

Hodnocení výsledků KO

Bourková L., OKH FN Brno

Obecná pravidla pro měření

- pravidelná kontrola KO i dif
 - kontrola správnosti (firemní materiál)
 - kontrola přesnosti (vitální krev)
 - porovnatelnost (metodik, přístrojů, laboratoří.....)
 - správná údržba přístroje (kontroly po údržbě)
-
- *kontrola správného odběru EDTA (evt. Mg^{2+} nebo citrát)*

Pozor na: stáří vzorku, vzhled vzorku - chilózní, ikterický...

Kontrola správnosti - statistické vyhodnocení

CELL-DYN Sapphire QC File 2 stredni

Lot #: N33439

Expiration Date: 21/02/14

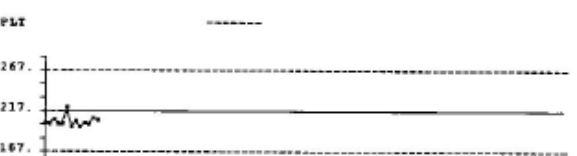
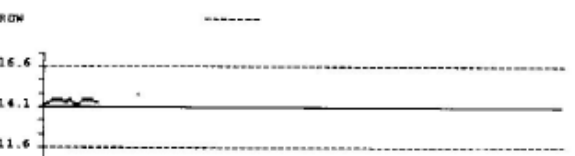
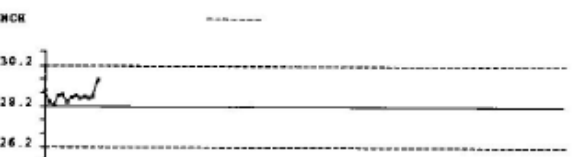
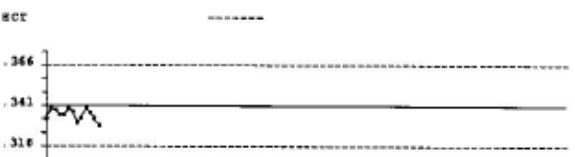
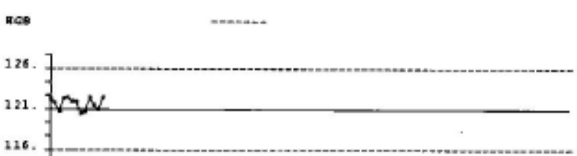
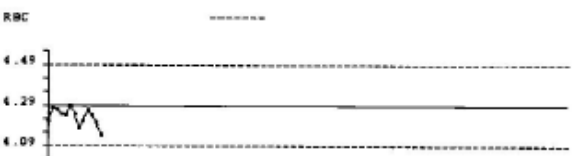
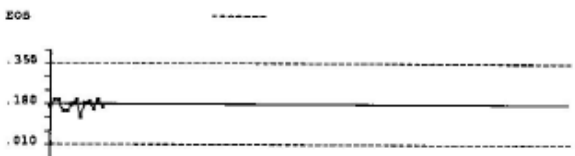
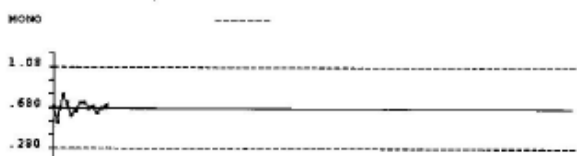
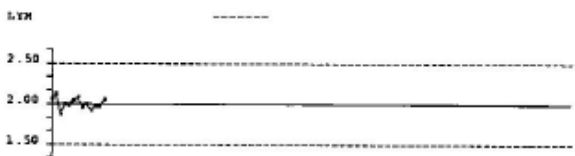
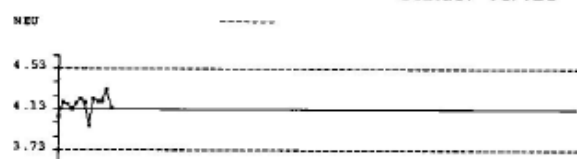
Software Version: v5 Analyzer SN: 42693AZ

21/02/14 09:59 Page: 1
Status: 13/120

Upper Limits:	7.05	4.53	2.50	1.00	.350	.500	4.49	126.	.366	83.5	30.2	378.	16.6	267.	10.2	.002	195.			
Lower Limits:	6.25	3.73	1.50	.280	.010	0.00	4.09	116.	.316	75.5	26.2	332.	11.6	167.	6.19	0.00	95.0			
Target Means:	7.05	4.13	2.00	.680	.180	.250	4.29	121.	.341	79.5	28.2	355.	14.1	217.	8.19	.001	145.			
Acc Seq#	WBC	NEU	LYM	MONO	EOS	BASO	RBC	HGB	HCT	MCV	MCH	MCHC	RDW	PLT	MPV	NRBC	RETC	Date	Time	OpID
8998	7.04	4.08	2.08	.701	.175	.012	4.22	122.	.334	79.1	29.0	367.	14.3	204.	8.27	0.00	131.	27/01/14	06:35	
9687	7.15	4.21	2.14	.548	.203	.051	4.29	122.	.340	79.3	28.5	359.	14.4	202.	8.37	0.00	134.	29/01/14	06:28	
403	7.20	4.19	1.88	.817	.202	.116	4.27	121.	.339	79.4	28.3	356.	14.6	208.	8.23	0.00	133.	31/01/14	06:34	
914	7.09	4.14	2.01	.735	.154	.045	4.25	123.	.336	79.0	28.8	365.	14.6	203.	8.40	0.00	137.	03/02/14	06:23	
1704	7.05	4.20	2.00	.616	.156	.078	4.25	123.	.336	79.1	28.9	365.	14.6	203.	8.23	0.00	133.	05/02/14	06:18	
2355	7.22	4.25	2.05	.664	.183	.067	4.29	122.	.340	79.2	28.5	359.	14.5	223.	8.28	0.00	134.	07/02/14	06:46	
2869	7.33	4.22	2.09	.742	.199	.075	4.25	122.	.338	79.6	28.7	361.	14.6	199.	8.51	0.00	131.	10/02/14	06:30	
3498	6.91	3.98	1.97	.737	.128	.094	4.18	121.	.331	79.2	28.8	364.	14.4	206.	8.43	0.00	131.	12/02/14	06:22	
3517	7.23	4.25	2.00	.690	.192	.096	4.22	121.	.335	79.3	28.6	361.	14.3	199.	8.37	0.00	133.	12/02/14	06:35	
4164	7.15	4.22	1.93	.698	.195	.098	4.27	123.	.340	79.7	28.7	360.	14.6	204.	8.36	0.00	130.	14/02/14	06:15	
4722	7.15	4.22	1.99	.640	.165	.133	4.25	122.	.337	79.4	28.6	361.	14.6	202.	8.40	0.00	135.	17/02/14	06:32	
5369	7.28	4.33	1.99	.686	.204	.099	4.21	121.	.334	79.4	28.8	362.	14.6	209.	8.26	0.00	127.	19/02/14	07:10	
6011	7.15	4.16	2.06	.713	.171	.046	4.15	123.	.329	79.3	29.5	372.	14.5	208.	8.25	0.00	129.	21/02/14	06:22	
Acc Seq#	WBC	NEU	LYM	MONO	EOS	BASO	RBC	HGB	HCT	MCV	MCH	MCHC	RDW	PLT	MPV	NRBC	RETC	Date	Time	OpID
N:	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0			
File Mean:	7.15	4.19	2.02	.691	.179	.075	4.24	122.	.336	79.3	28.7	362.	14.5	205.	8.34	0.00	132.			
Std Dev:	.111	.085	.070	.066	.023	.032	.041	.773	.003	.185	.307	4.08	.109	6.28	.688	0.00	2.67			
CV (%):	1.55	2.05	3.48	9.58	13.1	43.1	.973	.634	1.02	.233	1.07	1.13	.753	3.06	1.05	0.00	2.02			

Lot #: N33439 Expiration Date: 21/02/14

Status: 13/120



Kontrola správnosti
grafické vyhodnocení

Kontrola přesnosti

- za podmínek opakovatelnosti:
měření v krátkém časovém intervalu – v sérii za sebou
- za podmínek reprodukovatelnosti:
měření v časovém intervalu v rámci stability vzorku
- mezipřístrojové kontroly
- mezilaboratorní kontroly
- mezinárodní kontroly

❖ statistické vyhodnocení:
CV%, SD, Mean

Kontrola kvality krevních obrazů

- <http://www.hematology.cz/>
 - ✓ Doporučení ČHS ČLS JEP:
Vnitřní kontrola kvality měření krevních obrazů na hematologických analyzátoch
Zpracovali: L. Bourková, M. Matýšková, J. Kratochvíla
Revize: R. Jelínek, J. Kratochvíla, M. Matýšková
Vydání: 2013
Platnost od: 1.3.2013

Obecná pravidla pro hodnocení

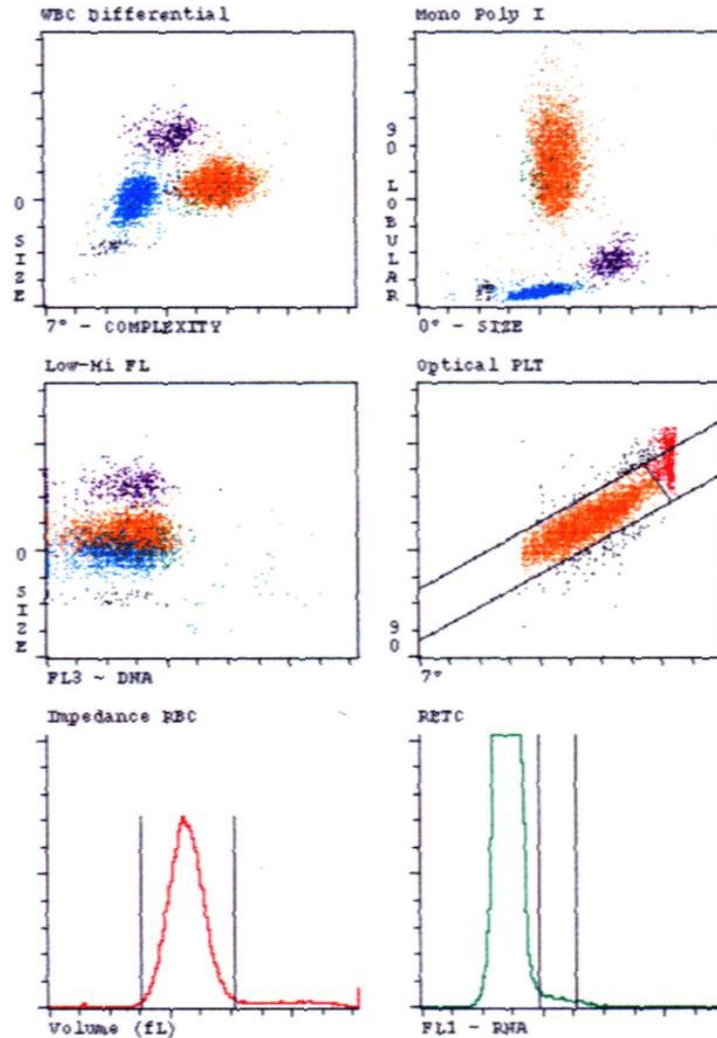
- specifická pravidla pro daný analyzátor:
 - princip měření
 - rozsah hodnot měřených parametrů (linearita)
 - hlášení přístroje
 - měřený / počítaný parametr, grafy
- klinická hlediska:
 - diagnóza
 - léčba
 - historie pacienta (LIS, četnost měření)

Normální vzorek

Sequence #: 703 Autoloader r38t06
 Patient/Human
 Specimen ID: 020003255
 Name:

Test Selection: CBC+RETC
 Param Set(Chart Page): 1
 Limit Set: 1
 Run Date/Time: 04.10.99 13:34

X-B In	WBC In	RBC In	PLT In	RETC In
WBC	7.88 10e9/L	WVF	.992	
SEG	4.73	%S	60.1	
BAND	0.00	%BD	0.00	
IG	0.00	%IG	0.00	
BLST	0.00	%BL	0.00	
MONe	.483	%Me	6.12	
EOS	.186	%E	2.37	
BASO	.051	%B	.641	
LYMe	2.43	%Le	30.8	
VARL	0.00	%VL	0.00	
RBC	5.22 10e12/L	RBCo	5.12	
HGB	9.38 mmol/L			
HCT	49.0 %			
MCV	93.9 fL			
MCH	1.80 fmo1			
MCHC	19.2 mmol/L			
RDW	12.4 %CV			
RETC	71.7 10e9/L	%R	1.38	
IRF	.221			
NRBC	0.00 10e9/L	NR/W	0.00	
PLTo	229. 10e9/L	PLTi	239.	
MPV	9.59 fL	CD61	----	
PDW	16.7 10(GSD)	PLTs	----	
PCT	2.19 mL/L	PLTl	----	

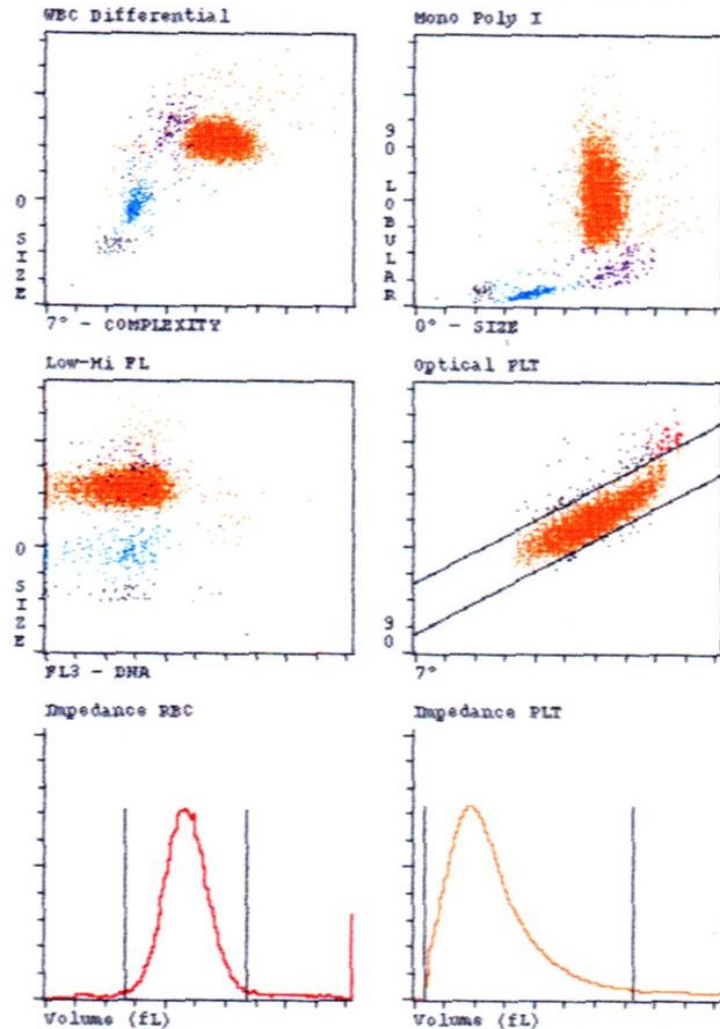


Infekce

Sequence #: 7967 Autoloader r04t02
 Patient/Human
 Specimen ID: 031273
 Name:

Test Selection: CBC
 Param Set(Chart Page): 1
 Limit Set: 1
 Run Date/Time: 30.04.99 08:58

X-B In	WBC 1 Out	RBC In	PLT In	RETC In	
WBC	31.0 10e9/L	WVF	.990		
SEG	17.8	%S	57.5		
BAND	9.14	%BD	29.5	BAND	.83
IG	2.06	%IG	6.65	IG	.81
BLST	0.00	%BL	0.00		
MONe	.637	%Me	2.06		
EOS	.043	%E	.139		
BASO	0.00	%B	0.00		
LYMe	1.29	%Le	4.16		
VARL	0.00	%VL	0.00		
RBC	3.39 10e12/L	RBCo	3.45		
HGB	6.49 mmol/L				
HCT	33.2 %				
MCV	98.0 fL				
MCH	1.91 fmo1				
MCHC	19.5 mmol/L				
RDW	15.3 %CV				
RETC	----	%R	----		
IRF	----				
NRBC	0.00 10e3/uL	NR/W	0.00		
PLTo	305. 10e9/L	PLTi	305.		
MPV	9.00 fL				
PDW	14.7 10(GSD)				
PCT	2.74 mL/L				



Starý vzorek

equence #: 1448 Autoloader r93t08
 specimen Type/SubType: Patient/Human
 specimen ID: JJ5312
 name:

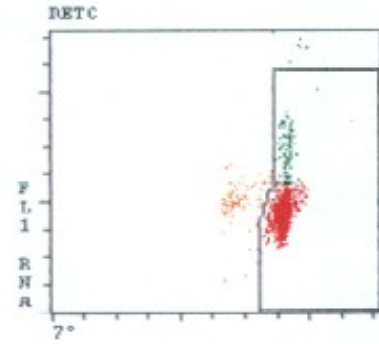
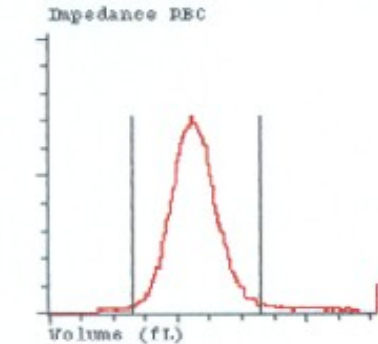
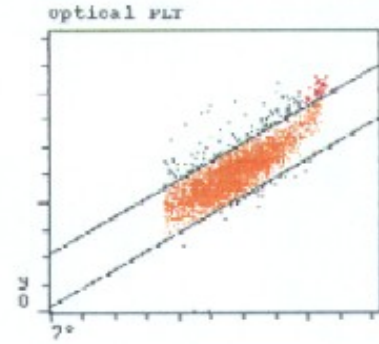
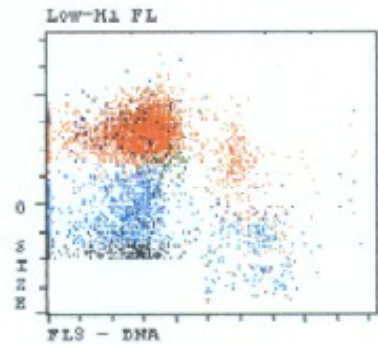
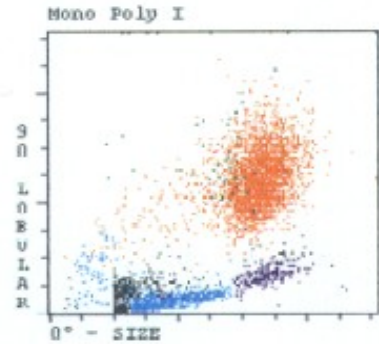
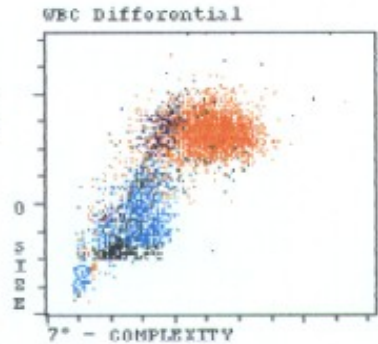
Test Selection: CBC+RETC
 Param Set(Chart Page): 1
 Limit Set: 1
 Run Date/Time: 28/10/98 17:16

BC	8.30	10e3/uL	WVF	.090	nvWBC	
EG	3.39		%S	40.8		
AND	2.11		%BD	25.4	BAND	.55
G	.551		%IG	6.64	IG	.69
LST	0.00		%BL	0.00		
ONE	.489		%Me	5.89		
OS	.105		%E	1.26		
ASO	.017		%B	.204		
YMe	1.65		%Le	19.8		
ARL	0.00		%VL	0.00		

BC	3.19	10e6/uL	RBCc	3.34	
GB	9.82	g/dL			
CT	30.3	%			
ICV	95.0	fL			
ICH	30.8	pg			
ICHC	32.4	g/dL			
DW	15.6	%			
ETC	60.6s	10e3/uL	%R	1.90s	IR
RF	.490				
RBC	0.00	10e3/uL	NR/W	0.00	

PLT	361.	10e3/uL	PLTi	329.	
MPV	10.9	fL			
PDW	15.3	10(GSD)			
PCT	.395	%			

Manual Differential	RBC Morphology		
EG	:META	:NORMAL	:MICRO
AND	:MYELO	:POLYCH	:MACRO
MPH	:PRO	:HYPOCH	:ANISO
ENO	:BLAST	:POIK	:BASOSTIP
OSIN	:VAR LYM	:TARGET	
ASO	:TOXGRAN	:SPHERO	:NRBC



Satelitóza trombocytů

Sequence #: 9427 Open Tube
 Specimen Type/SubType: Patient/Human
 Specimen ID: gruyters
 Name:

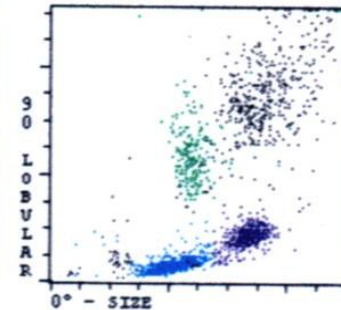
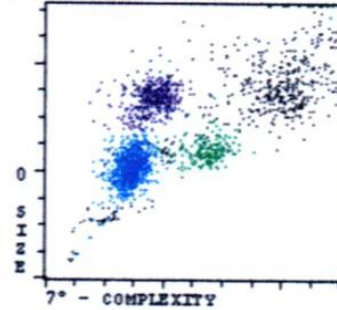
Test Selection: CBC
 Param Set(Chart Page): 1
 Limit Set: 1
 Run Date/Time: 26/01/99 17:44

WBC 3.20*10e9/L WVF .954*
 NEU 0.00* %N 0.00*
 LYM 2.00* %L 62.6*
 MONO .663* %M 20.7*
 EOS .512* %E 16.0*
 BASO .023* %B .732*

*InvalidData

WBC Differential

Mono Poly I

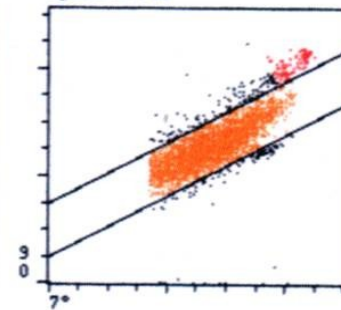
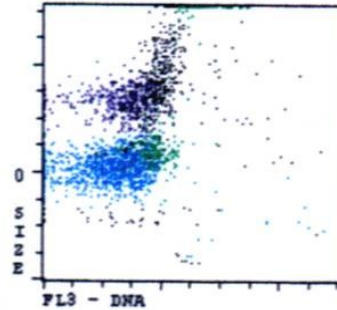


VARLYM .50

RBC 5.00 10e12/L RBCo 4.84
 HGB 9.50 mmol/L
 HCT .455 L/L
 MCV 91.0 fL
 MCH 1.90 fmoI
 MCHC 20.9 mmol/L
 RDW 12.4 %CV
 RETC --- 10e9/L %R ---
 IRF ---
 NRBC 0.00*10e9/L NR/W 0.00*
 PLT 156. 10e9/L PLTi 162.
 MPV 8.48 fL
 PDW 16.9 10(GSD)
 PCT 1.32 mL/L

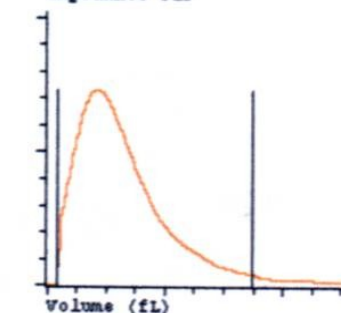
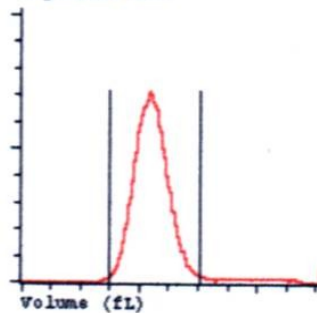
Low-Mi FL

Optical PLT



Impedance RBC

Impedance PLT



Monoblasty

Sequence #: 2830 Open Tube
 Specimen Type/SubType: Patient/Human
 Specimen ID:
 Name:

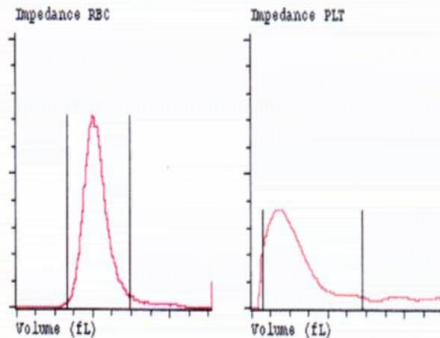
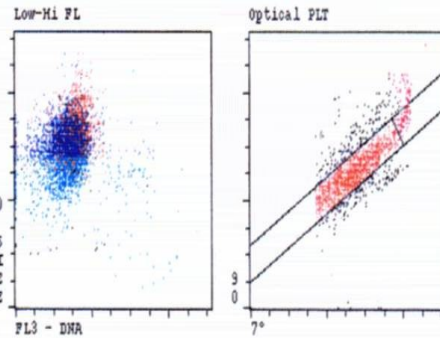
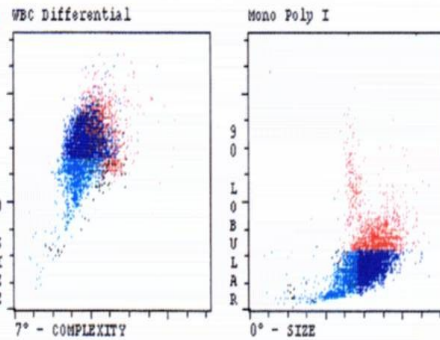
Test Selection: CBC
 Param Set(from Chart Page): 1
 Limit Set: 1
 Run Date/Time: 03/06/98 10:13

***InvalidData**

WBC	15.0	10e9/L	WVF	.977
NEU	3.25s	%N		21.7s
LYM	3.19*	%L		21.3*
MONO	8.36*	%M		55.9*
BOS	.024	%E		.159
BASO	.136	%B		.906
		BAND		.52
		IG		.59
		BLAST		.99

RBC	3.63	10e12/L	RBCo	3.70
HGB	6.91	mmol/L		
HCT	.308	L/L		
MCV	84.9	fL		
MCH	1.90	fmoI		
MCHC	22.4	mmol/L		
RDW	14.5	%CV		
RETc	----	10e9/L	%R	----
IRF	----			
NRBC	0.00	10e9/L	NR/W	0.00

PLT	25.9	10e9/L	PLTi	36.1
MPV	8.93	fL		
PDW	18.9	10(GSD)		
PCT	.231	mL/L		



Mononukleóza

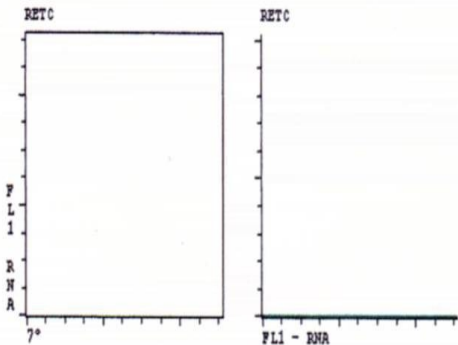
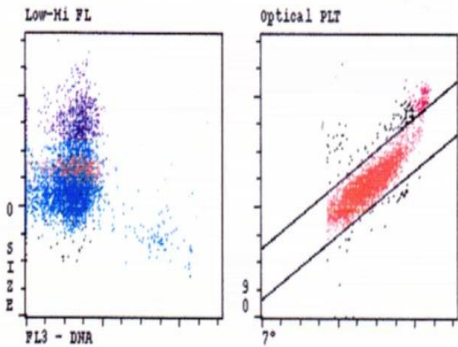
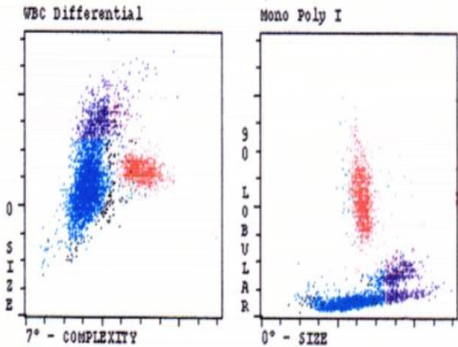
Sequence #: 3556 Autoloader
 Specimen Type/SubType: Patient/Human
 Specimen ID: 05374
 Name:

Test Selection: CBC
 Param Set(from Chart Page): 1
 Limit Set: 1
 Run Date/Time: 08/09/97 14:33

WBC	16.9	10e9/L	WVF	.983
SEG	4.21	%S		24.9
BAND	0.00	%BD		0.00
IG	0.00	%IG		0.00
BLST	1.11	%BL	6.52	BLAST .77
MONe	.703	%Me		4.15
BOS	.097	%E		.570
BASO	.056	%B		.333
LYMe	10.5	%Le		62.0 FP?
VARL	.258	%VL	1.52	VARLYM .90

RBC	5.36	10e12/L	RBCo	5.11
HGB	9.40	mmol/L		
HCT	.460	L/L		
MCV	85.9	fL		
MCH	1.76	fmoI		
MCHC	20.4	mmol/L		
RDW	15.5	%CV		
RETc	----	10e9/L	%R	----
IRF	----			
NRBC	0.00s	10e9/L	NR/W	0.00s

PLT	248.	10e9/L	PLTi	241.
MPV	8.34	fL		
PDW	18.0	10(GSD)		
PCT	2.07	mL/L		



Chronická lymfatická leukémie

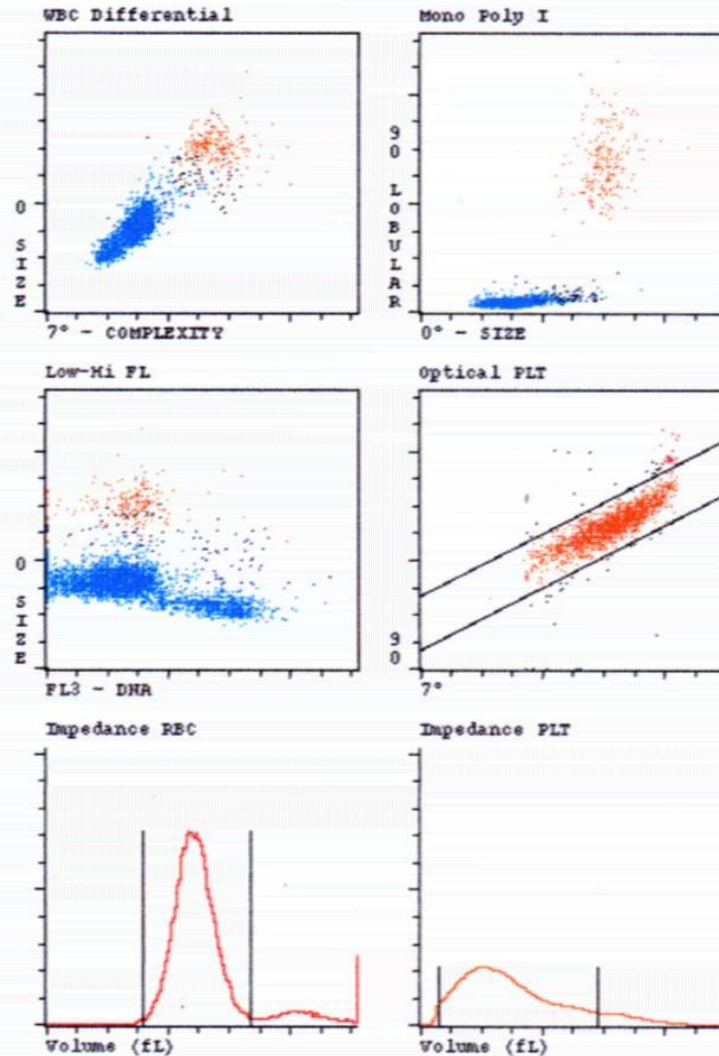
Sequence #: 3706 Autoloader r08t02
 Patient/Human
 Specimen ID: 990914696018
 Name:

Test Selection: CBC
 Param Set(Chart Page): 1
 Limit Set: 1
 Run Date/Time: 22/09/99 13:20

X-B	WBC	RBC	PLT	RETC
In	2 Out	In	In	In
WBC	207.10e9/L	WVF	.843	nvWBC
NEU	8.76	%N	4.24	
LYM	195.5	%L	94.35	
MONO	1.62	%M	.782	
EOS	0.00	%E	0.00	
BASO	1.34	%B	.647	

VARLYM .80

RBC	3.80	10e12/L	RBCo	3.79
HGB	7.31	mmol/L		
HCT	.376	L/L		
MCV	98.9	fL		
MCH	1.92	fmol		
MCHC	19.5	mmol/L		
RDW	12.9	%CV		
RETC	----	10e9/L	%R	----
IRF	----			
NRBC	0.00	10e9/L	NR/W	0.00
PLTo	47.8	10e9/L	PLTi	42.9
MPV	9.81	fL		
PDW	17.0	10(GSD)		
PCT	.469	nL/L		



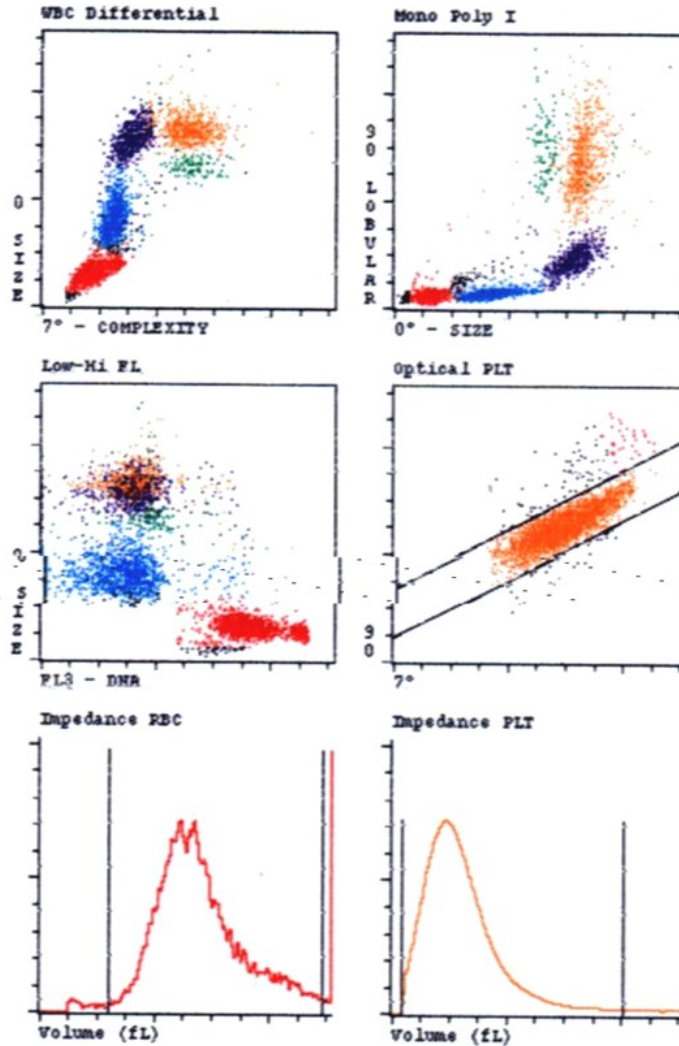
NRBC ve vzorku

Sequence #: 7677 Open Tube
 Patient/Human
 Specimen ID: 990812880018
 Name:

Test Selection: CBC+R
 Param Set(Chart Page): 1
 Limit Set: 1
 Run Date/Time: 22/08/99 20:54

X-B In	WBC In	RBC In	PLT In	RETC In
WBC	7.73 10e9/L	WVF	.957	
NEU	1.86	%N	24.1	
LYM	3.74	%L	48.4	
MONO	1.78	%M	23.1	
EOS	.326	%E	4.22	
BASO	.020	%B	.258	

RBC	1.22s10e12/L	RBCo	1.28
HGB	3.23 mmol/L		
HCT	.141sl/L		ASYM
MCV	115.sfl		
MCH	2.65sfmol		
MCHC	23.0smmol/L		
RDW	26.5s%CV		
RETC	----- 10e9/L	%R	-----
IRF			
NRBC	5.07 10e9/L	NR/W	65.6
PLTo	290. 10e9/L	PLTi	285.
MPV	8.31 fl		
PDW	14.6 10(GSD)		
PCT	2.41 mL/L		



Vzorek po dialýze

Sequence #: 4453 AutoLoader r91t07
 Patient/Human
 Specimen ID: JX6223
 Name:

Test Selection: CBC+RETC
 Param Set(Chart Page): 1
 Limit Set: 1
 Run Date/Time: 29/06/00 12:08

X-B In	WBC In	RBC -	PLT In	RETC In
WBC	15.0*10e9/L	WVF	.990*	
NEU	5.78*	%N	38.5*	
LYM	9.00*	%L	59.9*	
MONO	.214*	%M	1.43*	
EOS	.022*	%E	.149*	
BASO	0.00*	%B	0.00*	

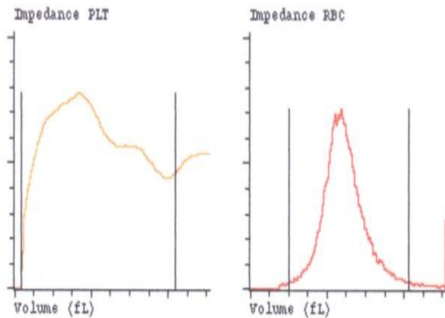
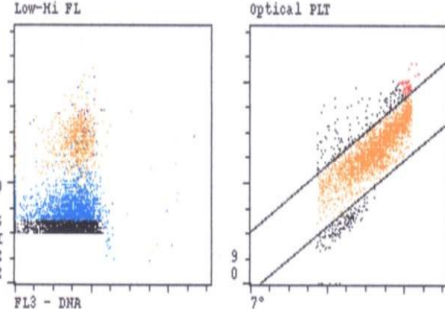
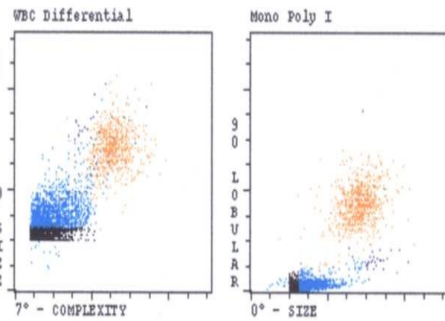
VARLYM .60

RBC	3.78s10e12/L	RBCc	3.85
HGB	8.08 mmol/L		rstRBC
HCT	.395 L/L		
MCV	104. fL		
MCH	2.13 fmoI		
MCHC	20.5 mmol/L		
RDW	21.9 %CV		
RETC	95.3s10e9/L	%R	2.52s
IRF	.335		IR
NRBC	0.00*10e9/L	NR/W	0.00*

PLTc	76.9 10e9/L	PLTl	90.3
MPV	16.6*fL	CD61	----
PDW	39.8*10(GSD)	PLTs	----
PCT	1.28*%L	PLTl	----

Manual Differential	'RBC Morphology		
SEG	'META	'NORMAL	'MICRO
BAND	'WYELD	'POLYCH	'MACRO
LYMPH	'PRO	'HYPOCH	'ANISO
MONO	'BLAST	'POIK	'BASOSTIP
EOSIN	'VAR LYW	'TARGET	
BASO	'TOXGRAN	'SPHERO	'NRBC
PLT_EST	'PLT MORPH		

Comment:
 DIFF by: Date:



WBC Count Rate Violation
 Resistant RBC Interference with WBC results
 Unable to Find Clear Separation Between WBC Subpopulations
 Lower, Upper, or Lower and Upper Region Interference in PLTl Histogram
 Lower, Upper, or Lower and Upper Region Interference in PLTl Histogram

Po odstranění rstRBC

Sequence #: 4472 AutoLoader r94t09
 Patient/Human
 Specimen ID: JX6223
 Name:

Test Selection: CBC+R
 Param Set(Chart Page): 1
 Limit Set: 1
 Run Date/Time: 29/06/00 12:56

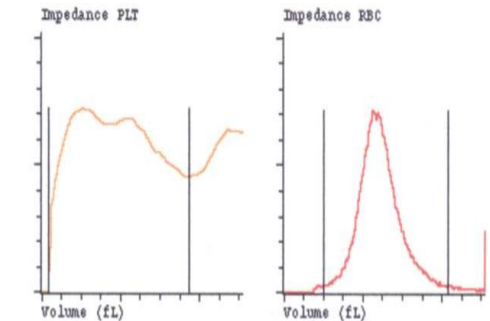
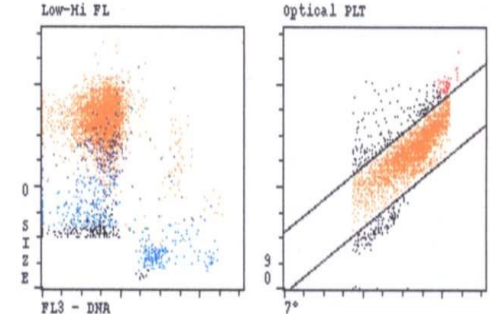
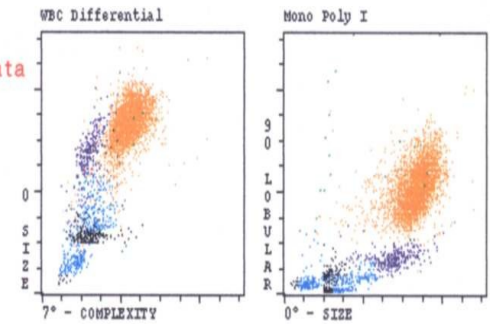
X-B In	WBC In	RBC -	PLT In	RETC In
WBC	6.47 10e9/L	WVF	.945	
NEU	5.55	%N	85.7	
LYM	.531	%L	8.21 FP?	
MONO	.364	%M	5.63	
EOS	.028	%E	.437	
BASO	.001	%B	.015	

RBC	3.74 10e12/L	RBCc	3.78
HGB	7.96 mmol/L		
HCT	.388 L/L		
MCV	104. fL		
MCH	2.13 fmoI		
MCHC	20.5 mmol/L		
RDW	21.9 %CV		
RETC	----- 10e9/L	%R	----
IRF	----		
NRBC	0.00s10e9/L	NR/W	0.00s

PLTc	75.2 10e9/L	PLTl	81.3
MPV	13.2*fL	CD61	----
PDW	19.7*10(GSD)	PLTs	----
PCT	.992*%L	PLTl	----

Manual Differential	'RBC Morphology		
SEG	'META	'NORMAL	'MICRO
BAND	'WYELD	'POLYCH	'MACRO
LYMPH	'PRO	'HYPOCH	'ANISO
MONO	'BLAST	'POIK	'BASOSTIP
EOSIN	'VAR LYW	'TARGET	
BASO	'TOXGRAN	'SPHERO	'NRBC
PLT_EST	'PLT MORPH		

Comment:
 DIFF by: Date:



Lower, Upper, or Lower and Upper Region Interference in PLTl Histogram
 Lower, Upper, or Lower and Upper Region Interference in PLTl Histogram

Reakce na EDTA

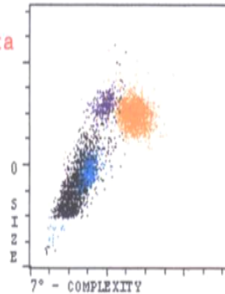
Sequence #: 8950 Auto-loader r06t03
 Patient/Human
 Specimen ID: 030074152
 Name: KATINKA JOHA PETERSEN

Test Selection: CBC
 Param Set (Chart Page): 1
 Limit Set: 1
 Run Date/Time: 02.05.00 09:47

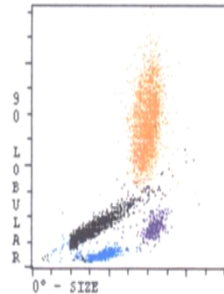
X-B In	WBC In	RBC In	PLT In	RETC In
WBC	14.8	10e9/L	WVF	.985
SEG	9.64	%S	%ED	64.9
BAND	0.00	%BD	%IG	0.00
IG	0.00	%IG	%BL	0.00*
BLST	0.00*	%BL	%Me	8.54*
MONe	1.27*	%E	%B	.109
EOS	.016	%Le	%VLe	26.4*FP?
BASO	.010	%B	%VLe	0.00*VARLYM .50
LYMe	3.92*			
VARL	0.00*			

*InvalidData

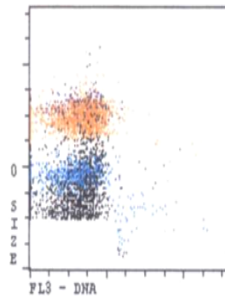
WBC Differential



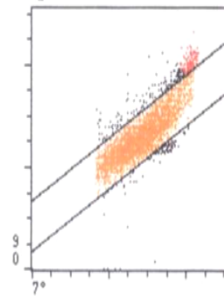
Mono Poly I



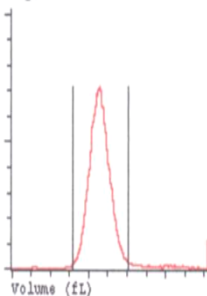
Low-Mi FL



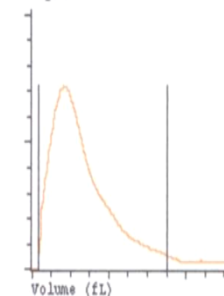
Optical PLT



Impedance RBC



Impedance PLT



Unable to Find Clear Separation Between WBC Subpopulations
 Significant Number of Cells Removed from WBC Differential Analysis
 Interference with PLT Results Due to PLT Clumping

RBC	3.56	10e12/L	RBCo	3.59
HGB	7.09	mmol/L		
HCT	33.0	%		
MCV	92.8	fL		
MCH	1.99	fmol		
MCHC	21.5	mmol/L		
RDW	11.3	%CV		
RETC	----	10e9/L	%R	----
IRF	----			
NRBC	0.00s	10e9/L	NR/W	0.00s
PLTo	132.	*10e9/L	PLTi	140.*PltC1mp
MPV	8.99	*fL	CD61	----
PDW	15.2	*10(GSD)	PLTs	----
PCT	1.18	*mL/L	PLT1	----

Manual Differential	'RBC Morphology		
SEG	'META	'NORMAL	'MICRO
BAND	'MYELO	'POLYCH	'MACRO
LYMPH	'PRO	'HYPOCH	'ANISO
MONO	'BLAST	'POIK	'BASOSTIP
EOSIN	'VAR LYM	'TARGET	
BASO	'TOXGRAN	'SPHERO	'NRBC
PLT_EST		'PLT MORPH	

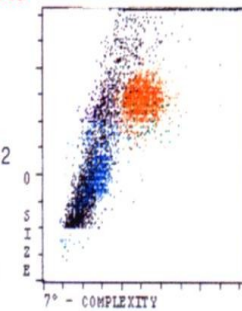
Comment:

Sequence #: 2568
 Specimen Type/SubType: Patient/Human
 Specimen ID: IA5285
 Name:

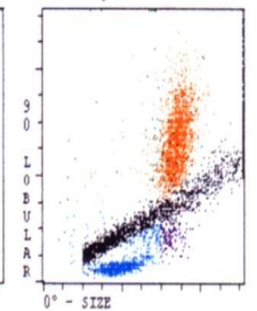
Test Selection: CBC+RETC
 Param Set (from Chart Page): 1
 Limit Set: 1
 Run Date/Time: 22/01/97 12:17

Invalid Data	
WBC	6.46*10e9/L
NEU	4.14*
LYM	1.87*
MONO	.257*
EOS	.189*
BASO	0.00*
WVF	.961*
%N	64.1*
%L	29.0*
%M	3.98*
%E	2.93*
%B	0.00*BAND

WBC Differential

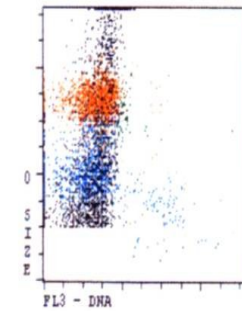


Mono Poly I

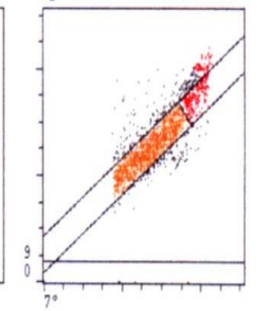


RBC	5.19	10e12/L	RBCo	5.28
HGB	15.7	g/dL		
HCT	.454	L/L		
MCV	87.5	fL		
MCH	30.2	pg		
MCHC	34.6	g/dL		
RDW	12.1	%		
RETC	43.6	10e9/L	%R	.840
IRF	.232			
NRBC	0.00*10e3/uL		NR/W	0.00*

Low-Mi FL

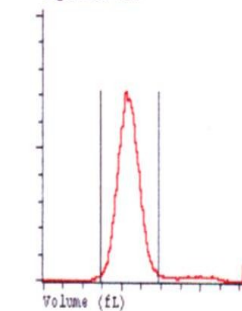


Optical PLT

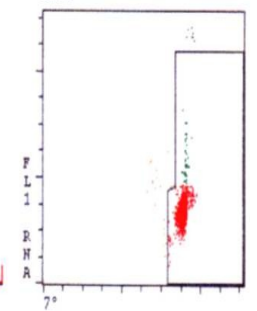


PLT	45.2*10e9/L	PLTi	49.6*PltC1mp
MPV	10.5*fL		
PDW	16.8*10(GSD)		
PCT	.476*mL/L		

Impedance RBC



RETC



ALL a fragmenty cytoplazmy

Sequence #: 2699 Autoloader r38t02
 Patient/Human
 Specimen ID: 000213479091
 Name:

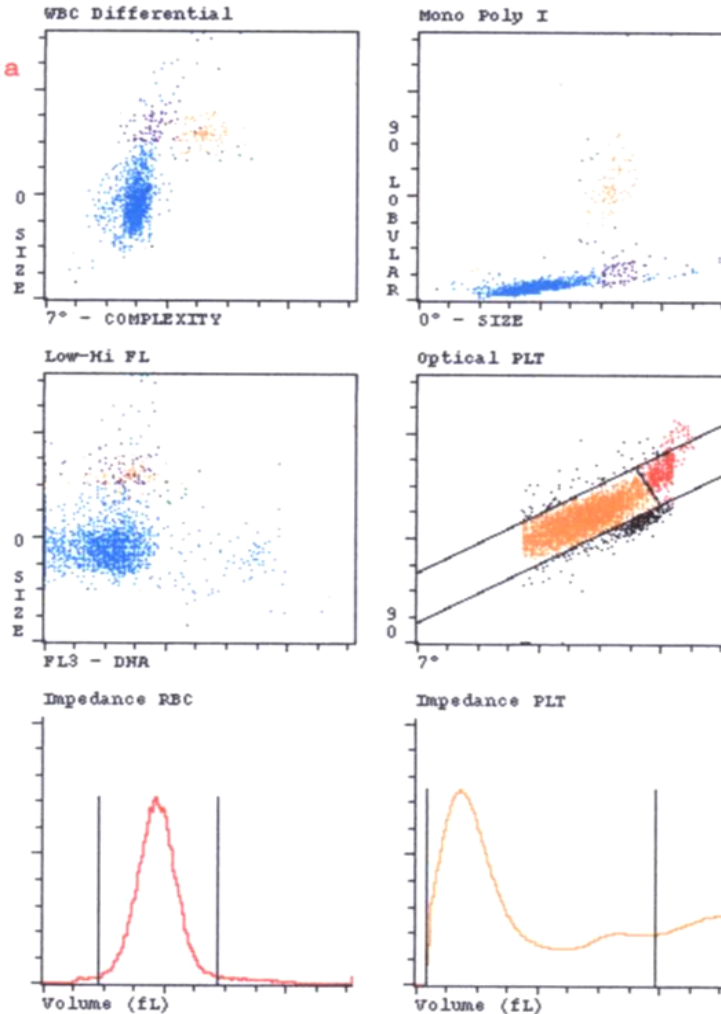
Test Selection: CBC
 Param Set(Chart Page): 1
 Limit Set: 1
 Run Date/Time: 21/02/00 08:57

X-B In	WBC 2 Out	RBC In	PLT In	RETC In
WBC	3.36 10e9/L	WVF	.956	*InvalidData
NEU	.133	%N	3.95	
LYM	3.08s	%L	91.7s	
MONO	.136s	%M	4.05s	
EOS	.010	%E	.296	
BASO	0.00	%B	0.00	

BLAST .73
 VARLYM .60

RBC	3.74 10e12/L	RBC _o	3.78
HGB	5.81 mmol/L		
HCT	.287 L/L		
MCV	76.6 fl		
MCH	1.55 fmol		
MCHC	20.3 mmol/L		
RDW	17.9 %CV		
RETC	----- 10e9/L	%R	-----
IRF	-----		
NRBC	0.00 10e9/L	NR/W	0.00

PLT _o	81.5*10e9/L	PLT _i	131.*
MPV	5.41*fl	CD61	-----
PDW	15.1*10(GSD)	PLT _s	-----
PCT	.441*ml/L	PLT _l	-----



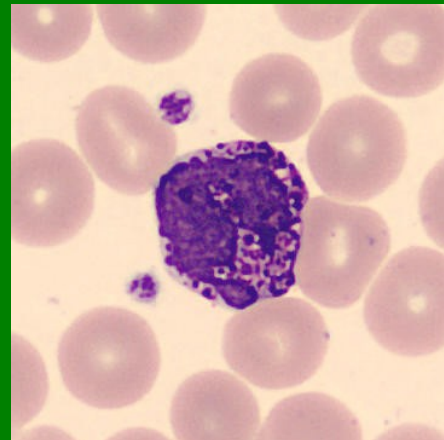
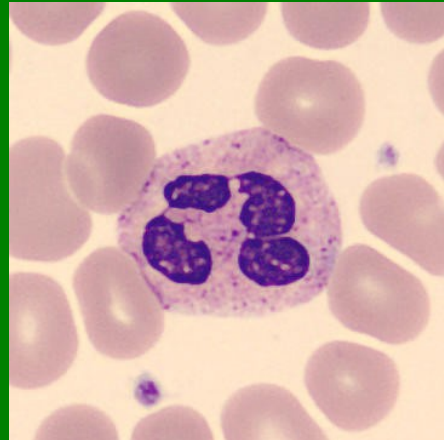
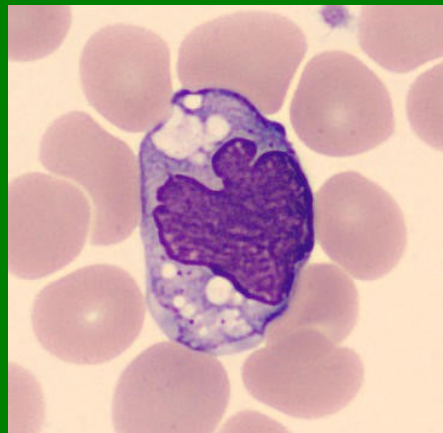
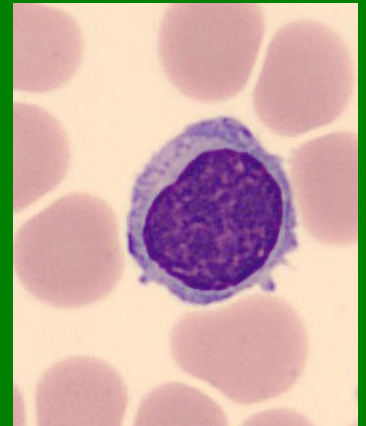
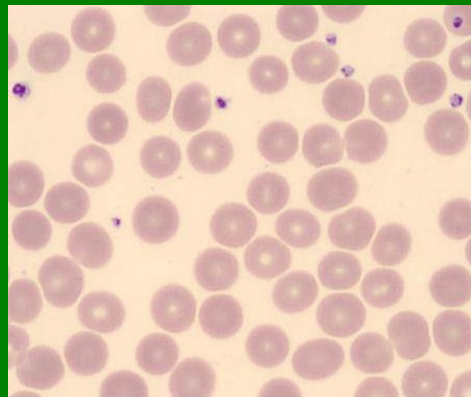
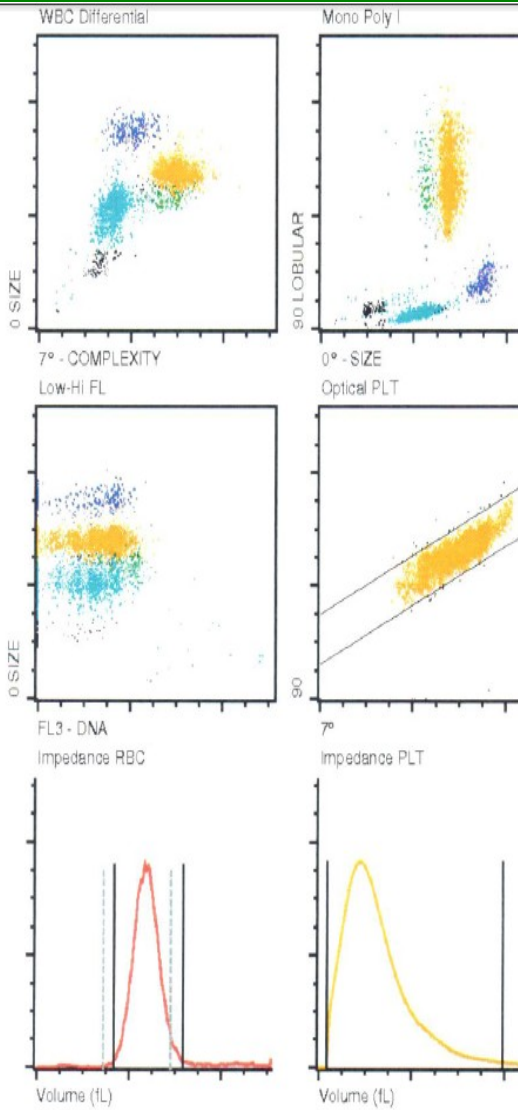
Lower, Upper, or Lower and Upper Region Interference in PLTi Histogram
 PIC/POC Delta

Fyziologický vzorek

Sex: F
 Doctor: 0717/27/06/2013
 User Defined A:
 User Defined B:
 User Defined C:
 User Defined D:

X-B In	WBC In	RBC In	PLT In	RETC In	WVF	%S	%BD	%IG	%BL	%Me	%E	%B	%Le	%VL	RBCo	%MIC	%MAC	%HPO	%HPR	NRW	PLTi	CD61	PLTs	PLTi	
WBC	7.36	10e9/L			.991																				
SEG	3.97					54.0																			
BAND	0.00					0.00																			
IG	0.00							0.00																	
BLST	0.00								0.00																
MONe	.450									6.11															
EOS	.299										4.06														
BASO	.023											.318													
LYMe	2.61												35.5												
VARL	0.00													0.00											
RBC	4.13	10e12/L				4.22																			
HGB	138.	g/L				.661																			
HCT	.406	L/L				3.87																			
MCV	98.4	fL																							
MCH	33.5	pg																							
MCHC	341.	g/L																							
RDW	11.4	%CV																							
HDW	---	%																							
RETC	---	10e9/L																							
IRF	---																								
NRBC	0.00	10e9/L				0.00																			
MCVr	---	fL																							
MChr	---	pg																							
CHCr	---	g/L																							
PLTo	319.	10e9/L				308.																			
MPV	8.03	fL																							
PDW	15.8	10(GSD)																							
PCT	2.56	mL/L																							
%tP	---	%																							

Manual Differential		RBC Morphology
SEG	META	NORMAL MICRO
BAND	MYELO	POLYCH MACRO
LYMPH	PRO	HYPDCH ANISO
MONO	BLAST	POIK BASOSTIP
EOSIN	VAR LYM	TARGET
BASO	TOXGRAN	SPHERO NRBC
PLT EST		PLT MORPH



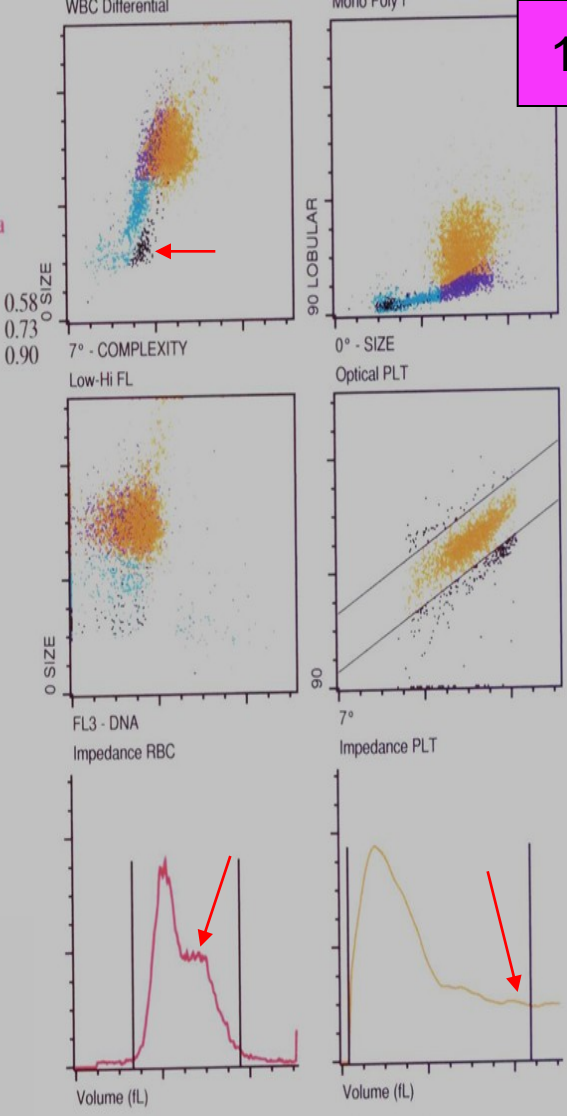
Sex: F
 Doctor: 0568/30/04/2010
 User Defined A:
 User Defined B:
 User Defined C:
 User Defined D:

X-B In	WBC In	RBC In	PLT In	RETC In
16.5*	10e9/L			
8.53*				
2.99*				
1.47*				
1.59				
2.79				
.018*				
0.00				
1.80				
0.00				

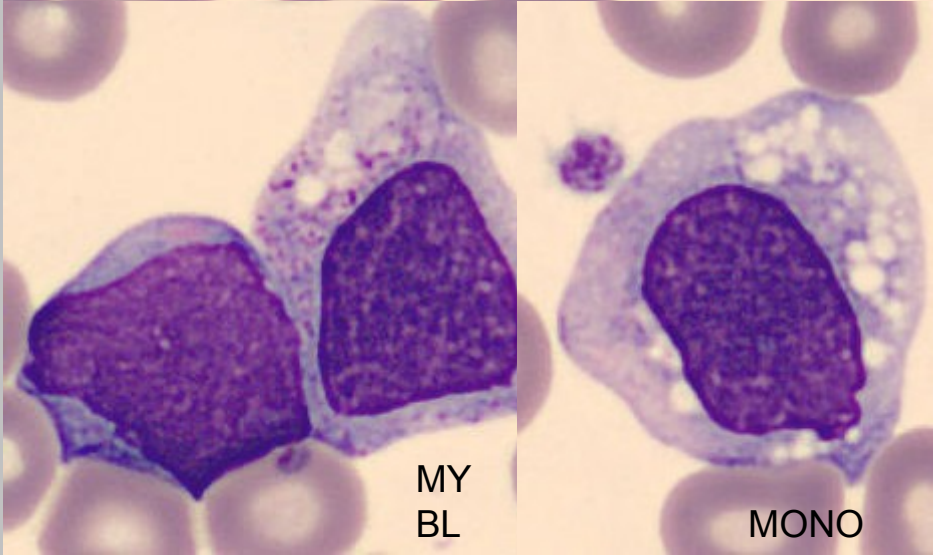
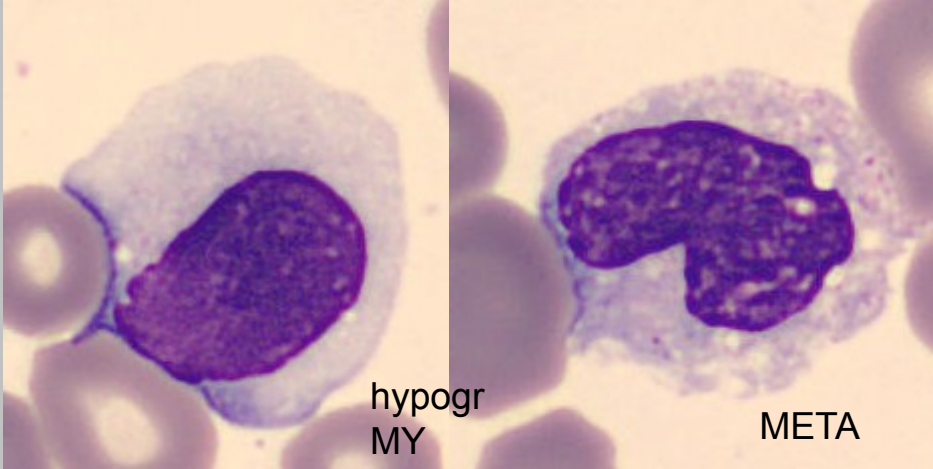
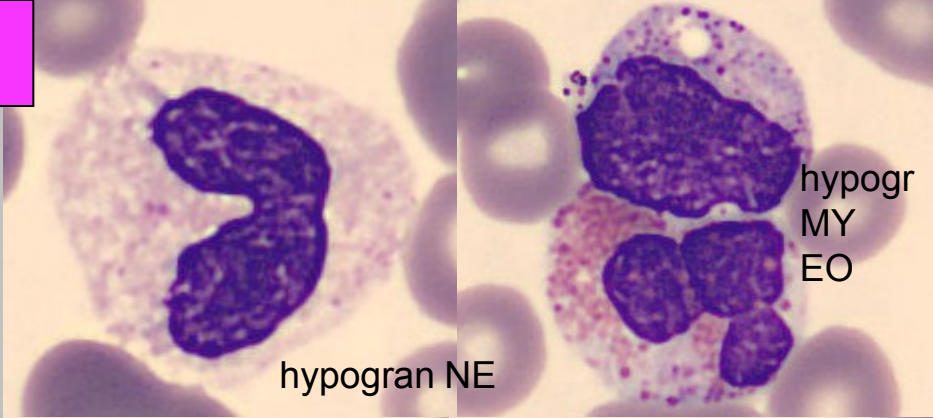
*InvalidData
 BAND IG BLAST

RBC	HGB	HCT	MCV	MCH	MCHC	RDW	RETC	IRF	NRBC	PLT ₀	MPV	PDW	PCT
2.80s	97.3	271	96.8s	34.8s	360.s	21.4s	---	---	0.00s	48.3	12.8*	24.9*	621*
10e12/L	g/L	L/L	fL	pg	g/L	%CV	10e9/L	%R	10e9/L	10e9/L	fL	10(GSD)	mL/L

ASYM



Unable to Find Clear Separation Between WBC Subpopulations
 Lower, Upper, or Lower and Upper Region Interference in PLTi Histogram
 PIC/POC Delta



Sex: F
 Doctor: 0568/30/04/2010
 User Defined A:
 User Defined B:
 User Defined C:
 User Defined D:

X-B In	WBC In	RBC In	PLT In	RETC In	
WBC	16.5	10e9/L	WVF	.982	
SEG	8.53*		%S	51.7*	
BAND	.299*		%BD	1.81*	BAND 0.58
IG	1.47*		%IG	8.94*	IG 0.73
BLST	1.59		%BL	9.67	BLAST 0.90
MONe	2.79		%Me	16.9	
EOS	.018*		%E	.112*	
BASO	0.00		%B	0.00	
LYMe	1.80		%Le	10.9	FP?
VARL	0.00		%VL	0.00	

*InvalidData

RBC	2.80s	10e12/L	RBCo	2.73
HGB	97.3	g/L		
HCT	27.1s	L/L		
MCV	96.8s	fL		
MCH	34.8s	pg		
MCHC	360.s	g/L		
RDW	21.4s	%CV		
RETC	---	10e9/L	%R	---
IRF	---			
NRBC	0.00s	10e9/L	NRW	0.00s
PLTo	48.3*	10e9/L	PLTI	82.1*
MPV	12.8*	fL	CD61	---
PDW	24.9*	10(GSD)	PLTs	---
PCT	.621*	mL/L	PLTI	---

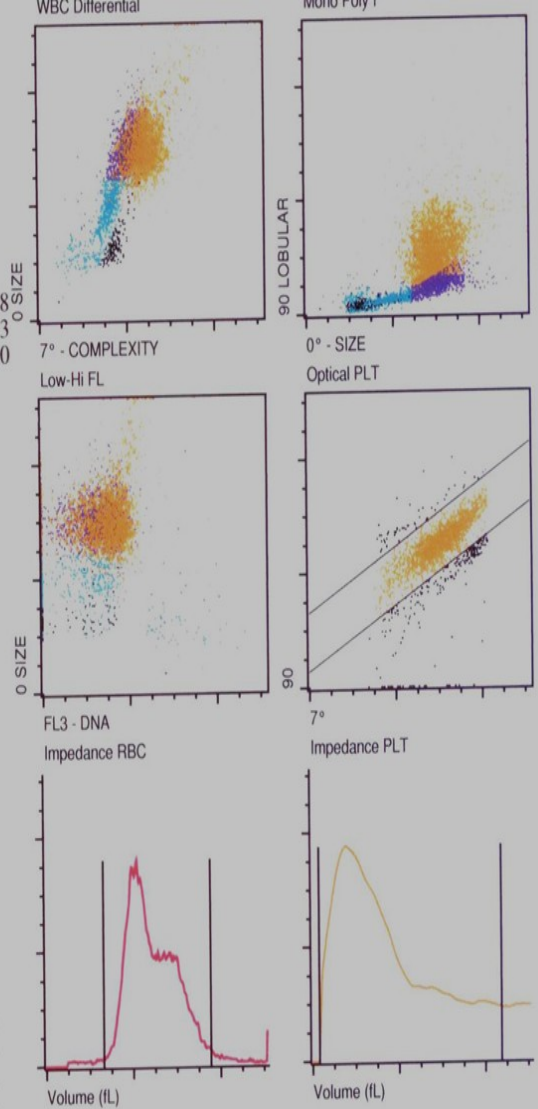
ASYM

*schisto
stříčky*

Manual Differential	RBC Morphology		
SEG 27	META 6	NORMAL	MICRO
BAND 7	MYELO 25	POLYCH	MACRO ✓
LYMPH 4	PRO 7	HYPOCH	ANISO ✓
MONO 22	BLAST 7	POIK	BASOSTIP
EOSIN	VAR LYM	TARGET	
BASO	TOXGRAN	SPHERO	NRBC
PLT EST <i>micro, makro</i>	PLT MORPH		

Comment:
 DIFF by: _____ Date: _____

*hypogranulad, hypogranulad neu, rakualizace
 obtížně rozlišování mono x myelo x neu*



Unable to Find Clear Separation Between WBC Subpopulations
 Lower, Upper, or Lower and Upper Region Interference in PLTI Histogram
 PIC/POC Delta

Patient 1

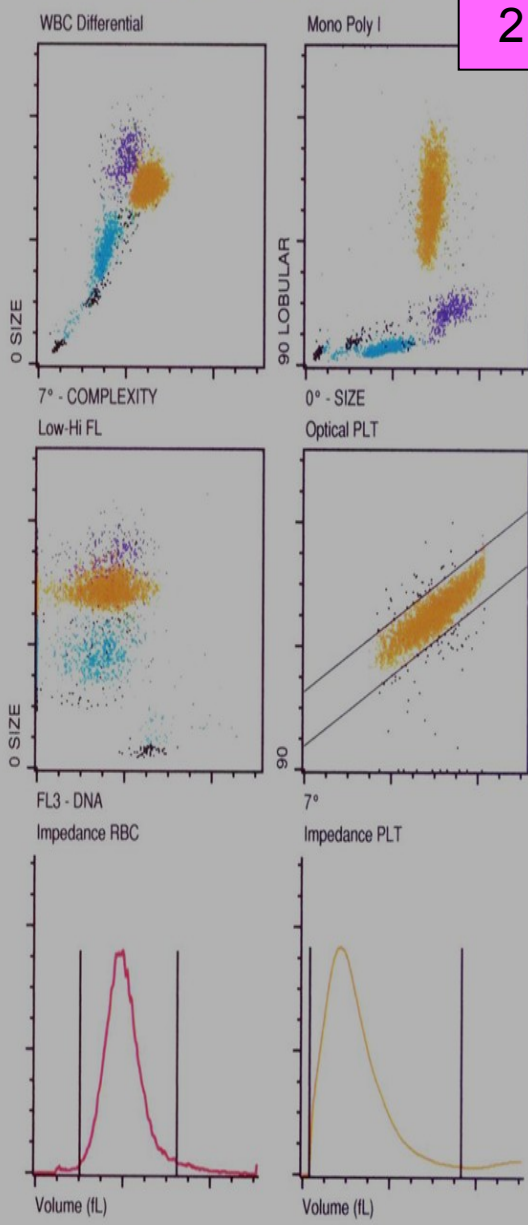
- žena, 58 roků
- pacientka hospitalizovaná na JIP hematologické kliniky
- s diagnózou AML spojená s dysplázií po terapii

DOB: 03/21/80
 Sex: F
 Doctor: 0776/31/05/2010
 User Defined A:
 User Defined B:
 User Defined C:
 User Defined D:

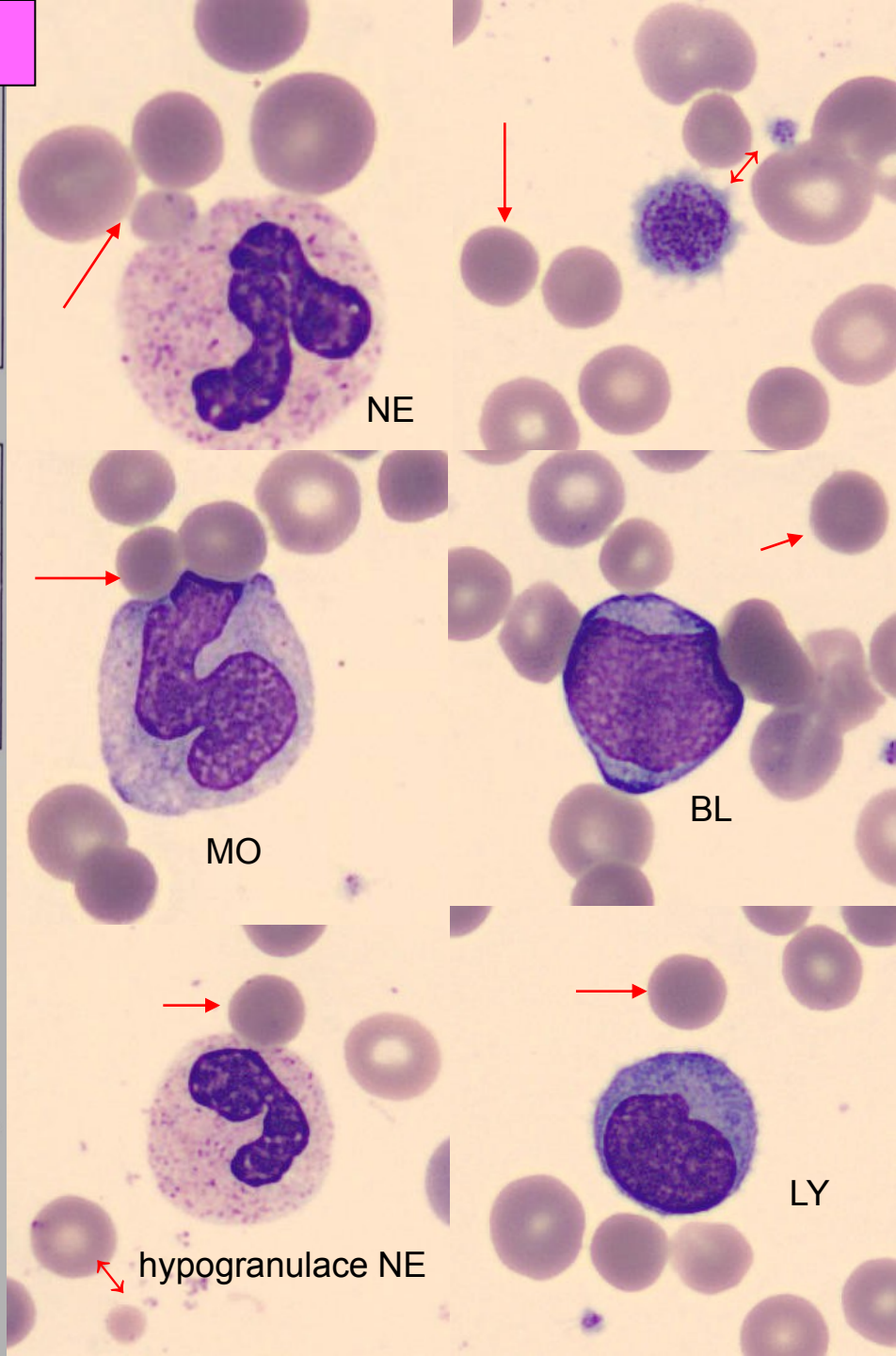
X-B In	WBC In	RBC In	PLT In	RETC Out
WBC	7.41	10e9/L	WVF	.964
SEG	5.16		%S	69.7
BAND	0.00		%BD	0.00
IG	0.00		%IG	0.00
BLST	0.00		%BL	0.00
MONe	.716		%Me	9.67
EOS	.173		%E	2.34
BASO	.031		%B	.420
LYMe	1.32		%Le	17.9
VARL	0.00		%VL	0.00

FP?

RBC	2.60	10e12/L	RBCo	2.54
HGB	79.9	g/L		
HCT	20.7	L/L		
MCV	79.7	fL		
MCH	30.8	pg		
MCHC	38.6	g/L		
RDW	19.8	%CV		
RETC	730	10e9/L	%R	28.1
IRF	.448			
NRBC	0.00s	10e9/L	NRW	0.00s
PLTo	215	10e9/L	PLTI	246
MPV	8.38	fL	CD61	----
PDW	15.4	10(GSD)	PLTs	----
PCT	1.80	mL/L	PLTI	----

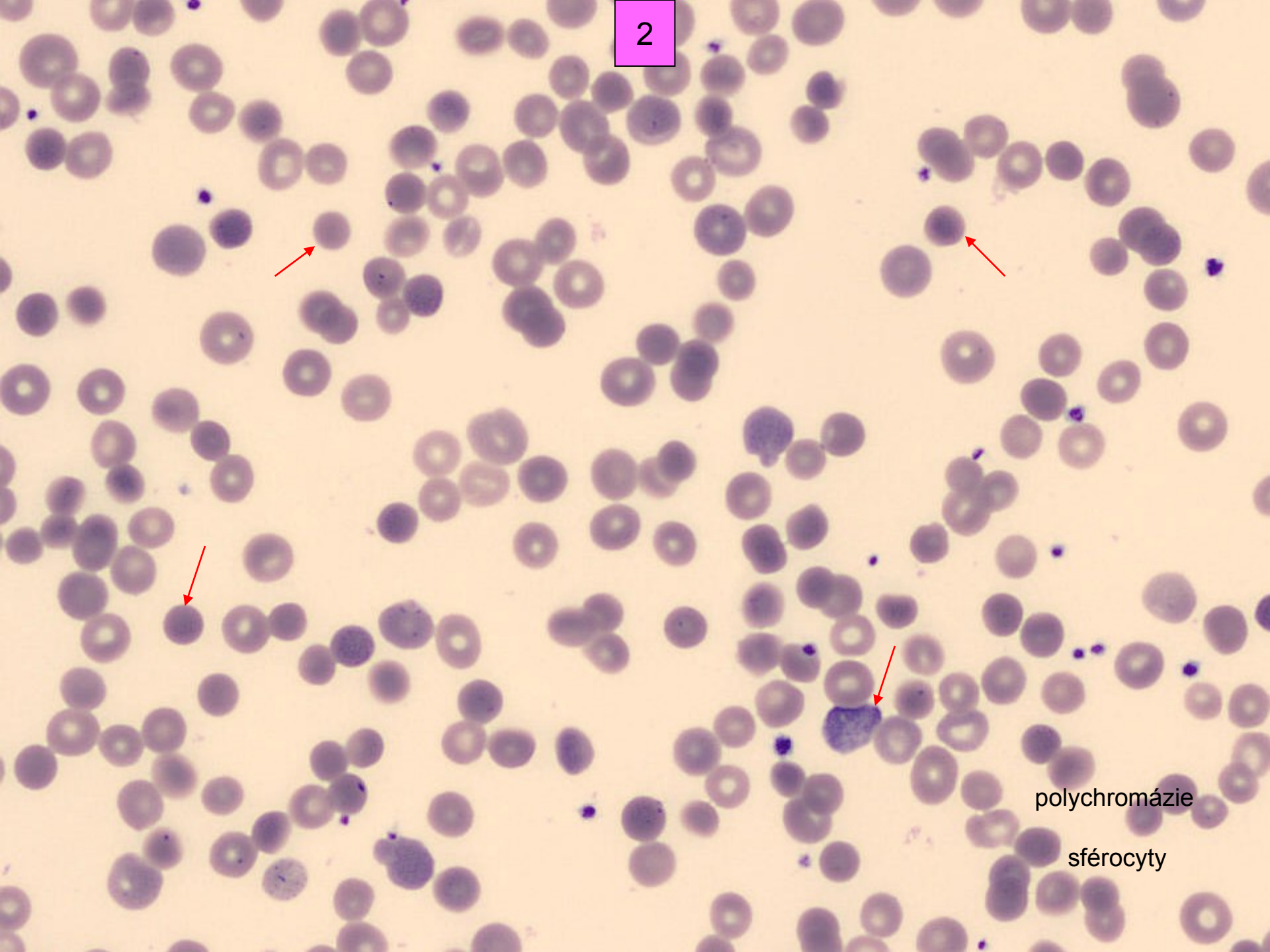


2



anizo ery
 sférocyty
 anizo, makro PLT

2



polychromázie

sférocyty

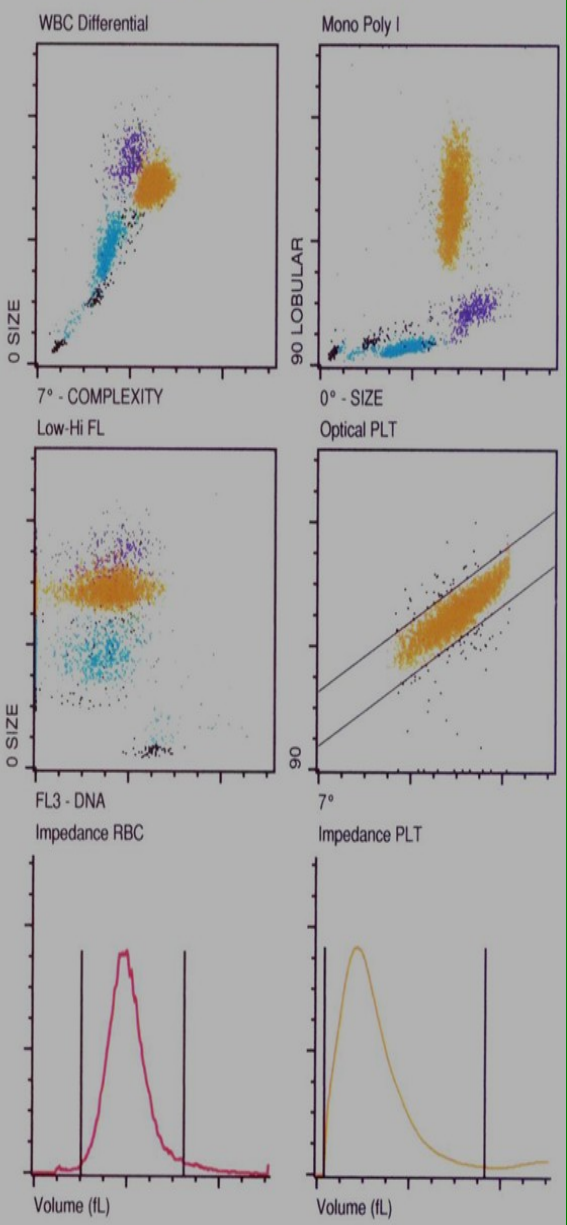
DOB: 03/21/80
 Sex: F
 Doctor: 0776/31/05/2010
 User Defined A:
 User Defined B:
 User Defined C:
 User Defined D:

X-B In	WBC In	RBC In	PLT In	RETC Out
WBC	7.41	10e9/L	WVF	.964
SEG	5.16		%S	69.7
BAND	0.00		%BD	0.00
IG	0.00		%IG	0.00
BLST	0.00		%BL	0.00
MONe	.716		%Me	9.67
EOS	.173		%E	2.34
BASO	.031		%B	.420
LYMe	1.32		%Le	17.9
VARL	0.00		%VL	0.00

FP?

RBC	2.60	10e12/L	RBCo	2.54
HGB	79.9	g/L		
HCT	20.7	L/L		
MCV	79.7	fL		
MCH	30.8	pg		
MCHC	38.6	g/L		
RDW	19.8	%CV		
RETC	730.	10e9/L	%R	28.1
IRF	.448			
NRBC	0.00s	10e9/L	NRW	0.00s
PLTo	215.	10e9/L	PLTi	246.
MPV	8.38	fL	CD61	----
PDW	15.4	10(GSD)	PLTs	----
PCT	1.80	mL/L	PLTI	----

Manual Differential	RBC Morphology		
SEG 68	META 1	NORMAL	MICRO ✓
BAND 1	MYELO	POLYCH ✓	MACRO ✓
LYMPH 20	PRO	HYPOCH	ANISO ✓
MONO 4	BLAST 1	POIK	BASOSTIP
EOSIN 3	VAR LYM	TARGET	<i>skrovyt</i>
BASO 1	TOXGRAN	SPHERO	NRBC
PLT EST <i>anizo</i>	PLT MORPH		
Comment: <i>hypogranulace neu</i>			
DIFF by:	Date:		



Patient 2

- žena, 30 roků
- ambulantní pacientka
- diagnóza: dědičná sférocyóza