with chronic lymphocytic leukemia. PC FCIP reveals cells with a pattern of CD38 & CD138 co-expression identical to that seen in myeloma approximately 2/3rds of WM cases. In contrast to myelomatous PCs however, the PCs in WM usually co-express both CD19 and CD45; the only exception being those cases with a detectable non-IgM serum paraprotein. These immunophenotyping studies highlight the spectrum of lymphoplasmacytic differentiation seen between, and within, WM cases.