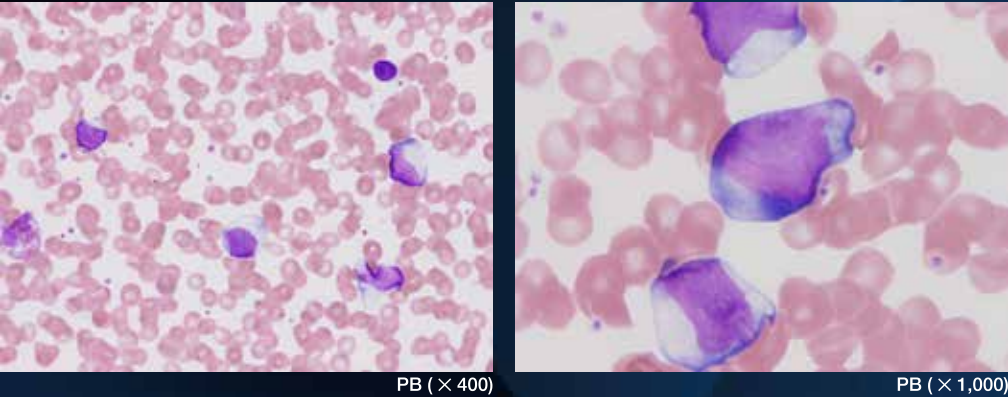


Case 16

Infectious Mononucleosis (IM)

The patient visited the hospital due to fever and lymphadenopathy.

Blood smear (May-Giemsa staining)



Visual differential counts

	(%)
Blast	0.0
Promyelo	0.0
Myelo	2.0
Meta	1.0
Band	7.5
Seg	10.5
Eosino	0.5
Baso	0.5
Mono	4.0
Lympho	32.5
Reactive-Ly	41.5
Other	0.0
NRBC	0.0

Celltac Data

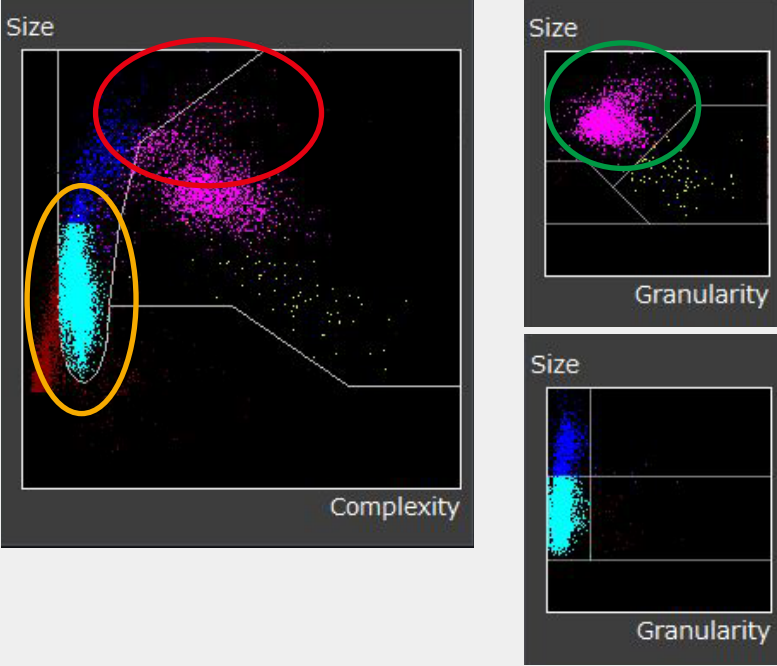
Numerical results

WBC	21.68	C	10 ³ /μL
RBC	5.03		10 ⁶ /μL
HGB	12.59		g/dL
HCT	36.7		%
MCV	73.0	L	fL
MCH	25.0	L	pg
MCHC	34.3		g/dL
RDW-CV	14.5		%
RDW-SD	42.3	L	fL
PLT	342.8	C	10 ³ /μL
PCT	0.24		%
MPV	7.1	L	fL
PDW	15.7	L	%
P-LCR	24.4	L	%
P-LCC	83.6		10 ³ /μL
NE	5.57	*	10 ³ /μL
LY	14.12	*	10 ³ /μL
MO	1.64	*	10 ³ /μL
EO	0.20	*	10 ³ /μL
BA	0.15	*	10 ³ /μL
NE%	25.71	*	%
LY%	65.16	*	%
MO%	7.55	*	%
EO%	0.90	*	%
BA%	0.68	*	%
RET	0.0865		10 ⁶ /μL
RET%	1.72		%
IRF	16.8		%
LFR	83.2	L	%
MFR	13.7		%
HFR	3.1	H	%

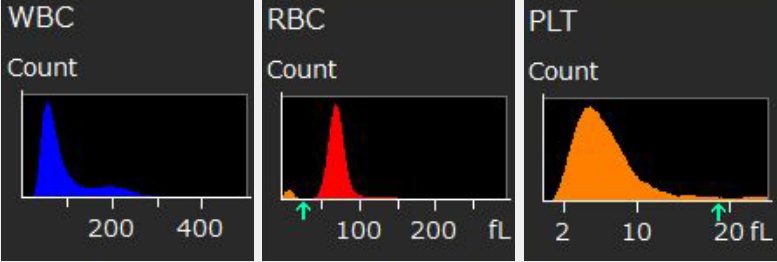
Flags

Morphological Flags	Numerical Flags
Blast	Leukocytosis
Immature Granulocyte	Lymphocytosis
Atypical Ly	Monocytosis
Ly-Mo Interference	PLT Clumps

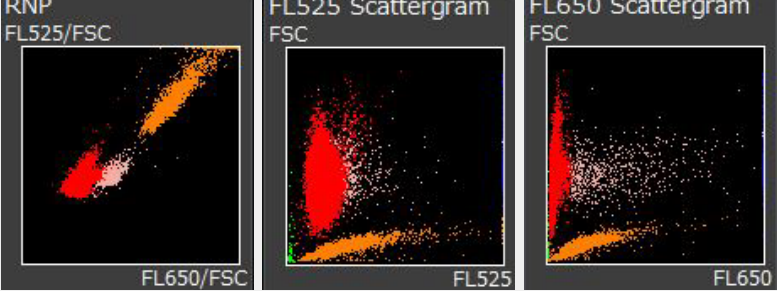
Scattergrams



Histograms



RET Scattergrams



Explanation of scattergram/histogram

The neutrophil plot on the MAIN scattergram shows a shift to the left (○), and the neutrophil plot on the NE-EO scattergram shows a distribution extending to the upper part (○), suggesting the appearance of immature cells. An “Immature Granulocyte” flag indicating this is shown. Additionally, the lymphocyte plot shows an abnormal distribution extending to the monocyte area (○), suggesting the appearance of abnormal lymphoid cells, such as reactive lymphocytes. An “Atypical Ly” flag indicating this is shown.

■ Data provision and supervision, Department of Clinical Laboratory, The University of Tokyo Hospital
Masahiro Jona

Explanation of case

The complete blood count revealed an increased leukocyte count of $21.68 \times 10^3/\mu\text{L}$, while the white blood cell differential count showed an elevated lymphocyte ratio (65.16%) and absolute count. Biochemical tests revealed elevated liver enzyme levels with LD of 775 U/L, AST of 151 U/L and ALT of 232 U/L. Additionally, viral tests showed an elevated EBV VCA-IgM Ab* titer ≥ 160 .
* EBV VCA-IgM Ab is also known as Epstein-Barr Virus Antibody to Viral Capsid Antigen, IgM.
Peripheral blood smear showed the presence of lymphocytes of varying sizes, with a basophilic cytoplasm and a coarse chromatin. They were deemed reactive lymphocytes (atypical Ly).