



Patient Demography: Female, 38 years old, presented with fever and body pain

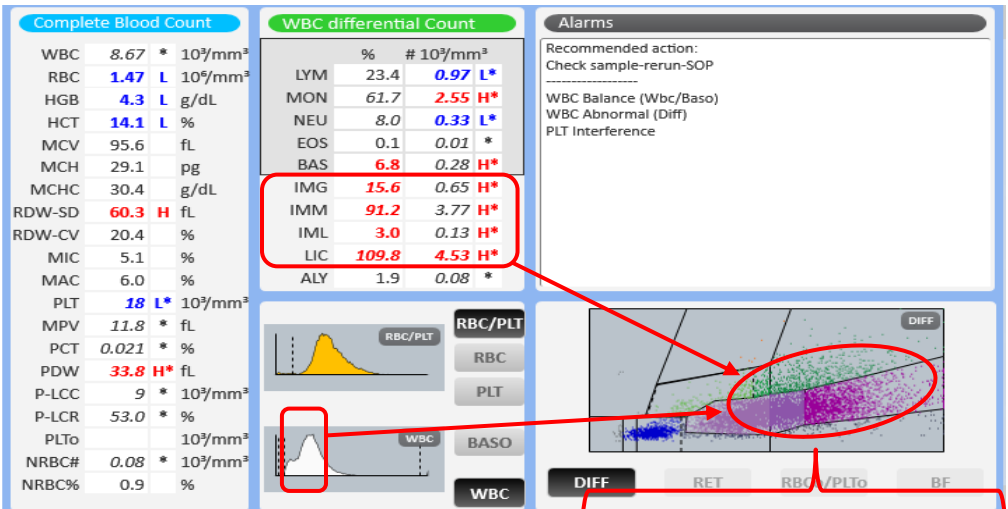
Diagnosis: Features suggestive of acute promyelocytic leukemia

Microscopic Review: Neutrophils 18%, Lymphocytes 2%, Monocytes 5%, Eosinophils 1%, Basophils 1%, Abnormal Promyelocyte 73%, Occasional n RBC seen. The abnormal promyelocytes are large cells, with a round eccentric nucleus, quite fine chromatin with nucleolus, very basophilic cytoplasm with a light perinuclear area, and many primary azurophil granules covering the cytoplasm and nucleus. Severe thrombocytopenia is noted.

Other Information: Negative for Dengue and Malaria test

Other Test: Immunophenotyping and cytogenetic reports confirmed the diagnosis of acute promyelocytic leukemia.

How Yumizen Can Assist: On the DIFF scattergram, we observe a population in continuation and emerging from the neutrophil and monocytic matrix towards the IMG and IMM matrices. The neutrophil matrix population is seen merging in monocytic and following in IMM and IMG, as the majority of the population is of abnormal promyelocytes. This population corresponds to the presence of myeloid series immature, showing very high LIC values along with high IMM and IMG. The population discussed shows abnormal promyelocyte morphology features as described in microscopy. The interesting finding is also noted in BASO –WBC histogram as a peak seen at neutrophils and monocytes location, suggesting the abnormal promyelocytes' morphological features lie between the neutrophils and monocytes area, which is not a usual finding in other leukemias. The hallmark of abnormal lymphocytes seen here is very high LIC, high IMM & IMG, along with a broad peak on BASO-WBC histogram at neutro-mono location.



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