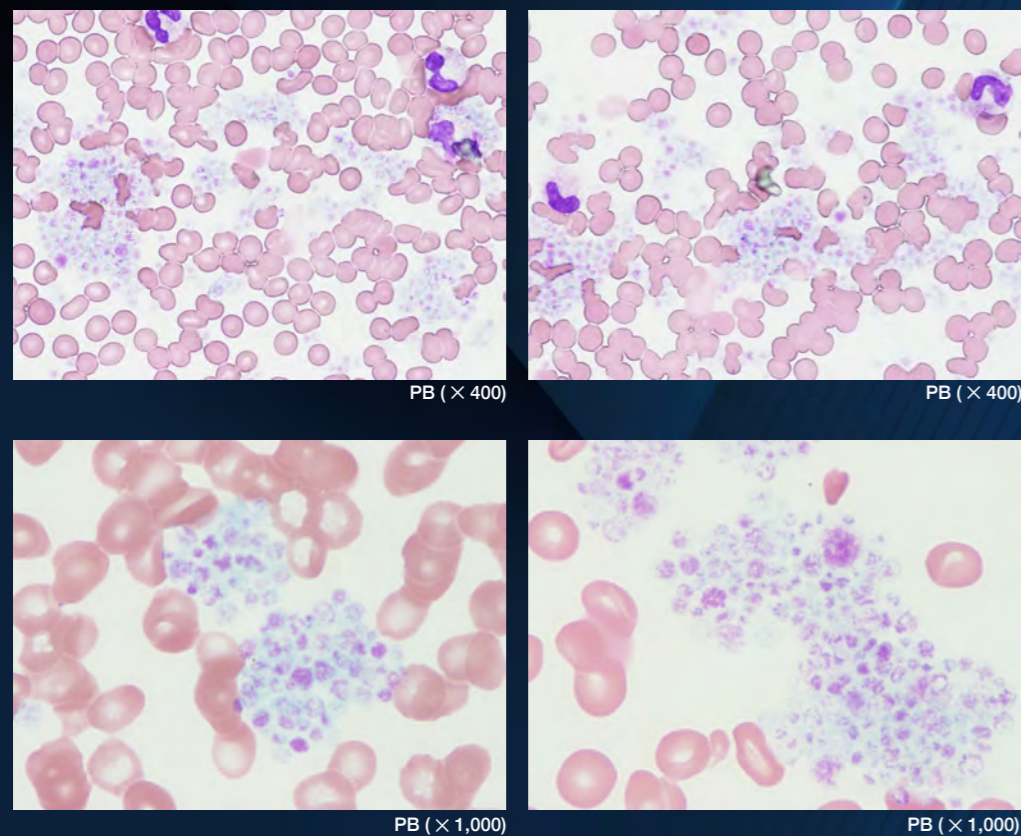


Case 6-1

# EDTA-dependent pseudothrombocytopenia (EDTA-anticoagulated specimen)

A male patient, age in his 70s, was attending the general practitioner for chronic renal failure. Tests showed thrombocytopenia, and thus the patient was referred to the hospital.

## Blood smear (May-Giemsa staining)

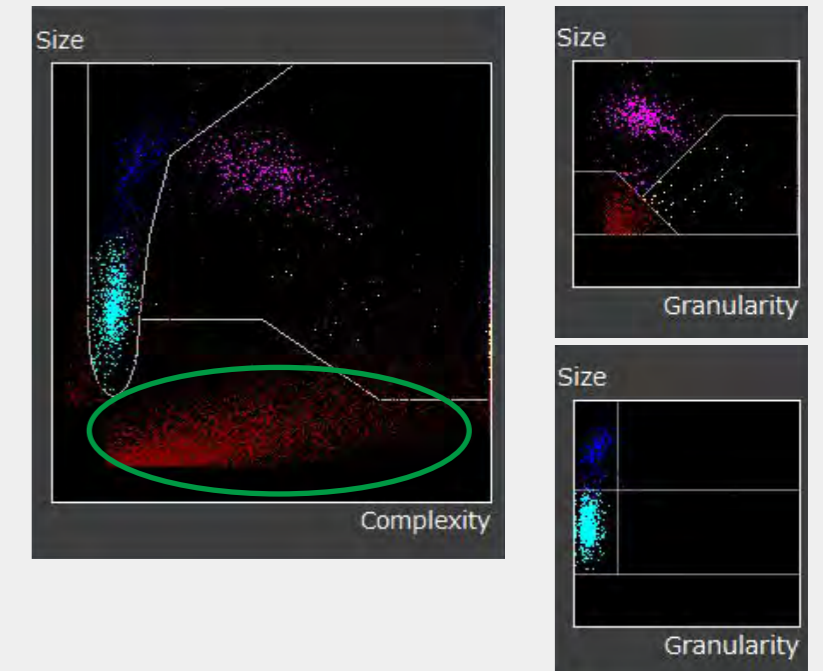


## Celltac Data

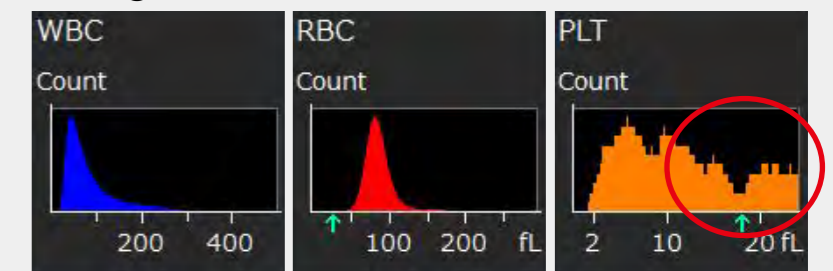
### Numerical results

WBC	8.09	C	10 <sup>3</sup> /μL
RBC	2.83	L	10 <sup>6</sup> /μL
HGB	8.51	L	g/dL
HCT	24.6	L	%
MCV	86.9		fL
MCH	30.1		pg
MCHC	34.6		g/dL
RDW-CV	16.9	H	%
RDW-SD	58.7	H	fL
PLT	31.9	C	10 <sup>3</sup> /μL
PCT	0.03	?	%
MPV	9.8	?	fL
PDW	19.0	?	%
P-LCR	55.9	?	%
P-LCC	17.8	?	10 <sup>3</sup> /μL
NE	2.33	*	10 <sup>3</sup> /μL
LY	4.61	*	10 <sup>3</sup> /μL
MO	0.75	*	10 <sup>3</sup> /μL
EO	0.23		10 <sup>3</sup> /μL
BA	0.17	H	10 <sup>3</sup> /μL
NE%	28.84	*	%
LY%	56.96	*	%
MO%	9.27	*	%
EO%	2.86		%
BA%	2.07	H	%

### Scattergrams



### Histograms



### Flags

Morphological Flags	Numerical Flags
Immature Granulocyte	Lymphocytosis
Atypical Ly	Anemia
Small Nucleated Cell	Thrombocytopenia
	<u>PLT Clumps</u>

## Explanation of case

A complete blood count revealed a decrease in platelet count. A peripheral blood specimen was prepared, and platelet clumps were observed. The image near the feathered edge of the peripheral blood smear showed platelet clumps in places. No fibrin strands were observed. Blood was drawn from the patient with an EDTA-2K blood collection tube containing kanamycin and retested because EDTA-dependent pseudothrombocytopenia was suspected. (Refer to Case 6-2 for more details).

## Explanation of scattergram/histogram

The PLT was low at 31.9 x 10<sup>3</sup>/μL. The WBC and PLT showed a "C" indicating suspected platelet clumps. This was also indicated by the display of a "PLT Clumps" flag. The PLT histogram showed peaks in the large area (○). It was thought that platelet clumps was measured as a large PLT, resulting in a false low platelet count. A large number of plots (○) in the ghost region on the MAIN scattergram, showing a left-to-right distribution, were considered as the platelet clumps. In the case of specimens with platelet clumps, it was suggested that WBC may have been falsely high due to the platelet clumps.