

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)
-

❖ vždy statistické vyhodnocení: CV%, SD, Mean

- *kontrola správného odběru EDTA (evt. Mg^{2+} nebo citrát)*

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

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)

Fyziologické hodnoty

Infekce

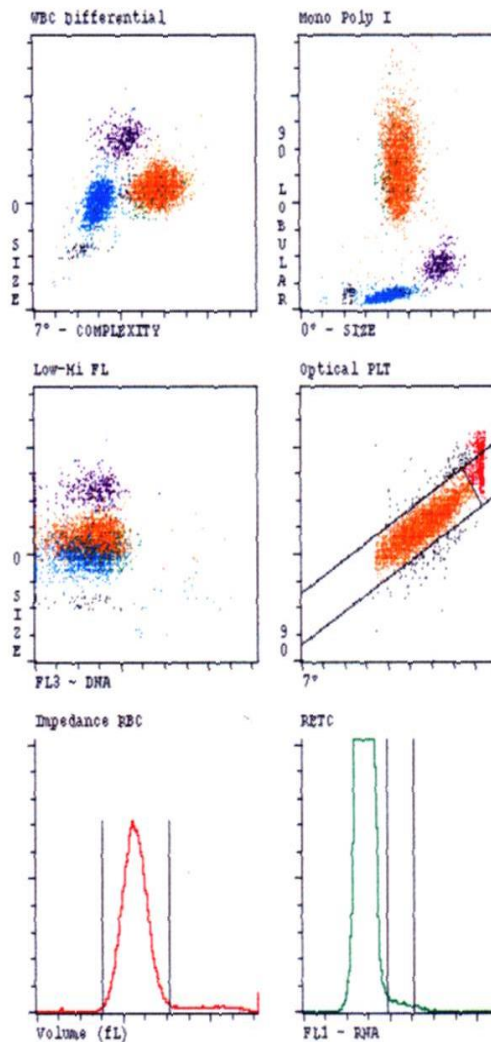
Sequence #: 703 Autoloader r38t06
 Patient/Human
 Specimen ID: 020003255
 Name:

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

X-B	WBC	RBC	PLT	RETC
In	In	In	In	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	PLTI	----



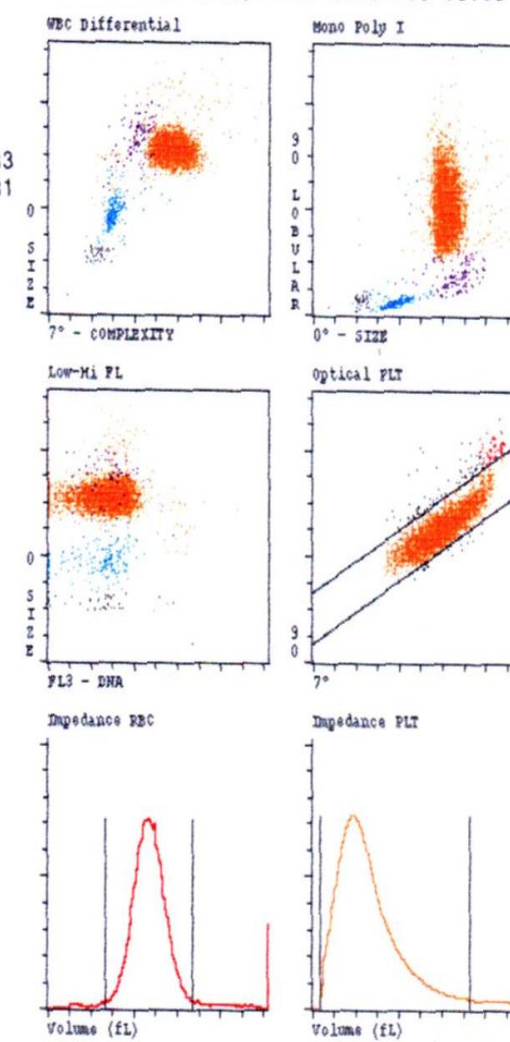
Sequence #: 7967 Autoloader r04t02
 Patient/Human
 Specimen ID: 031273
 Name:

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

X-B	WBC	RBC	PLT	RETC
In	1 Out	In	In	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	---- 10e9/L	%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		



Satelitózta trombocytû

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

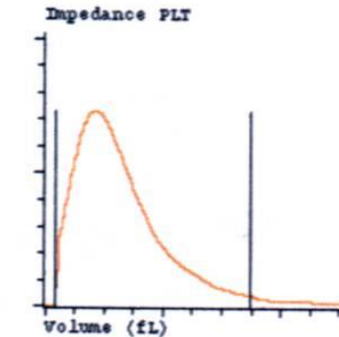
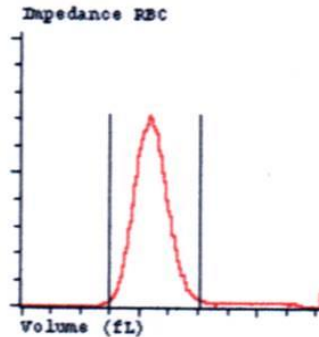
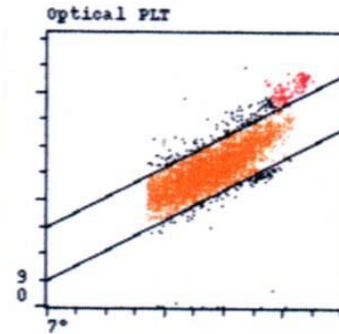
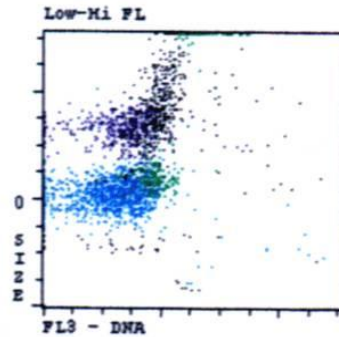
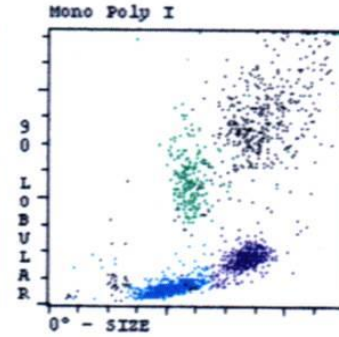
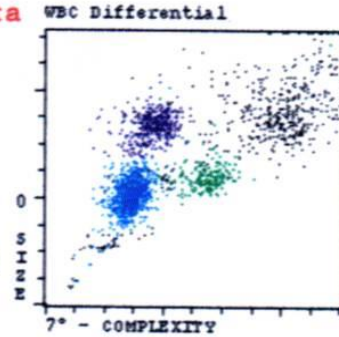
Test Selection: CBC
 Param Set(Chart Page): 1
 Limit Set: 1
 Run Date/Time: 26/01/99 17:44

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*

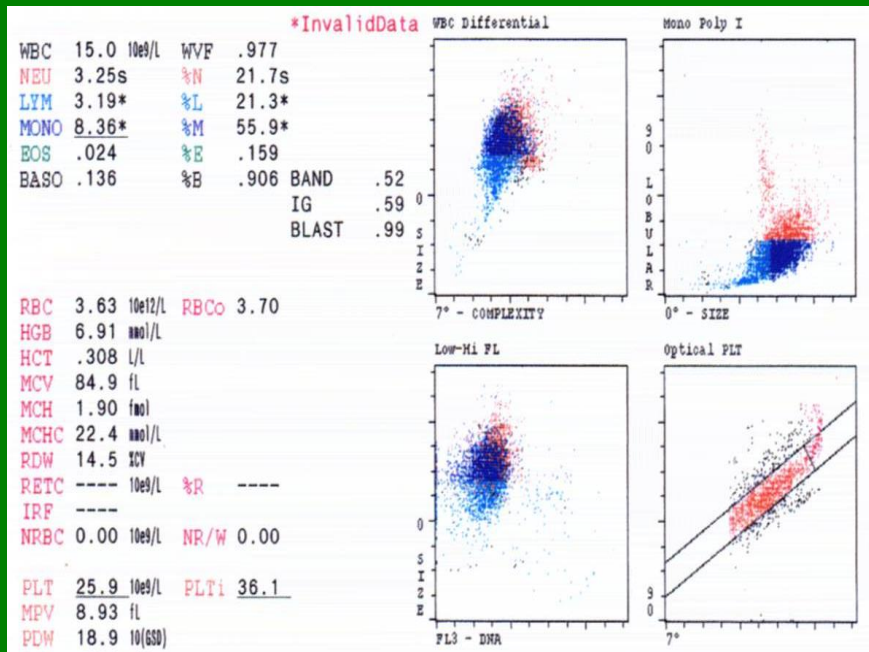
*InvalidData

VARLYM .50

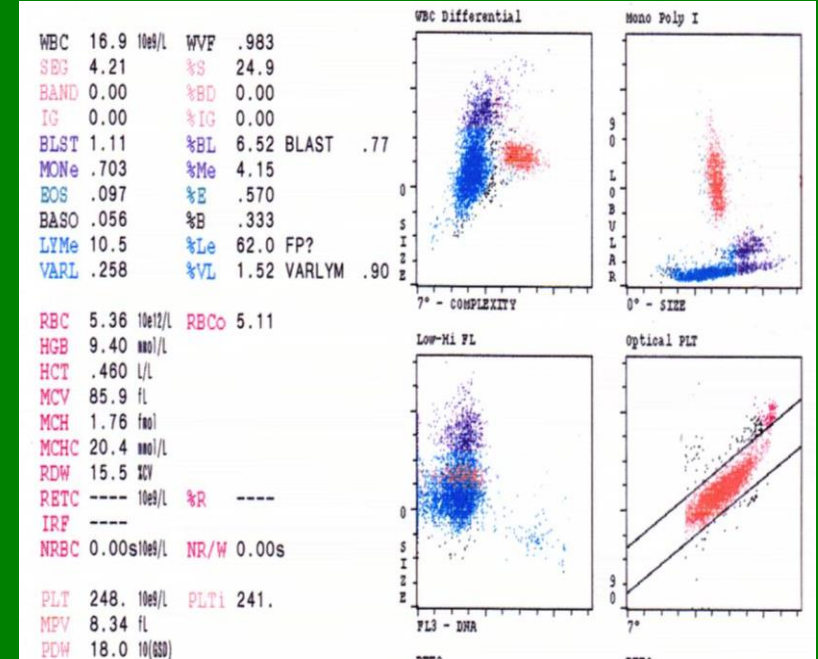
RBC 5.00 10e12/L RBCo 4.84
 HGB 9.50 mmol/L
 HCT .455 L/L
 MCV 91.0 fL
 MCH 1.90 fmoI
 MCHC 20.9 mmol/L
 RDW 12.4 %CV
 RETC --- 10e9/L %R ---
 IRF ---
 NRBC 0.00*10e9/L NR/W 0.00*
 PLT 156. 10e9/L PLTi 162.
 MPV 8.48 fL
 PDW 16.9 10(GSD)
 PCT 1.32 mL/L



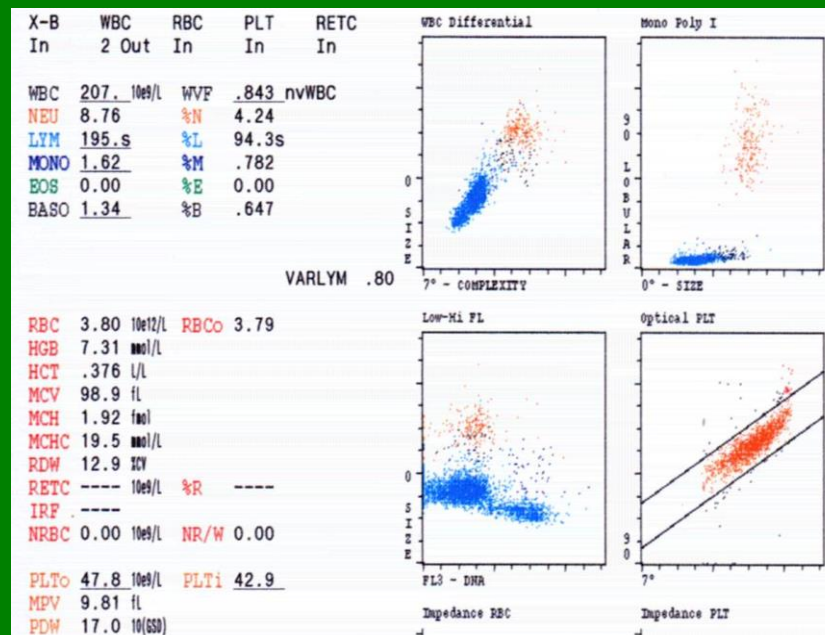
Monocytární leukémie



Mononukleóza



Chronická lymfatická leukémie



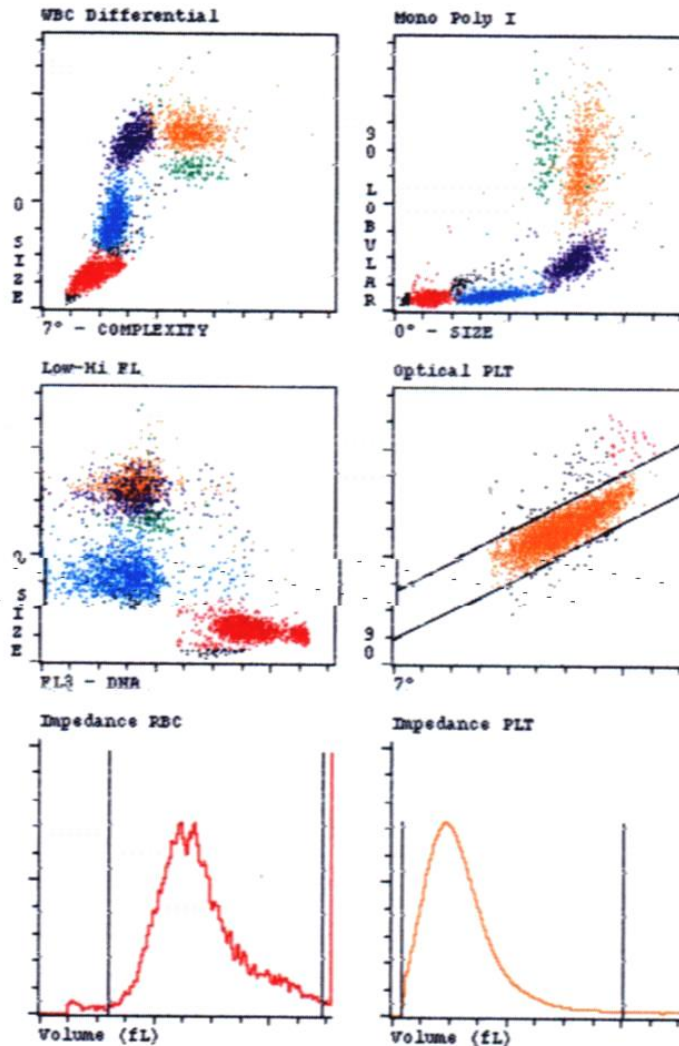
NRBC ve vzorku

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		

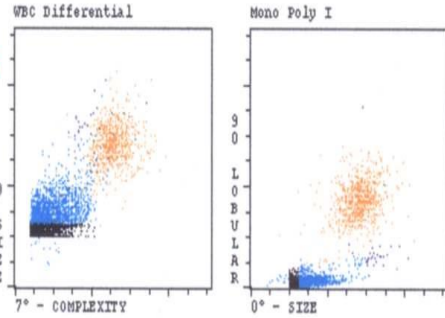


Vzorek po dialýze

Sequence #: 4453 Auto-loader 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*	*InvalidData
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*	

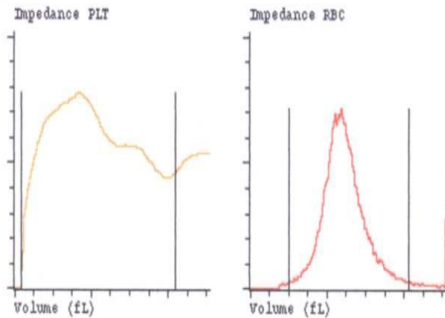
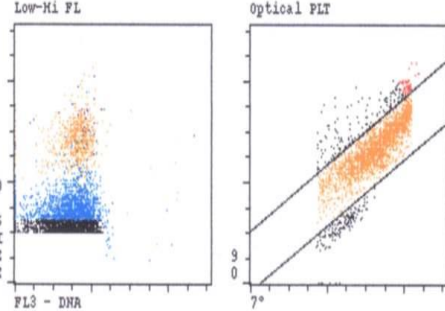


RBC	3.78s10e12/L	RBCc	3.85
HGB	8.08 mmol/L		rstRBC
HCT	.395 L/L		
MCV	104. fL		
MCH	2.13 fmoL		
MCHC	20.5 mmol/L		
RDW	21.9 %CV		
RETC	95.3s10e9/L	%R	2.52s
IRF	.335		IR
NRBC	0.00*10e9/L	NR/W	0.00*

PLTc	76.9 10e9/L	PLTi	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 PLTi Histogram
 Lower, Upper, or Lower and Upper Region Interference in PLTl Histogram

Po odstranění rstRBC

Sequence #: 4472 Auto-loader 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

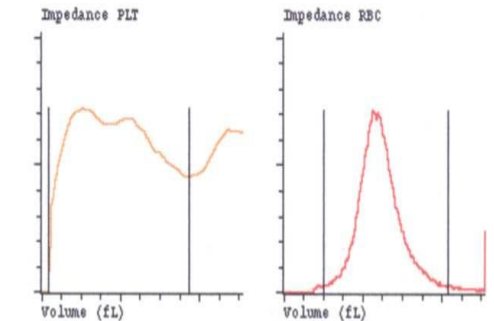
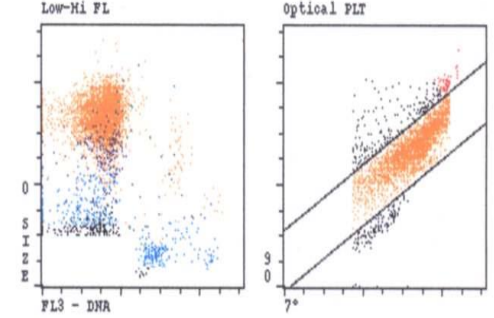
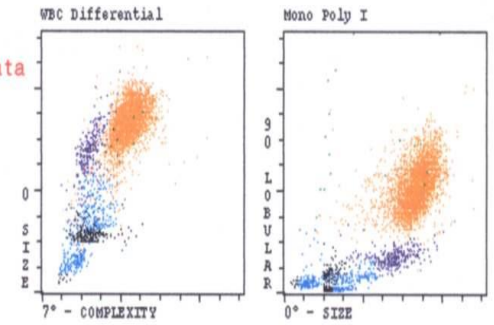
X-B In	WBC In	RBC -	PLT In	RETC In
WBC	6.47 10e9/L	WVF	.945	*InvalidData
NEU	5.55	%N	85.7	
LYM	.531	%L	8.21 FP?	
MONO	.364	%M	5.63	
EOS	.028	%E	.437	
BASO	.001	%B	.015	

RBC	3.74 10e12/L	RBCc	3.78
HGB	7.96 mmol/L		
HCT	.388 L/L		
MCV	104. fL		
MCH	2.13 fmoL		
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	PLTi	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 PLTi Histogram
 Lower, Upper, or Lower and Upper Region Interference in PLTl Histogram

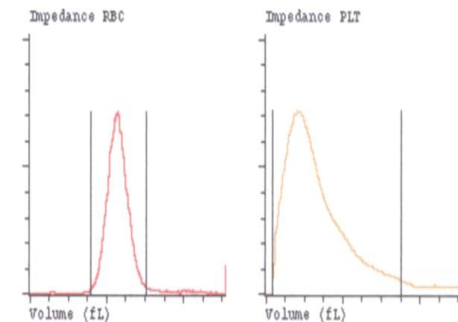
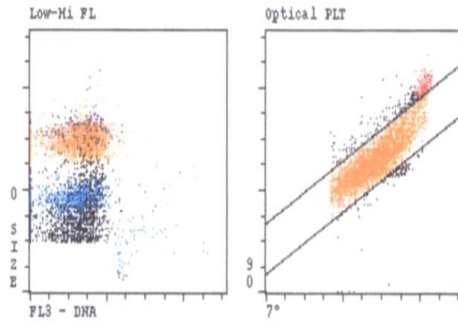
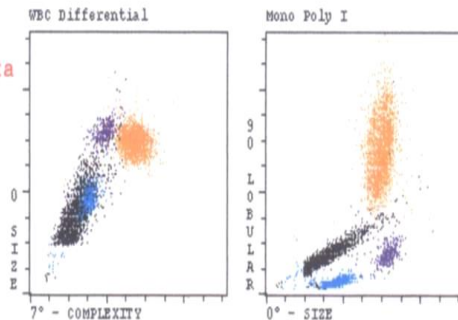
Reakce na EDTA

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	64.9	
BAND	0.00	%BD	0.00	
IG	0.00	%IG	0.00	
BLST	0.00*	%BL	0.00*	
MONE	1.27*	%Me	8.54*	
EOS	.016	%E	.109	
BASO	.010	%B	.068	
LYMe	3.92*	%Le	26.4*FP?	
VARL	0.00*	%VL	0.00*VARLYM	.50

*InvalidData



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	0.00s10e9/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	

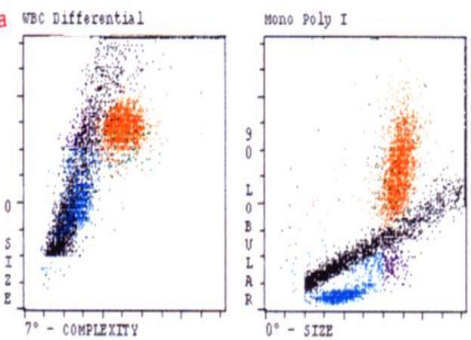
Comment:

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

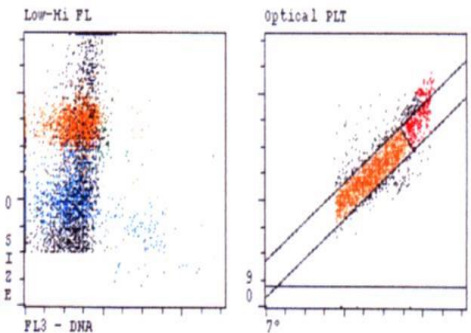
Test Selection: CBC+RETC
 Param Set (from Chart Page): 1
 Limit Set: 1
 Run Date/Time: 22/01/97 12:17

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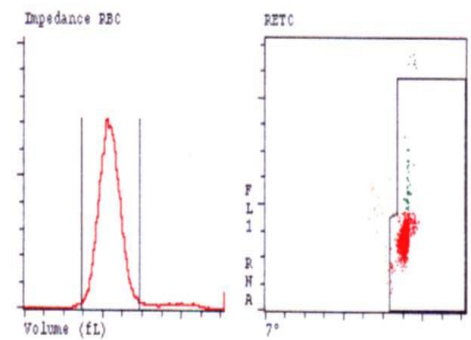
WBC	6.46*10e9/L	WVF	.961*
NEU	4.14*	%N	64.1*
LYM	1.87*	%L	29.0*
MONO	.257*	%M	3.98*
EOS	.189*	%E	2.93*
BASO	0.00*	%B	0.00*BAND



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*



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



ALL a fragmenty cytoplazmy

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

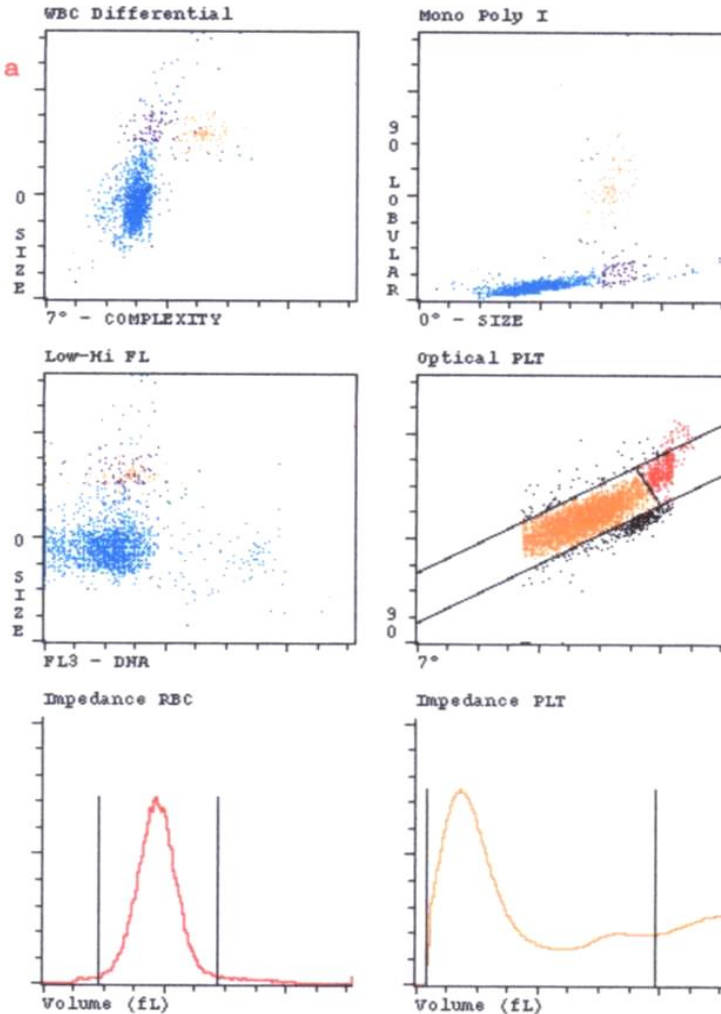
Test Selection: CBC
 Param Set(Chart Page): 1
 Limit Set: 1
 Run Date/Time: 21/02/00 08:57

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