

SUMMARY STATISTICS

EQA round: NF1/22 - Peripheral Blood Smears - Photos

Deadline (EQA round closed): 18.03.2022

Professional supervision: Czech Haematological Society

Key:	>>>	... marks correct (expected) result
	>	... marks conditionally correct (acceptable) result

Photo 1

Object no.1 WBC and other nucleous elements - types of cells	>>>	51	Blast	88 %
		1	Promyelocyte	1,7 %
		6	Lymphocyte	10 %
WBC - morphology		18	No changes	31 %
	>	16	Vacuolisation	28 %
		4	Lymphocytes - atypical forms	6,9 %
		1	Leukemic promyelocyte	1,7 %
Object no.2 WBC and other nucleous elements - types of cells	>>>	58	Erythroblast	100 %
WBC - morphology	>>>	39	No changes	67 %
		13	Erythroblast: disturbance of cytoplasmatic haemoglobinisation	22 %
Object no.3 WBC and other nucleous elements - types of cells	>>>	56	Blast	97 %
		1	Promyelocyte	1,7 %
		1	Lymphocyte	1,7 %
WBC - morphology		30	No changes	52 %
		3	Vacuolisation	5,2 %
		1	Lymphocytes - atypical forms	1,7 %
		1	Leukemic promyelocyte	1,7 %
Object no.4 WBC and other nucleous elements - types of cells	>>>	54	Blast	93 %
		1	Promyelocyte	1,7 %
		3	Lymphocyte	5,2 %
WBC - morphology		23	No changes	40 %
	>	9	Vacuolisation	16 %
		2	Lymphocytes - atypical forms	3,4 %
		1	Leukemic promyelocyte	1,7 %
RBC - morphology		1	No changes	1,7 %
		3	Normocytosis	5,2 %
		3	Microcytosis	5,2 %
		5	Macrocytosis	8,6 %
	>>>	53	Anisocytosis	91 %
		5	Poikilocytosis	8,6 %
		2	Eliptocytes	3,4 %
		14	Spherocytes	24 %
		1	Stomatocytes	1,7 %
		1	Drepanocytes	1,7 %
	>	25	Dacryocytes	43 %
		1	Acanthocytes	1,7 %
	>>>	48	Schistocytes (and other fragmentocytes)	83 %
		1	Polychromasia	1,7 %
		1	Hypochromia	1,7 %
		3	Howell-Jolly bodies	5,2 %
		3	Pappenheimer bodies	5,2 %
		2	Anisochromia	3,4 %
		2	Knizocytes	3,4 %
	>>>	45	Ovalocytes	78 %

Photo 2

Object no.1 WBC and other nucleous elements - types of cells	>>>	58	Monocyte	100 %
WBC - morphology	>	40	No changes	69 %
	>	16	Atypical/reactive monocytes	28 %
		1	Vacuolisation	1,7 %
Object no.2 WBC and other nucleous elements - types of cells	>>>	58	Lymphocyte	100 %

Photo 2

Object no.2 WBC - morphology	>>>	28	No changes	48 %	
	>	17	Lymphocytes - reactive forms	29 %	
		3	"Hairy" lymphocytes	5,2 %	
		10	Lymphocytes - atypical forms	17 %	
Object no.3 WBC and other nucleous elements - types of cells	>	10	Blast	17 %	
		7	Promyelocyte	12 %	
		1	Neutrophil myelocyte	1,7 %	
		2	Neutrophil metamyelocyte	3,4 %	
		1	Eosinophil - immature form	1,7 %	
		17	Monocyte	29 %	
		3	Lymphocyte	5,2 %	
	>	17	Promonocyte	29 %	
	WBC - morphology		18	No changes	31 %
			4	Hypogranulation/agranulation	6,9 %
>>>		19	Atypical/reactive monocytes	33 %	
		1	Nucleocytoplasmatic asynchrony	1,7 %	
		1	"Hairy" lymphocytes	1,7 %	
		3	Lymphocytes - atypical forms	5,2 %	
		4	Leukemic promyelocyte	6,9 %	
Object no.4 WBC and other nucleous elements - types of cells			1	Neutrophil metamyelocyte	1,7 %
		6	Neutrophil bar	10 %	
	>>>	45	Neutrophil segment	78 %	
	>	6	Eosinophil segment	10 %	
	WBC - morphology		11	No changes	19 %
			11	Hypergranulation/toxic granulation	19 %
			3	Giant bands and metamyelocytes	5,2 %
		>>>	26	Hypogranulation/agranulation	45 %
			1	Hypersegmented granulocytes	1,7 %
		>	11	Hyposegmentation or pseudo Pelger anomaly	19 %
		2	Nucleocytoplasmatic asynchrony	3,4 %	
		1	Granules (pseudo) Chediak-Higashi	1,7 %	
RBC - morphology		13	No changes	22 %	
		11	Normocytosis	19 %	
		1	Microcytosis	1,7 %	
		1	Macrocytosis	1,7 %	
		9	Anisocytosis	16 %	
		2	Poikilocytosis	3,4 %	
	>	18	Spherocytes	31 %	
	>	17	Stomatocytes	29 %	
		4	Dacryocytes	6,9 %	
		3	Echinocytes	5,2 %	
		11	Schistocytes (and other fragmentocytes)	19 %	
		1	Polychromasia	1,7 %	
		5	Hypochromia	8,6 %	
		3	Howell-Jolly bodies	5,2 %	
		1	Rouleaux formation	1,7 %	
		4	Pappenheimer bodies	6,9 %	
	8	Anisochromia	14 %		
>	16	Ovalocytes	28 %		
Platelets - morphology		20	No changes	34 %	
	>	27	Anisocytosis	47 %	
	>	27	Platelets hypo-/agranulation	47 %	

Photo 3

Object no.1 WBC and other nucleous elements - types of cells		1	Blast	1,7 %	
		1	Monocyte	1,7 %	
	>>>	56	Lymphocyte	97 %	
	WBC - morphology		1	No changes	1,7 %
			1	Hypergranulation/toxic granulation	1,7 %
			1	Vacuolisation	1,7 %
		>>>	45	LGL/big lymphocytes	78 %
>	19	Lymphocytes - reactive forms	33 %		
Object no.2 WBC and other nucleous elements - types of cells		1	Blast	1,7 %	
		1	Monocyte	1,7 %	

Photo 3

Object no.2	WBC and other nucleous elements - types of cells	>>>	56	Lymphocyte	97 %
	WBC - morphology		2	No changes	3,4 %
			2	Vacuolisation	3,4 %
		>>>	13	LGL/big lymphocytes	22 %
		>	47	Lymphocytes - reactive forms	81 %
Object no.3	WBC and other nucleous elements - types of cells		1	Blast	1,7 %
			1	Neutrophil myelocyte	1,7 %
	WBC - morphology	>>>	56	Lymphocyte	97 %
			1	Hypergranulation/toxic granulation	1,7 %
			1	Hypogranulation/agranulation	1,7 %
		>>>	53	LGL/big lymphocytes	91 %
			5	Lymphocytes - reactive forms	8,6 %
			1	Lymphocytes - atypical forms	1,7 %
RBC - morphology			1	No changes	1,7 %
			2	Microcytosis	3,4 %
			6	Macrocytosis	10 %
		>>>	26	Anisocytosis	45 %
			3	Poikilocytosis	5,2 %
		>	34	Spherocytes	59 %
		>	13	Stomatocytes	22 %
		>>>	54	Dacryocytes	93 %
		>	15	Acanthocytes	26 %
		>>>	38	Echinocytes	66 %
			5	Schistocytes (and other fragmentocytes)	8,6 %
			3	Polychromasia	5,2 %
			4	Hypochromia	6,9 %
			1	Howell-Jolly bodies	1,7 %
			1	Pappenheimer bodies	1,7 %
			1	RBC agglutination	1,7 %
		>	9	Anisochromia	16 %
		>>>	39	Knizocytes	67 %
		>	9	Ovalocytes	16 %
Platelets - morphology		>>>	55	No changes	95 %
			1	Large platelets	1,7 %
			1	Platelet satellitism	1,7 %

Photo 4

Object no.1	WBC and other nucleous elements - types of cells	>>>	58	Monocyte	100 %
	WBC - morphology	>	38	No changes	66 %
		>	17	Atypical/reactive monocytes	29 %
			2	Vacuolisation	3,4 %
Object no.2	WBC and other nucleous elements - types of cells		1	Promyelocyte	1,7 %
	WBC - morphology	>>>	57	Lymphocyte	98 %
			2	No changes	3,4 %
		>>>	44	LGL/big lymphocytes	76 %
		>	7	Lymphocytes - reactive forms	12 %
			1	"Hairy" lymphocytes	1,7 %
			4	Lymphocytes - atypical forms	6,9 %
Object no.3	WBC and other nucleous elements - types of cells	>>>	56	Lymphocyte	97 %
	WBC - morphology		2	Erythroblast	3,4 %
			2	No changes	3,4 %
			3	Lymphocytes - reactive forms	5,2 %
		>>>	49	"Hairy" lymphocytes	84 %
		>	3	Lymphocytes - atypical forms	5,2 %
			1	Erythroblast: disturbance of cytoplasmatic haemoglobinisation	1,7 %
Object no.4	WBC and other nucleous elements - types of cells		1	Neutrophil myelocyte	1,7 %
	WBC - morphology	>>>	57	Lymphocyte	98 %
			5	No changes	8,6 %
		>>>	29	LGL/big lymphocytes	50 %
		>	15	Lymphocytes - reactive forms	26 %
			1	"Hairy" lymphocytes	1,7 %
			7	Lymphocytes - atypical forms	12 %
RBC - morphology			3	Normocytosis	5,2 %
			2	Microcytosis	3,4 %

Photo 4

RBC - morphology		1	Macrocytosis	1,7 %	
	>>>	30	Anisocytosis	52 %	
		4	Poikilocytosis	6,9 %	
		1	Eliptocytes	1,7 %	
	>	31	Spherocytes	53 %	
	>>>	56	Stomatocytes	97 %	
	>>>	36	Dacryocytes	62 %	
		7	Acanthocytes	12 %	
	>	30	Echinocytes	52 %	
	>	20	Schistocytes (and other fragmentocytes)	34 %	
		1	Polychromasia	1,7 %	
		2	Hypochromia	3,4 %	
	>>>	35	Rouleaux formation	60 %	
		2	Pappenheimer bodies	3,4 %	
		5	RBC agglutination	8,6 %	
		4	Anisochromia	6,9 %	
	>>>	48	Knizocytes	83 %	
	>>>	39	Ovalocytes	67 %	
	Platelets - morphology	>	19	No changes	33 %
			2	Large platelets	3,4 %
		2	Small platelets	3,4 %	
		3	Anisocytosis	5,2 %	
		1	Platelet aggregates	1,7 %	
		2	Platelet satellitism	3,4 %	
>		29	Platelets hypo-/agranulation	50 %	
		5	Megakaryocytic nucleus fragments	8,6 %	

Evaluation of the results - scoring system

NF1/22

	Photo 1	Photo 2	Photo 3	Photo 4
Maximal achievable score:	40	30	55	65
Successful participants (success 60 % and more):	51 (it is 88 %)	22 (it is 38 %)	52 (it is 90 %)	52 (it is 90 %)
Minimal success in this round:	20,0 %	23,3 %	-3,6 %	16,9 %
Maximal success in this round:	100,0 %	96,7 %	100,0 %	100,0 %

Number of participants: 58

Number of the participants that succeeded: {

in all 4 photos: 18 (it is 31 %)
in 3 photos: 33 (it is 57 %)
in 2 photos: 3 (it is 5 %)
in 1 photo: 0 (it is 0 %)
in no photo: 4 (it is 7 %)