

# Hematologies Update Vol.3

3161 Elliott Avenue, Suite 200, Seattle, WA 98121 Phone (800) 860-0934 Fax: (206) 223-5550 [www.hematologies.com](http://www.hematologies.com)

## CASE STUDY- *Difference from Normal (ΔN:) Flow Cytometry* Identifies Secondary Underlying Neoplastic Population That May have been Missed at Other Laboratories

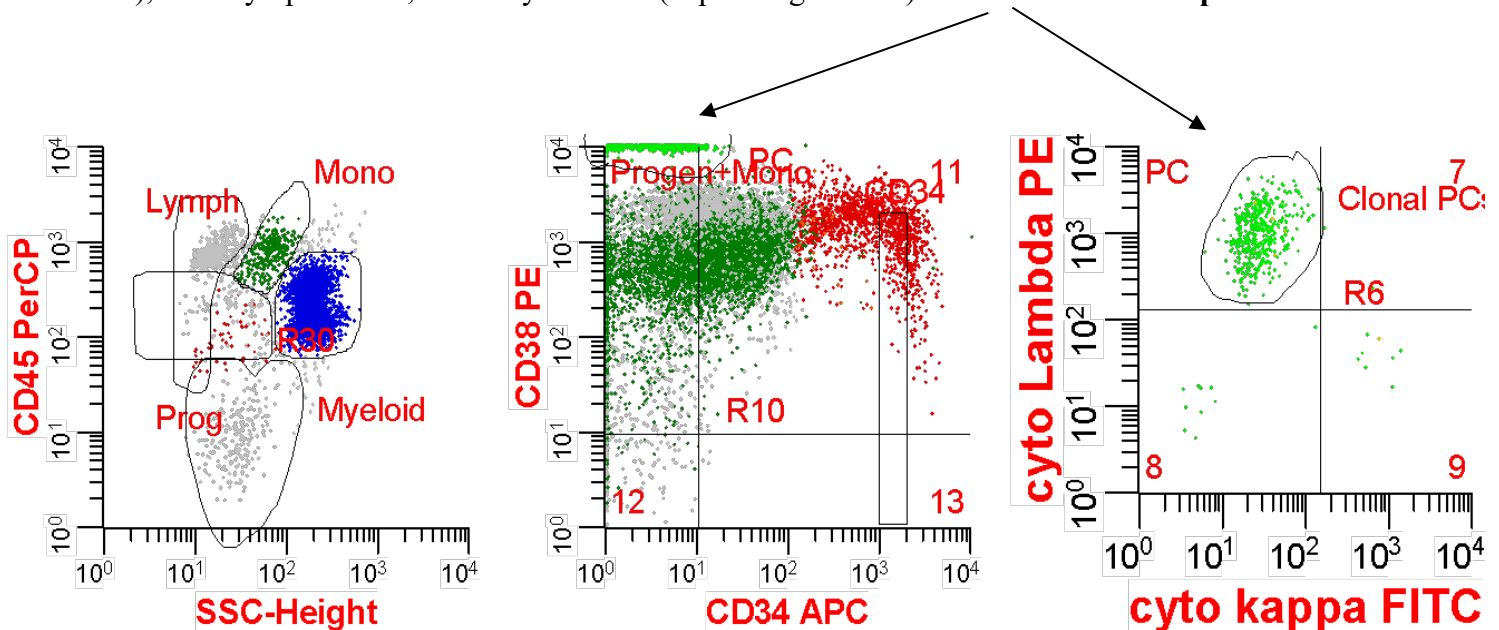
A bone marrow aspirate was sent to HematoLogics for *Difference from Normal (ΔN:) Flow Cytometry* analysis to determine if there was **Measurable Residual Disease (MRD)** for AML. While flow cytometric analysis determined that there was no evidence of AML, it did identify an abnormal plasma cell population, indicating the presence of a plasma cell neoplasm. The Leukemia-Associated Immunophenotype (LAIP) used at other laboratories may have missed this second neoplastic process. LAIP is targeted to the AML cell population found at diagnosis, whereas ΔN: looks for abnormalities in the entire composition of the bone marrow, in this case aberrant plasma cells.

### ΔN: FLOW CYTOMETRY

**Clinical History/Indications:** A patient with a clinical history of acute myeloid leukemia (AML).

**Analysis/Conclusions:** The flow cytometric findings show no evidence of aberrant myeloid antigen expression or abnormal myeloblasts (estimated lower level of detection <0.02%). Monoclonal plasma cells are identified.

**Flow Cytometric SSC/CD45 Differential:** 11% lymphocytes, 5.5% monocytes, 75% myeloid forms (all stages of maturation), 1.4% lymphoblasts, 0.7% myeloblasts (expressing CD117) and **2.5% abnormal plasma cells**.



#### References:

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