

Verein für
Association pour le
Associazione per il



medizinische Qualitätskontrolle
contrôle de qualité médical
controllo di qualità medico

Report

Differential Blood Smear H3

MQ 2015-2

Acknowledgements

The Mythic 18 analyzer was provided by the company Polymed. MQ employees conducted the measurements.

The ABX Micros CRP 200 instrument was provided to [sic: by] the company by Axonlabs. MQ employees conducted the measurements.

The findings of the KX21, XE-5000, ADVA 2120 devices and of the microscopic blood counts were generated by the Zentrallabor des Medizinbereichs Diagnostik HAD der Klinik für Hämatologie des Universitätsspitals Zürich (Central Laboratory of Medical Diagnostic HAD of the University Hospital Zurich Hematology Clinic). The lab is ISO/IEC 17025 certified (STS 445). Dr. Jeroen Goede is the responsible manager; Prof. MG Manz, M.D., the clinic director.

www.haematologie.usz.ch

For information regarding all analyses offered by the University Hospital of Zurich, see: www.uzl.usz.ch

(c) 2015 Verein für medizinische Qualitätskontrolle

Index

1	SAMPLE A	4
1.1	ABX Micros	4
1.2	Mythic	5
1.3	Sysmex KX21	6
1.4	Sysmex XE-5000	7
1.5	ADVIA 120	9
1.6	Differential Blood Smear	11
1.7	Summary of participant results	13
1.8	Qualab Codes	14
2	SAMPLE B	15
2.1	ABX Micros	15
2.2	Mythic	16
2.3	Sysmex KX21	17
2.4	Sysmex XE-5000	18
2.5	ADVIA 120	20
2.6	Differential Blood Smear	22
2.7	Summary of participant results	24
2.8	Qualab Codes	25

1 Sample A

1.1 ABX Micros



Findings MQ 2015-2 H3A

70 year old man

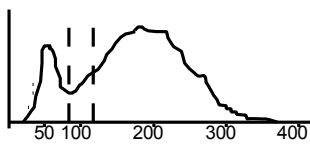
WBC :	14.8	H	$10^9/L$	MCV :	91.3	fL
RBC :	2.58	L	$10^{12}/L$	MCH :	30.8	pg
HGB :	79	L	g/L	MCHC:	337	g/L
HCT :	235	L	L/L	RDW :	13.7	%
PLT :	337		$10^9/L$	MPV :	6	L fL
PCT :	202		$10^{-2}L/L$	PDW :	11.3	%

WBC Fl ags : G1 G2

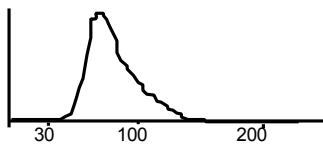
DIFF:

%LYM:	13.6	L	%	#LYM:	2.0	$10^9/L$
%MON:	6.4		%	#MON:	0.9	H $10^9/L$
%GRA:	80.0	H	%	#GRA:	11.9	H $10^9/L$

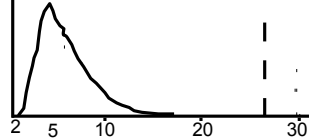
WBC



RBC



PLT



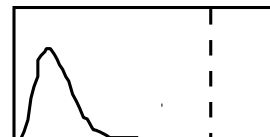
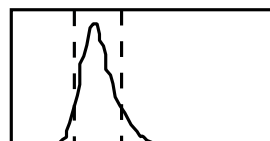
1.2 Mythic



Findings MQ 2015-2 H3A

70 year old man

WBC	14.6	h	10 ⁹ /l	3.5 / 10.0
LYM	3.2		10 ⁹ /l	1.2 / 3.2
MON	1.8	H	10 ⁹ /l	0.1 / 1.0
GRA	9.6	H	10 ⁹ /l	1.2 / 6.8
LYM%	22.2		%	17.0 / 48.0
MON%	12.1	H	%	2.0 / 10.0
GRA%	65.7		%	43.0 / 76.0
RBC	2.52	l	10 ¹² /l	4.00 / 5.70
HGB	80	L	g/l	140 / 180
HCT	0.236	L	l/l	0.420 / 0.540
MCV	93.7		fl	80.0 / 100.0
MCH	31.7		pg	26.0 / 34.0
MCHC	339		g/l	310 / 365
RDW	14.9		%	10.0 / 16.0
PLT	301		10 ⁹ /l	150 / 400
MPV	6.7	l	fl	7.0 / 11.0
PCT	0.202		cl/l	0.100 / 0.500
PDW	14.1		%	10.0 / 18.0



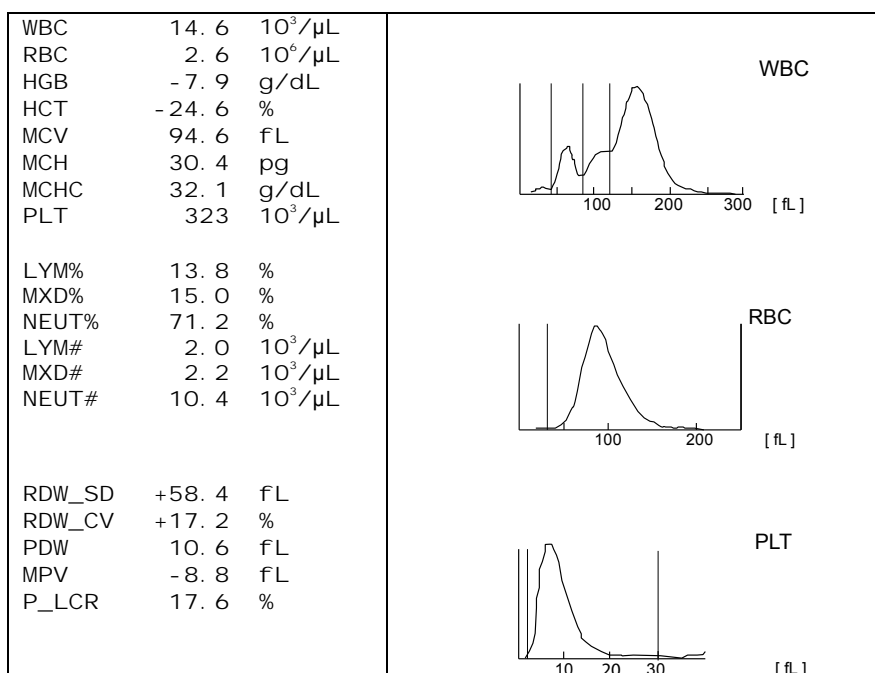
1.3 Sysmex KX21



Findings MQ 2015-2 H3A

70 year old man

Analysis	Result	Unit	Reference Value
Blood count			
Hemoglobin	79	g/l	134-170
Hematocrit	0.246	l/l	0.350-0.500
Erythrocytes	2.6	T/l	4.2-5.7
MCV	94.6	fl	80-100
MCH	30.4	pg	26-34
MCHC	321	g/l	310-360
RDW	* 17.2	%	11.0-14.8
Thrombocytes	323	G/l	143-400
MXD	2.20		
Leukocytes	* 14.6	G/l	3.0-9.6
Leucocyte Differentiation			
Neutrophiles	* 10.4	G/l	1.40-8.00
Lymphocytes	2.00	G/l	1.50-4.00



1.4 Sysmex XE-5000

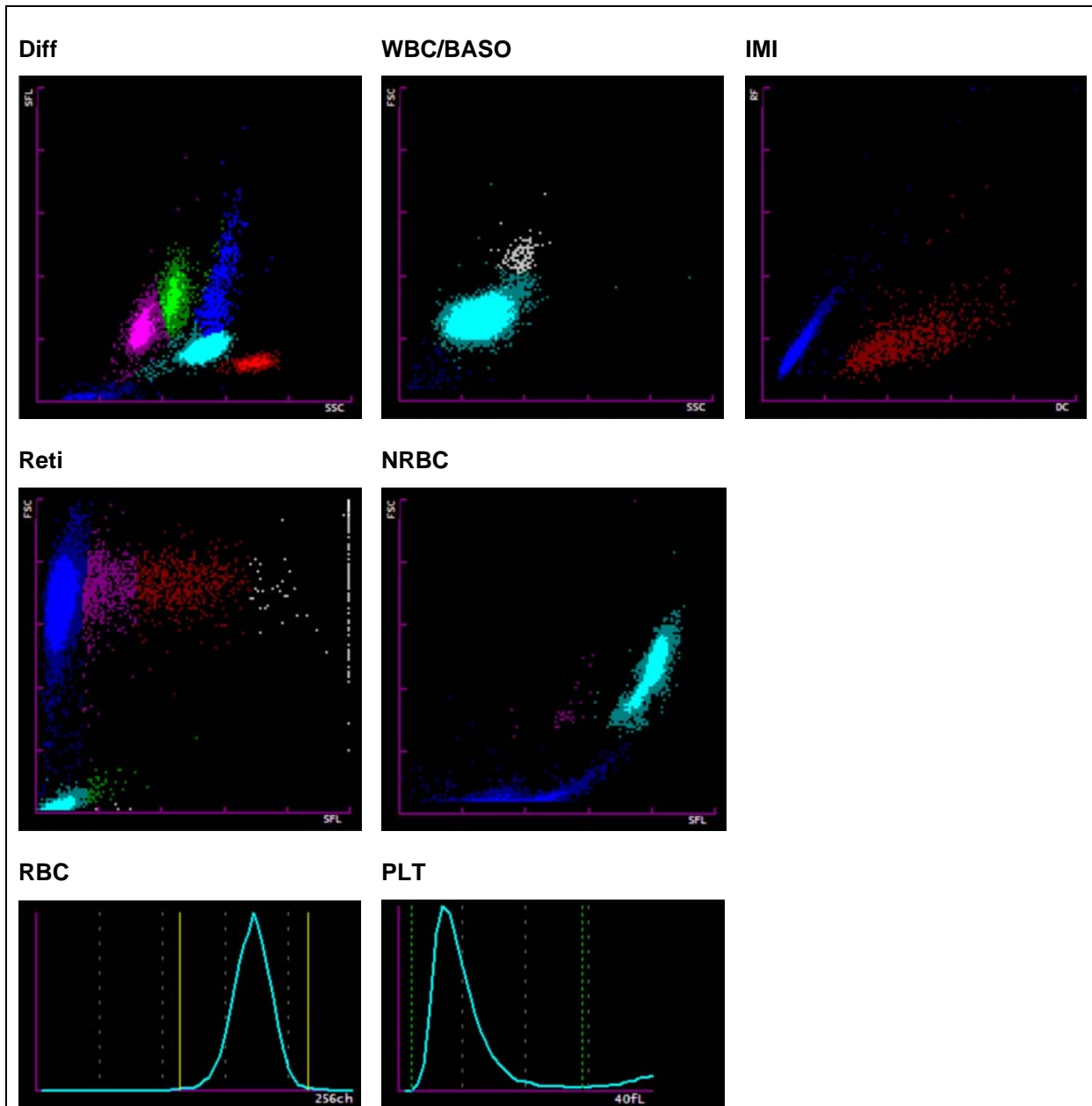


Findings MQ 2015-2 H3A

70 year old man

Analysis	Result	Unit	Reference value
Blood Count			
Hemoglobin	78	g/l	134-170
Hematocrit	0.250	l/l	0.400-0.500
Erythrocytes	2.54	T/l	4.2-5.7
MCV	98.4	fl	80-100
MCH	30.7	pg	26-34
MCHC	312	g/l	310-360
Mikrocytes	* 17.9	%	11.0-14.8
Thrombocytes	326	G/l	143-400
Leucocytes	* 14.74	G/l	3.0-9.6
Leucocyte Differentiation			
Neutrophils	* 10.27	G/l	1.40-8.00
Monocytes	* 1.77	G/l	0.16-0.95
Eosinophils	0.65	G/l	0.00-0.70
Basophils	0.09	G/l	0.00-0.15
Lymphocytes	1.96	G/l	1.50-4.00
IG abs.	0.76	G/l	0.00-0.03
IG %	5.2	%	0.0-0.5
NRBC abs.	0.02	G/l	
NRBC	0.1	/100 Lc	

Findings HAD MQ 2015-2 H3A



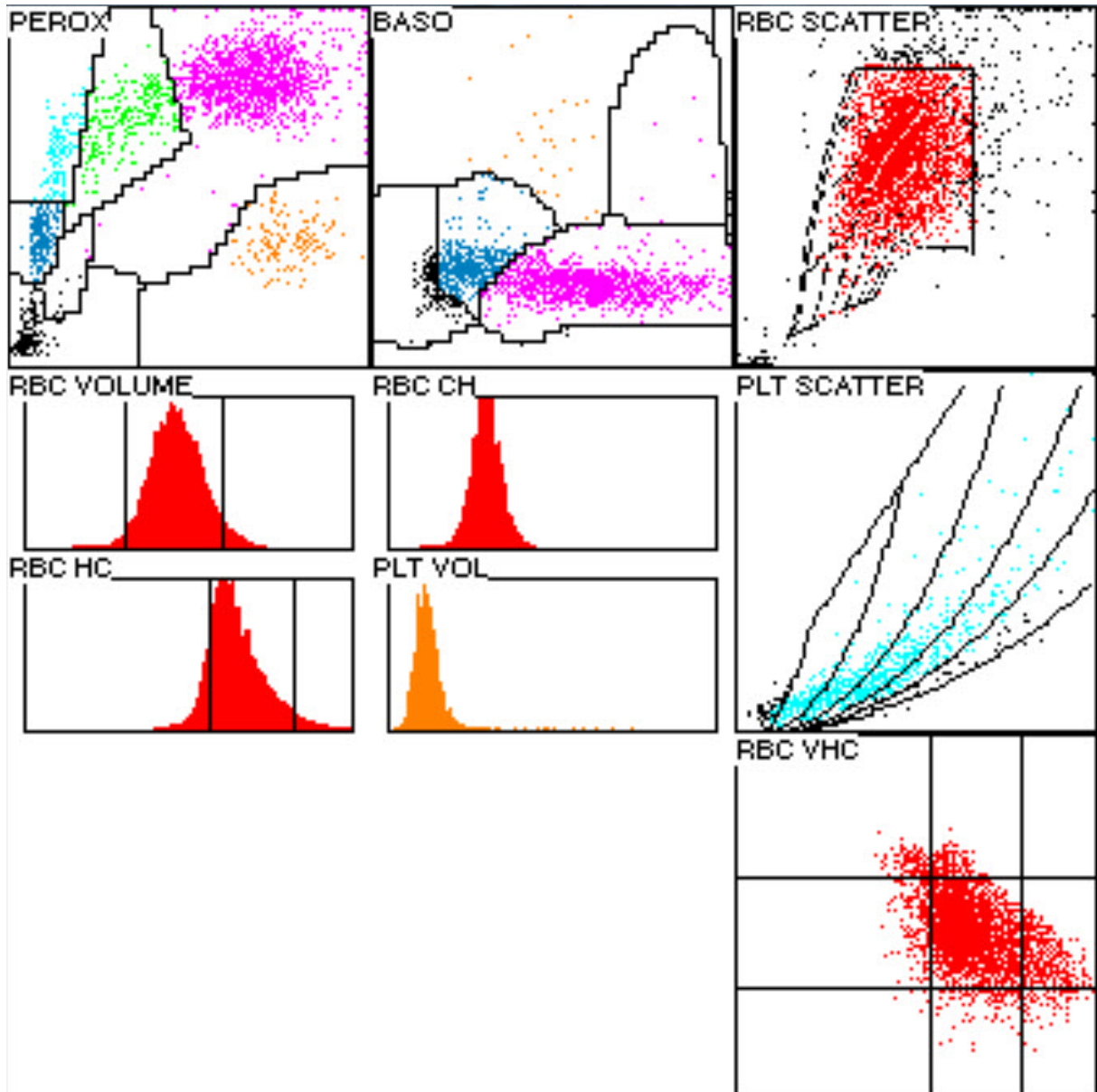
1.5 ADVIA 120



Findings MQ 2015-2 H3A

70 year old man

Analysis		Result	Unit	Reference value
Blood Count				
Hämoglobin	*	79	g/l	134-170
Hämatokrit	*	0.2444	l/l	0.400-0.500
Erythrozyten	*	2.63	T/l	4.2-5.7
MCV		92.8	fl	80-100
MCH		30.1	pg	26-34
MCHC		324	g/l	310-360
Mikrozyten		1.6	%	0-2.0
Makrozyten	*	4.3	%	0-2.0
Hypochrome Ec	*	11.6	%	0-2.0
Hyperchrome Ec	*	3.4	%	0-2.0
RDW	*	17.4	%	11.0-14.8
Thrombozyten		330	G/l	143-400
Vd. L-SHIFT		0	+	Keine (0)
Leukozyten	*	14.64	G/l	3.0-9.6
Blutbild				
Neutrophile	*	10.68	G/l	1.40-8.00
Monozyten	*	1.07	G/l	0.16-0.95
Eosinophile		0.57	G/l	0.00-0.70
Basophile		0.08	G/l	0.00-0.15
Lymphozyten		1.69	G/l	1.50-4.00
LUC		3.7	%	0.0-4.0



1.6 Differential Blood Smear

Findings MQ 2015-2 H3A

37 year old man

Analysis		Result	Unit	Reference value
Neutrophils total	*	10.32	G/l	1.40-8.00
Monocytes	*	1.46	G/l	0.16-0.95
Eosinophils		0.59	G/l	0.00-0.70
Basophils		0.07	G/l	0.00-0.15
Lymphocytes		1.61	G/l	1.50-4.00
Neutrophils total		70.5	%	40.0-74.0
Neutrophils Band		18.5	%	0.0-20.0
Neutrophils Segmented	*	52.0	%	30.0-50.0
Monocytes	*	10.0	%	3.4-9.0
Eosinophils		4.0	%	0.0-7.0
Basophils		0.5	%	0.0-1.5
Lymphocytes	*	11.0	%	19.0-48.0
Plasmacells		0.0	%	0-0.5
Blasts		0.0	%	0
Promyelocytes	*	0.5	%	0
Myelocytes	*	2.5	%	0
Metamyelocytes	*	1.0	%	0
Nucleated Red Cells		0	/100 Lc	

Comment

Washing out of myeloid precursors and of up to 0.5% promyelocytes. Neutrophil granulocytes with fine cytoplasmic granulation. Many with fine cytoplasmic vacuoles, rarely with fine basophilic streaks.

Lymphocytes usually small, with a dense chromatin structure and narrow cytoplasm.

Platelets; Slight anisocytosis, rarely agranular forms, no giant forms.

Red blood cell count; Anemia, minor hypochromasia, marked anisocytosis with few micro- and macrocytes, isolated megalocytes upon microscopic review. Discrete polychromasia, poikilocytosis with many acanthocytes, rare spherocytes□no red cell inclusions.

Dr. J. Goede / K. Schreiber

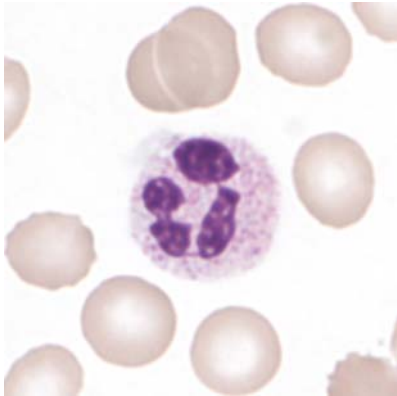


Abb 1. Neutrophil (Seg)

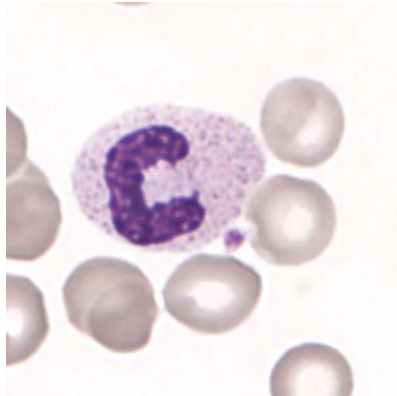


Abb 2. Neutrophil (Band)

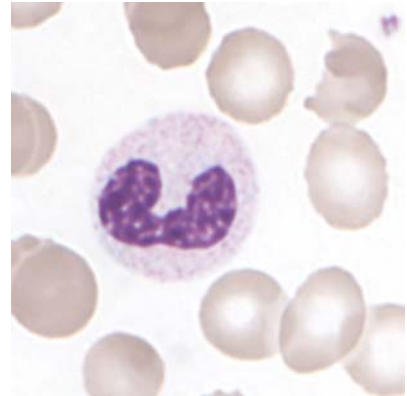


Abb 3. Neutrophil (Band)

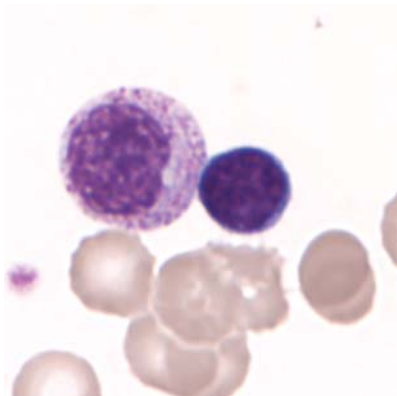


Abb 4. Myelocyte+Lymphocyte

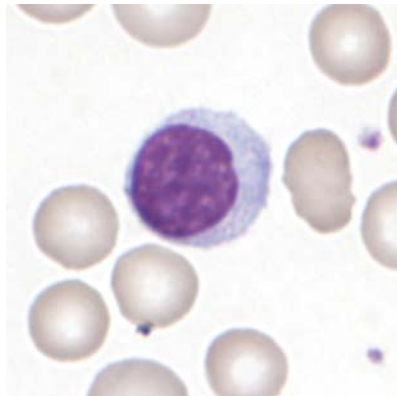


Abb 5. Lymphocyte

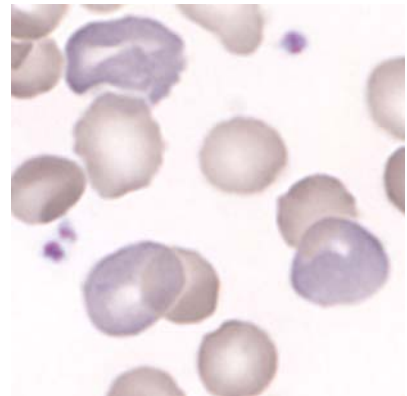


Abb 6. Polychromasia

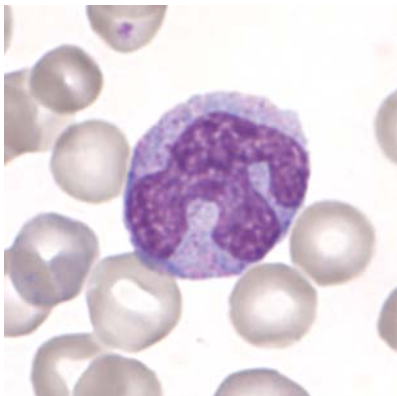


Abb 7. Monocyte

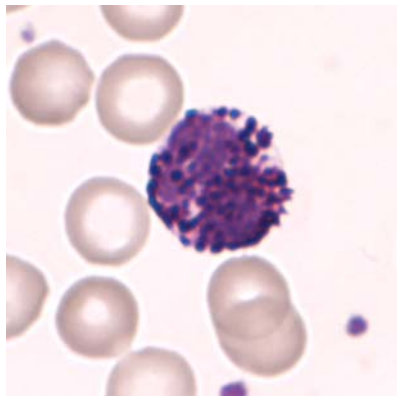


Abb 8. Basophil

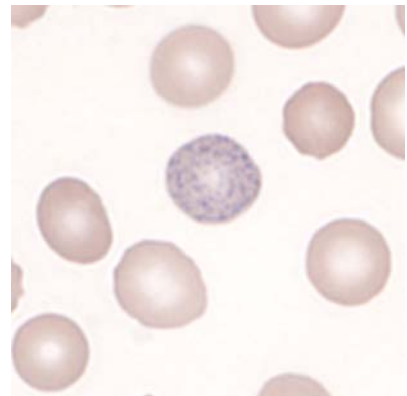


Abb 9. basophilic strippling

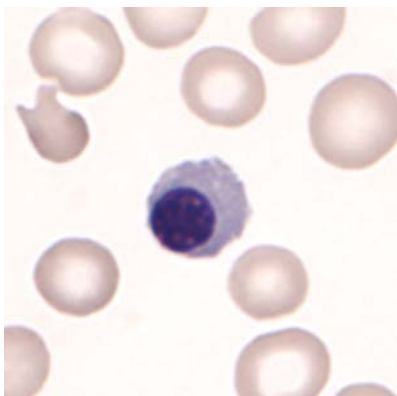


Abb 10. Erythroblast

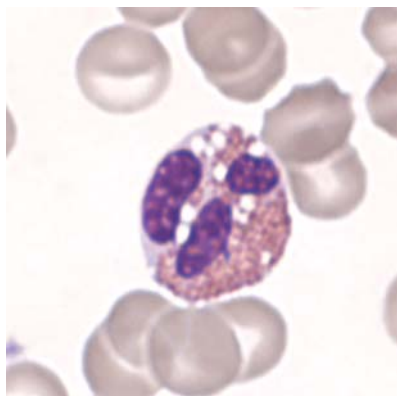


Abb 11 Eosinophil with vacuolisation

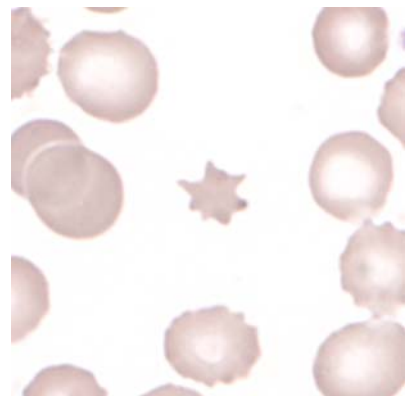


Abb 12. Akanthocyte

1.7 Summary of participant results

Leucozyte Differential H3-A

	0	1-4	5-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	>79
<i>Neutrophils Band</i>	2	16	47	130*	108	33	8	6	1		
<i>Neutrophils Segmented.</i>	1			1	16	36	101	125*	61	8	2
<i>Eosinophils</i>	9	177*	155	7	2		1				
<i>Basophile</i>	186*	162	3								
<i>Monocytes</i>	27	133	149	42*							
<i>Lymphocytes</i>	1		20	245*	78	6		1			
<i>Plasmacells</i>	339*	10	2								
<i>Blasts</i>	328*	18	5								
<i>Promyelocytes</i>	287*	56	8								
<i>Myelocytes</i>	197	123*	24	7							
<i>Metamyelozyten</i>	241	108*	2								
<i>Erythrocytes Nucleated</i>	291*	59			1						
<i>Unknown</i>	325*	15	7	3	1						
<i>Smudge cells</i>	335*	14	2								

Evaluation H3-A

	<i>light</i>	<i>medium</i>	<i>strong</i>		<i>light</i>	<i>medium</i>	<i>strong</i>
<i>Hypersegmentation</i>	29	2	1	<i>Hypochromic Ec</i>	76*	39	8
<i>Pelger-Hüet Anomaly</i>	7	2		<i>Polychromatic Ec</i>	107*	94	12
<i>Coarse Granulation</i>	118	64	9	<i>Anisocytes</i>	121	127*	17
<i>Basophilic Stripling</i>	30	4		<i>Mikrocytes</i>	116*	45	5
<i>Vacuoles</i>	74	20	4	<i>Makrocytes</i>	95*	26	
<i>Reaktive Lymphocytes</i>	64	15	8	<i>Megalocytes</i>	16*	3	
<i>Atypical Lymphocytes</i>	3			<i>Poikilocytosis</i>	87*	32	5
<i>Others</i>	7	5	1	<i>Ovalocytes</i>	31	6	
				<i>Target Cells</i>	38	1	
				<i>Akanthocytes</i>	47	26*	12
<i>Anisocytosis</i>	89*	24	3	<i>Echinocytes</i>	46	71	62
<i>Megakaryocyte Nucleaus</i>	13	2		<i>Sickle Cells</i>			
<i>Granulation</i>	20	1	1	<i>Fragmentocytes</i>	26	4	
<i>Others</i>				<i>Spherocytes</i>	33	10	
				<i>Stomatocytes</i>	9		1
				<i>Basophilic Stripling</i>	78	17	1
				<i>Howell-Jolly Bodies</i>	17	2	
				<i>Pappenheim Bodies</i>	3		
				<i>Others</i>	6	1	1

1.8 Qualab Codes

Summary of the participant codes
(Bold printed: expected codes)

Code	Text	Number
31	Pathologic findings	98
30	Pathologic findings, refer to expert	197
15	Polychromatophilic Red Cells	134
2	Neutrophils, left shift	104
4	Neutrophils, Toxic Changes	80
12	Microcytes	68
14	Hypochromic Erythrocytes	60
27	Erythrocytes, other:	49
16	Poikilocytosis	43
13	Makrocytes	41
5	Atypical lymphocytes, probably reactive	37
25	Basophilic stripping	37
29	Normal Blood Smear	37
21	Spherocytes	21
8	Leukocytes, other:	17
9	Macrothrombocytes	16
20	Fragmentocytes	14
22	Rouleaux	14
19	Targetcells	10
1	Neutrophils, hypersegmentation of nucleus	9
17	Elliptocytes/Ovalocytes	9
6	Atypical Lymphocytes, probably neoplastic	8
24	Howell-Jolly bodies	8
18	Stomatocytes	5
3	Pelger Hüet Anomaly	3
10	Thrombocyte aggregates	3
11	Thrombocytes, Giant	2
23	Erythrocytes agglutination	2
28	Parasites	2

2 Sample B

2.1 ABX Micros



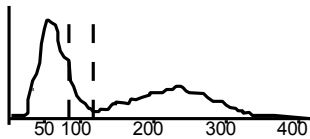
Findings MQ 2015-2 H3B

57 year old woman

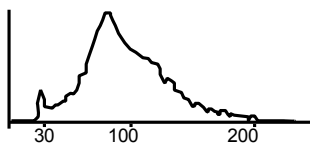
WBC :	6.1	$10^9/L$	MCV :	107.1	H	fL
RBC :	2.39	L $10^{12}/L$	MCH :	37.5	H	pg
HGB :	90	L g/L	MCHC:	350		g/L
HCT :	256	L L/L	RDW :	10.9		%
PLT :	645	H $10^9/L$	MPV :	9.0		fL
PCT :	580	H $10^{-2}L/L$	PDW :	14.4		%

DIFF:					
%LYM:	40.2	%	#LYM:	2.4	$10^9/L$
%MON:	10.1	H %	#MON:	0.6	$10^9/L$
%GRA:	49.7	%	#GRA:	3.1	$10^9/L$

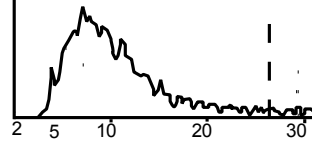
WBC



RBC



PLT



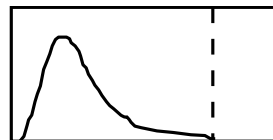
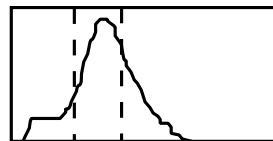
2.2 Mythic



Findings MQ 2015-2 H3B

57 year old woman

WBC	6.5		10 ⁹ /l	3.5 / 10.0
LYM	3.2		10 ⁹ /l	1.2 / 3.2
MON	0.6		10 ⁹ /l	0.1 / 1.0
GRA	2.7		10 ⁹ /l	1.2 / 6.8
LYM%	49.4	h	%	17.0 / 48.0
MON%	8.9		%	2.0 / 10.0
GRA%	41.7	l	%	43.0 / 76.0
RBC	2.49	L	10 ¹² /l	4.00 / 5.70
HGB	90	l	g/l	140 / 180
HCT	0.27	l	l/l	0.420 / 0.540
MCV	108.4	h	fl	80.0 / 100.0
MCH	36.1	H	pg	26.0 / 34.0
MCHC	333		g/l	310 / 365
RDW	22.9	h	%	10.0 / 16.0
PLT	550	H	10 ⁹ /l	150 / 400
MPV	9.9		fl	7.0 / 11.0
PCT	0.545	h	cl/l	0.100 / 0.500
PDW	15.5		%	10.0 / 18.0

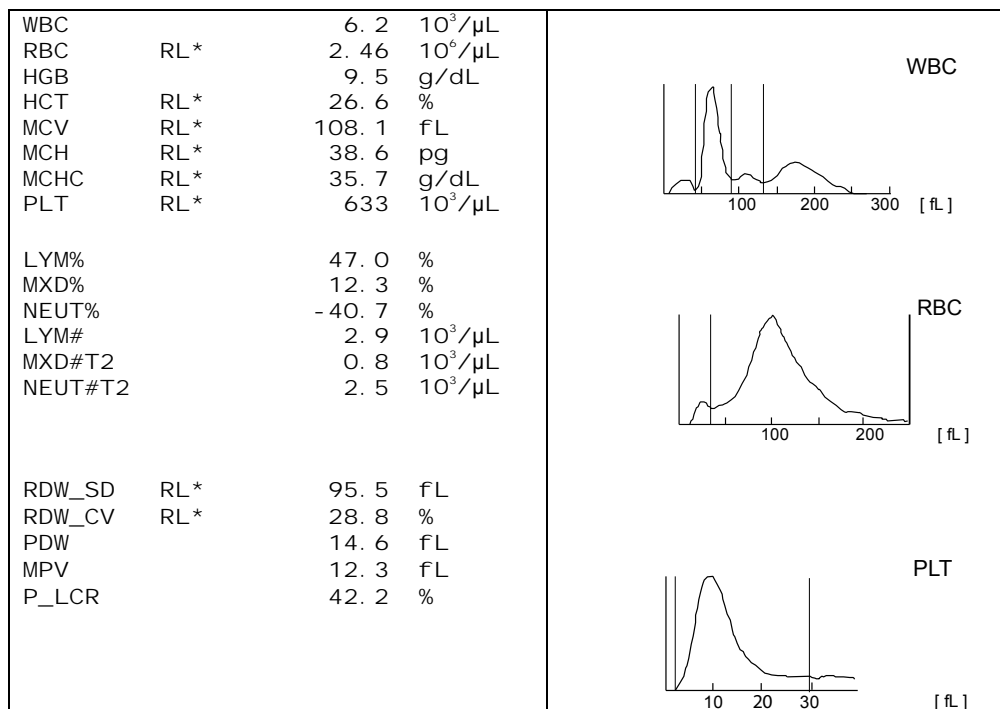


2.3 Sysmex KX21



Findings MQ 2015-2 H3B
57 year old woman

Analysis	Result	Unit	Reference Value
Blood count			
Hemoglobin	* 95	g/l	117-153
Hematocrit	* 0.266	l/l	0.350-0.460
Erythrocytes	* 2.46	T/l	3.9-5.2
MCV	* 108.1	fl	80-100
MCH	* 38.6	pg	26-34
MCHC	35.7	g/l	310-360
RDW	* 28.8		
<u>Thrombocytes</u>	* 633	G/l	143-400
<u>Leukocytes</u>	6.2	G/l	3.0-9.6



2.4 Sysmex XE-5000

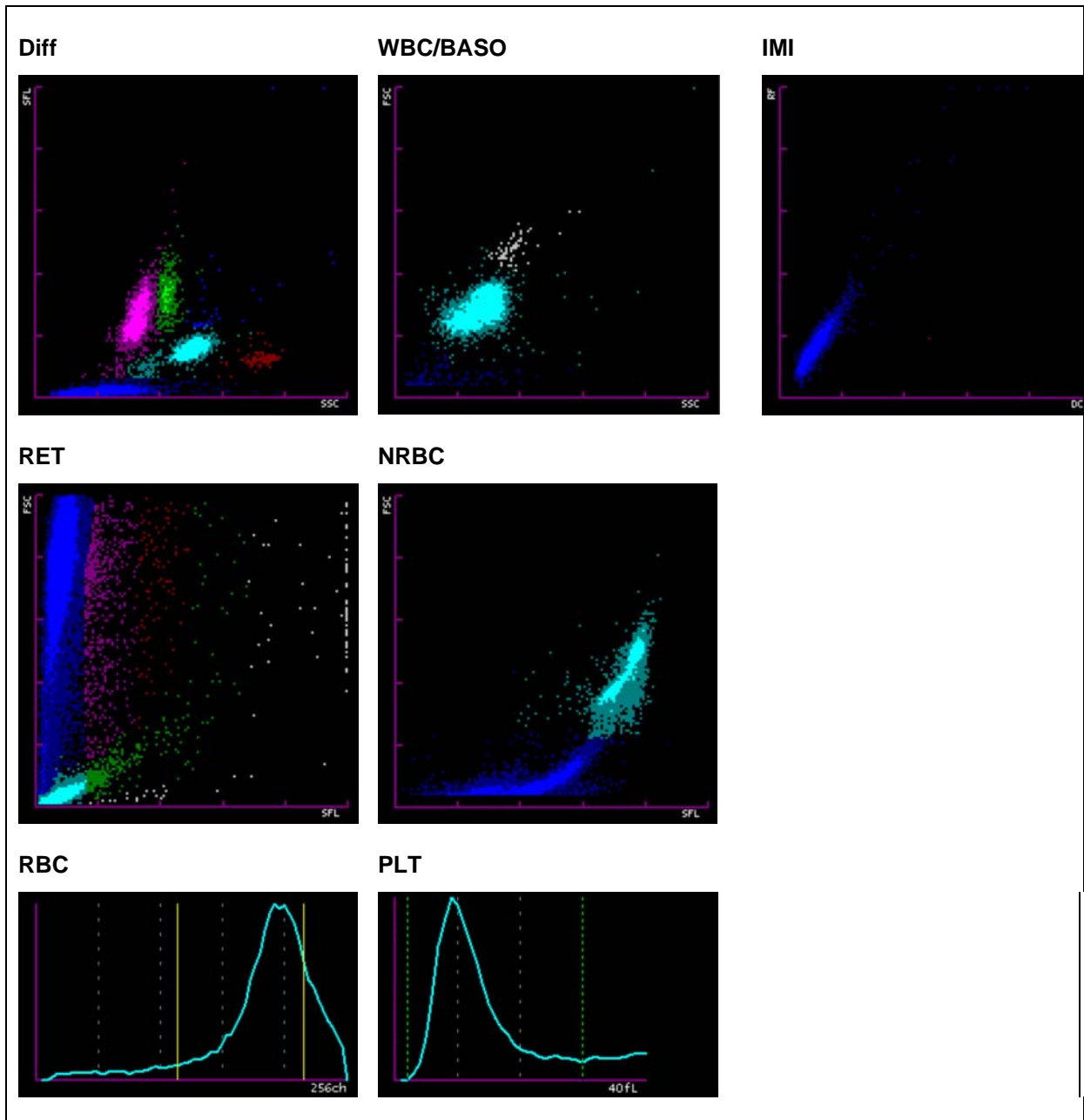


Findings MQ 2015-2 H3B

57 year old woman

Analysis	Result	Unit	Reference value
Blood Count			
Hemoglobin	95	g/l	117-153
Hematocrit	0.271	l/l	0.350-0.460
Erythrocytes	2.51	T/l	3.9-5.2
MCV	* 108.0	fl	80-100
MCH	* 37.8	pg	26-34
MCHC	351	g/l	310-360
Mikrocytes	* 26.6	%	11.0-14.8
Thrombocytes	* 541	G/l	143-400
Leucocytes	6.30	G/l	3.0-9.6
Leucocyte Differentiation			
Neutrophils	2.51	G/l	1.40-8.00
Monocytes	0.69	G/l	0.16-0.95
Eosinophils	0.17	G/l	0.00-0.70
Basophils	0.07	G/l	0.00-0.15
Lymphocytes	2.86	G/l	1.50-4.00
IG abs.	* 0.05	G/l	0.00-0.03
IG %	* 0.8	%	0.0-0.5
NRBC abs.	0.00	G/l	
NRBC	0.0	/100 Lc	

Findings HAD MQ 2015-2 H3B

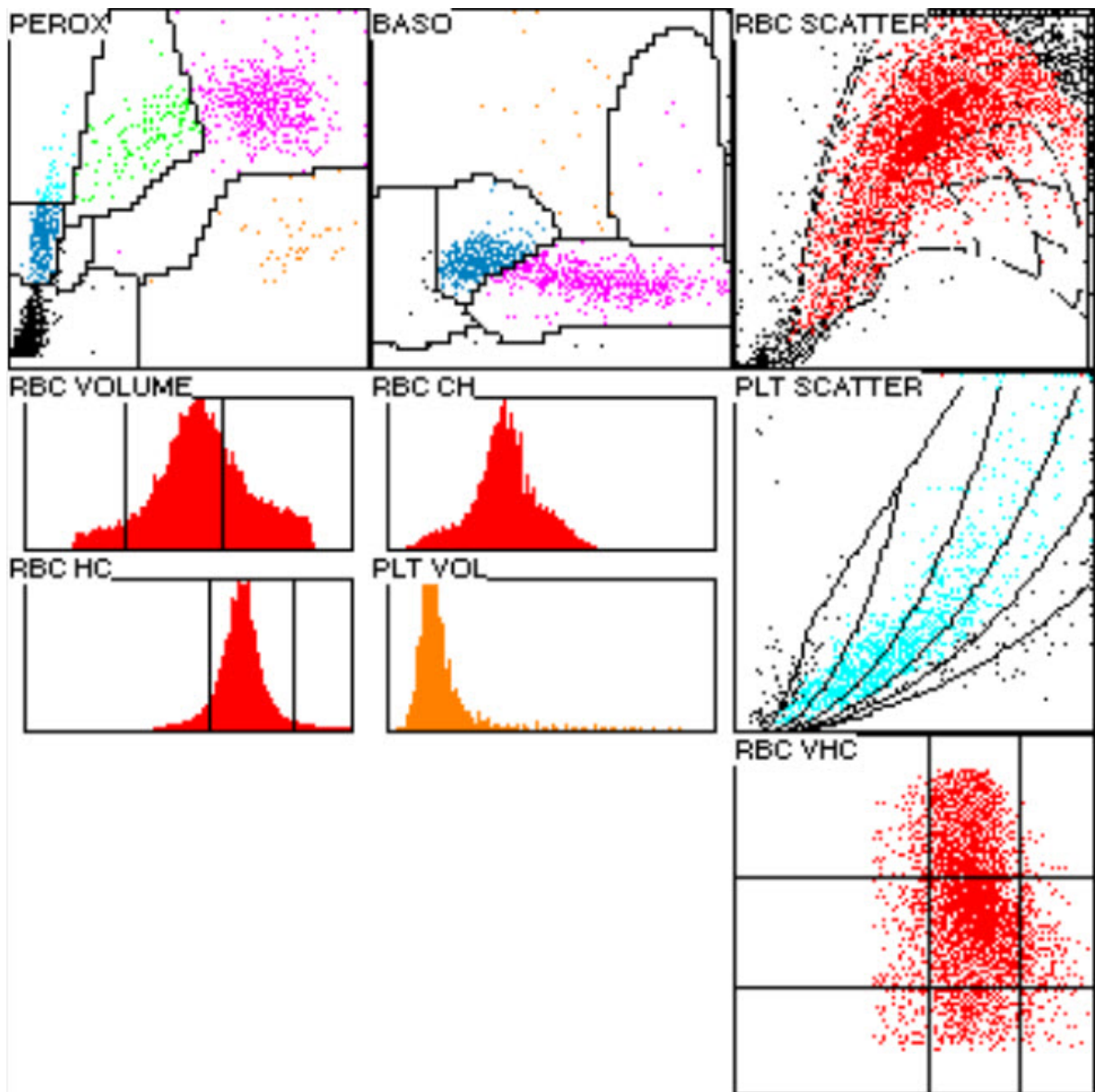


2.5 ADVIA 120



Findings MQ 2015-2 H3B 57 year old woman

Analysis	Result	Unit	Reference value
Blood Count			
Hemoglobin	95	g/l	117-153
Hematocrit	0.275	l/l	0.350-0.460
Erythrocytes	2.53	T/l	3.9-5.2
MCV	* 108.7	fl	80-100
MCH	* 37.5	pg	26-34
MCHC	345	g/l	310-360
Mikrocytes	* 6.1	%	0-2.0
Makrocytes	* 30.1	%	0-2.0
Hypochromic Ec	* 7.0	%	0-2.0
Hyerchromic Ec	* 2.2	%	0-2.0
RDW	* 27.4	%	11.0-0-14.8
Thrombocytes	* 527	G/l	143-400
Vd. L-SHIFT	0	+	Keine (0)
Leukocytes	6.05	G/l	3.0-9.6
Leucocytes Differentiation			
Neutrophils	2.63	G/l	1.40-8.00
Monocytes	0.43	G/l	0.16-0.95
Eosinophils	0.15	G/l	0.00-0.70
Basophils	0.06	G/l	0.00-0.15
Lymphocytes	2.57	G/l	1.50-4.00
LUC	3.6	%	0.0-4.0



2.6 Differential Blood Smear

Findings MQ 2015-2 H3B

57 year old man

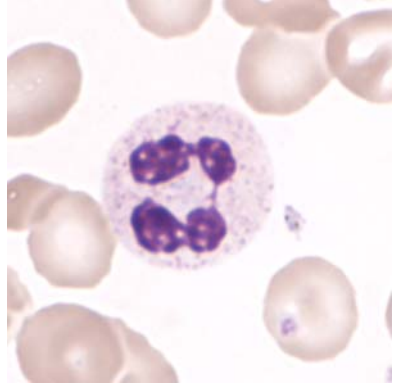
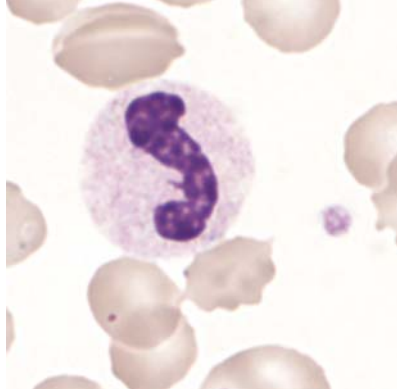
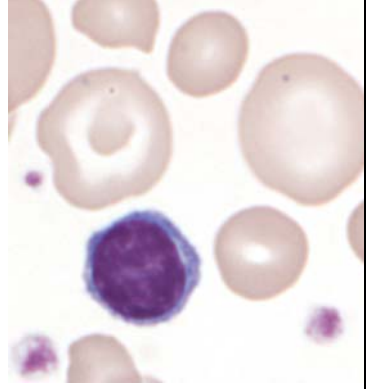
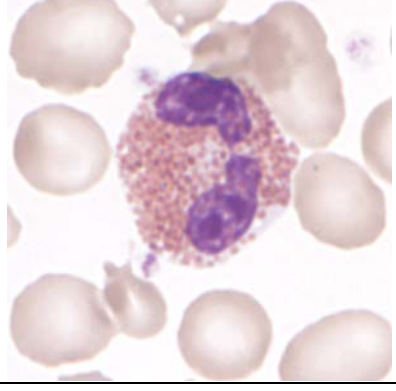
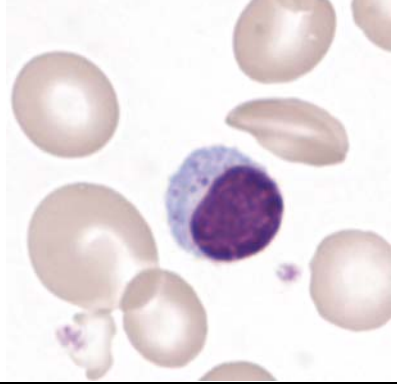
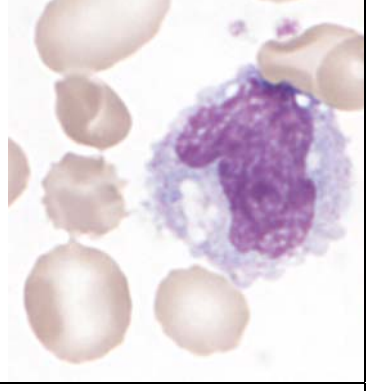

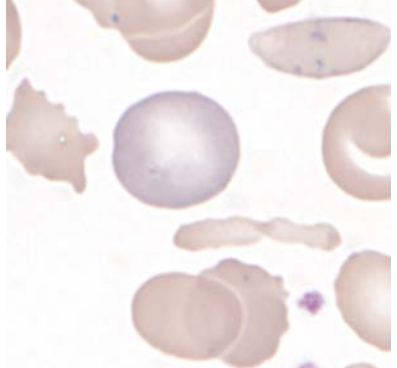
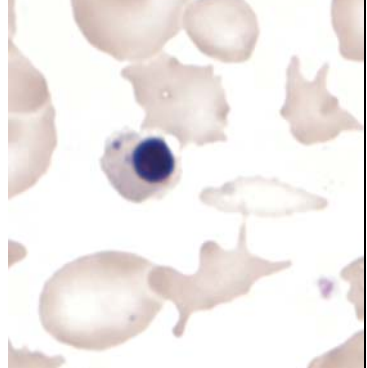
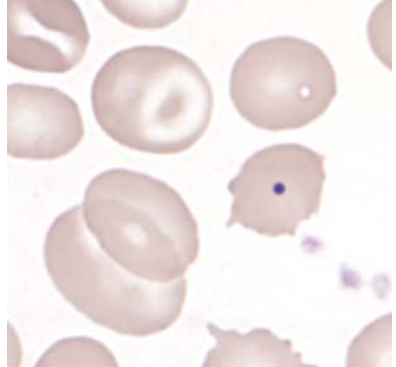
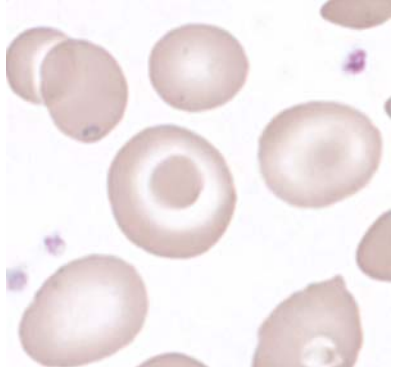
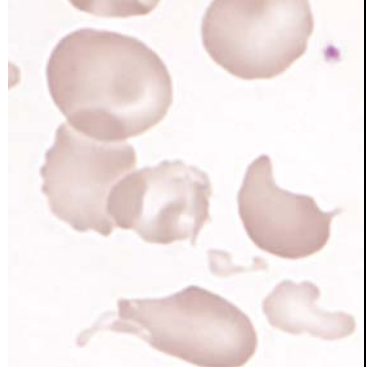
Analysis	Result	Unit	Reference value
Neutrophils total	2.66	G/l	1.40-8.00
Monocytes	0.42	G/l	0.16-0.95
Eosinophils	0.15	G/l	0.00-0.70
Basophils	0.03	G/l	0.00-0.15
Lymphocytes	2.75	G/l	1.50-4.00
Neutrophils total	44	%	40.0-74.0
Neutrophils Band	15.5	%	0.0-20.0
Neutrophils Segmented	28.5	%	30.0-50.0
Monocytes	7	%	3.4-9.0
Eosinophils	2.5	%	0.0-7.0
Basophils	0.5	%	0.0-1.5
Lymphocytes	45.5	%	19.0-48.0
Plasmacells	0.0	%	0-0.5
Blasts	0.0	%	0
Promyelocytes	0.0	%	0
Myelocytes	0.5	%	0
Metamyelocytes	0.0	%	0
Nucleated Red Cells	1.5	/100 Lc	

Comment

Hyporegenerative anemia with an absolute reticulocyte count of 65 g/L; Significantly anisochrome, severely anisocytic red blood count with a very large number of macrocytes and many microcytes, pronounced poikilocytosis with 5 megalocytes per field of view, many acanthocytes and akantospherocytes, many ovalocytes/elliptocytes and few target cells. Many erythrocytic inclusions mostly compatible with Pappenheim bodies, few erythrocytes with Howell-Jolly bodies and upon microscopic review isolated erythrocytes with partly coarse basophilic stippling. Washing out of 1.5 erythroblasts per 100 leukocytes. Neutrophils with mild nuclear pyknosis and fine cytoplasmic granulation.

Lymphocytes are polymorph in terms of nuclei and size. Thrombocytosis; Significant anisocytosis among the hypogranular platelets. No giant platelets.

Dr. med. J. Goede / K. Schreiber

		
<i>Abb 1. Neutrophil (seg)</i>	<i>Abb 2. Neutrophil (band)</i>	<i>Abb 3. Lymphocyte</i>
		
<i>Abb 4. Eosinophil</i>	<i>Abb 5. Lymphocyte (LGL)</i>	<i>Abb 6. Monocyte</i>
		
<i>Abb 7. Macrothrombocyte</i>	<i>Abb 8. Polychromasia</i>	<i>Abb 9. Erythroblast</i>
		
<i>Abb 10. Pappenheimbodies</i>	<i>Abb 11. Targetcell</i>	<i>Abb 12. Poykilocytosis</i>

2.7 Summary of participant results

Leukozyte Differential H3-B

	<1	1-4	5-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	>79
<i>Neutrophils Band</i>	2	23	80	196*	43	4	2				
<i>Neutrophils Segmented.</i>	1		1	18	129*	158	39	2	2		
<i>Eosinophils</i>	18	312*	20								
<i>Basophile</i>	133*	212	3	1	1						
<i>Monocytes</i>	24	81	169*	75	1						
<i>Lymphocytes</i>				1	4	51	225*	61	6	2	
<i>Plasmacells</i>	330*	17	2	1							
<i>Blasts</i>	340*	6	3	1							
<i>Promyelocytes</i>	345*	3	2								
<i>Myelocytes</i>	338*	6	4	2							
<i>Metamyelozyten</i>	342*	7		1							
<i>Erythrocytes Nucleated</i>	293	57*									
<i>Unknown</i>	333*	12	2	3							
<i>Smudge cells</i>	329*	17	4								

Beurteilung H3-B

	<i>light</i>	<i>medium</i>	<i>strong</i>		<i>light</i>	<i>medium</i>	<i>strong</i>
<i>Hypersegmentation</i>	10	4		<i>Hypochromic Ec</i>	76	63	28
<i>Pelger-Hüet Anomaly</i>	2			<i>Polychromatic Ec</i>	120	64	9
<i>Coarse Granulation</i>	39	11	3	<i>Anisocytes</i>	30	88	182*
<i>Basophilic Stripping</i>	8	2		<i>Mikrocytes</i>	103	53*	13
<i>Vacuoles</i>	29	6		<i>Makrocytes</i>	62	148*	51
<i>Atypical Lymph, reactive</i>	50	18	3	<i>Megalocytes</i>	77*	86	37
<i>Atypical Lymph, neoplastic</i>	5	1		<i>Poikilocytosis</i>	80	103	88*
<i>Others</i>	7	2		<i>Ovalocytes</i>	126	104*	18
				<i>Target Cells</i>	138*	78	14
				<i>Akanthocytes</i>	90	50*	7
<i>Anisocytosis</i>	95	84*	29	<i>Echinocytes</i>	63	14	7
<i>Megakaryocyte Nucleaus</i>	37	14	3	<i>Sickle Cells</i>	33	12	4
<i>Granulation</i>	34	5	2	<i>Fragmentocytes</i>	103	44	7
<i>Others</i>				<i>Spherocytes</i>	34	9	4
				<i>Stomatocytes</i>	29	7	2
				<i>Basophilic Stripping</i>	112*	81	17
				<i>Howell-Jolly Bodies</i>	100*	51	4
				<i>Pappenheim Bodies</i>	25	9*	1
				<i>Others</i>	6		

2.8 Qualab Codes

Summary of the participant codes
(Bold printed: expected codes)

Code	Text	Number
31	Pathologic findings	106
30	Pathologic findings, refer to expert	215
13	Makrocytes	161
16	Poikilocytosis	142
25	Basophilic strippling	104
24	Howell-Jolly bodies	81
19	Targetcells	71
17	Elliptocytes/Ovalocytes	65
15	Polychromatophilic Red Cells	63
20	Fragmentocytes	61
14	Hypochromic Erythrocytes	57
9	Macrothrombocytes	53
27	Erythrocytes, other:	37
12	Microcytes	34
5	Atypical lymphocytes, probably reactive	26
29	Normal Blood Smear	18
10	Thrombocyte aggregates	12
11	Thrombocytes, Giant	10
2	Neutrophils, left shift	9
22	Rouleaux	8
21	Spherocytes	7
26	Tear Drops	7
4	Neutrophils, Toxic Changes	6
6	Atypical Lymphocytes, probably neoplastic	6
1	Neutrophils, hypersegmentation of nucleus	5
18	Stomatocytes	5
28	Parasites	4
8	Leukocytes, other:	2
3	Pelger Hüet Anomaly	1