


Patient Information		
Name: TESTING, FLOW DOB (AGE) Sex: 5/12/1938 (71) M MRN (Client MRN): 124512		
Billing #: Order #:		
Client Information	Specimen Information	
Location: Shamokin Hospital Copy To: Outside Client.:	Collected Date: 8/28/2009 Accession Date: 8/28/2009 Reported Date: 8/31/2009 Submitting: - Dr Testing	Accession #: F09-23 Client Case #: Report Type: Final Report

Clinical History

Elevated white cell count with lymphocytosis.

Flow Cytometry Diagnosis

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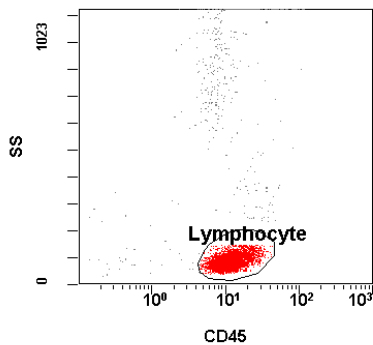
The flow cytometric study on "whole blood" demonstrates B-cell chronic lymphocytic leukemia (B-CLL); positive for ZAP70; negative for CD38.

COMMENT:

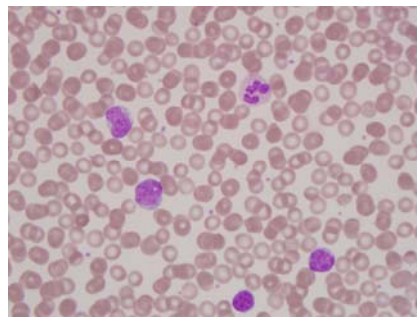
Since the disease is positive for ZAP70, while being negative for CD38, suggesting intermediate prognosis in combinatorial risk assignment. It should be pointed out that positivity for ZAP70 usually (not always) correlates with unmutated IgVH or more aggressive disease; negativity for ZAP70 does not always rule out unmutated IgVH or aggressive disease. Correlation with other prognostic markers and clinical information is recommended.

The analytic results on the "lymphocyte gate" are recorded in Table 1. Comprising approximately 92% of the total events, the lymphocyte population reveals a predominant small mature B-monotypic lymphoid population, which is positive for CD45, CD19, CD20 (low), CD43, CD23 and CD5 and shows restricted surface kappa immunoglobulin light chain in low intensity, while being negative for CD10 and other cell markers tested in this study. The remaining cells in the gate are mostly benign T cells. The blood film contains predominately small lymphoid cells with features of CLL cells. No increased prolymphocytes are present.

Specimen type: A: Peripheral Blood



CD45 versus side light scatter



CLL in PB

Photographic images and diagrams represent key findings in this case; they are not intended to replace a complete review of the final diagnostic report.

The following statement applies to Flow Cytometry, Immunohistochemistry, Molecular Genetics, Immunofluorescence, and In situ Hybridization Assays: This test was developed and its performance characteristics determined by Geisinger Medical Laboratories. It has not been cleared or approved by the U.S. Food and Drug Administration. The FDA has determined that such clearance or approval is not necessary. This test is used for clinical purposes. It should not be regarded as investigational or for research.

Supporting Data

WBD: 47K/ul with 93% lymphocytes.

Cell viability: 100%.

Table 1: Analytic results on lymphocyte gate

T-NK cell markers/ % positive cells	B-cell markers/ % positive cells	Myelomonocytic markers/% positive cells	Other markers/ % positive cells
CD2: 5	CD19: 93	CD14: 0	CD10: 0
CD3: 3	CD20: 19	CD33: 7	CD45: 100
CD4: 4	CD19/K: 86	CD7/CD33: 1	CD38: 4
CD8: 4	CD19/L: 1	CD64/CD14: 0	
CD5: 95	CD19/CD10: 0		
CD7: 8	CD19/CD5: 92		
CD56/CD16: 0	CD19/CD23: 92		
CD57: 1	CD19/FMC7: 92		

Prognostic markers for B-CLL *	
Prognostic cell markers	% of CLL cells
ZAP70	51
CD38	3
Combinatorial risk category	Intermediate

*The cytometric combinatorial risk category does not take into account other prognostic factors such as clinical category (Rai; Binet, etc.), cytogenetic abnormalities, or IgV_H gene rearrangement status.

The disease is considered positive for ZAP70 and CD38 if >20% of CLL cells are positive for ZAP70 and CD38.

CPT Code(s): LL3, ZAP70, 3CLX2, 88189