

# SUMMARY STATISTICS

## EQA round: NF1/18 - Peripheral Blood Smears - Photos

Dead line (EQA round closed): 20.04.2018

Professional supervision: Czech Haematological Society  
National Reference Laboratory for Haematology

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

### Photo 1

Object no.1 WBC and other nucleous elements - types of cells		6	Monocyte	60 %
	>>>	4	Lymphocyte	40 %
WBC - morphology	>	6	No changes	60 %
		1	Atypical/reactive monocytes	10 %
		1	LGL/big lymphocytes	10 %
		3	Lymphocytes - atypical forms	30 %
Object no.2 WBC and other nucleous elements - types of cells	>>>	9	Lymphocyte	90 %
		1	Erythroblast	10 %
WBC - morphology	>>>	7	No changes	70 %
		3	Lymphocytes - atypical forms	30 %
Object no.3 WBC and other nucleous elements - types of cells	>>>	10	Monocyte	100 %
WBC - morphology	>>>	5	No changes	50 %
		3	Atypical/reactive monocytes	30 %
		5	Vacuolisation	50 %
Object no.4 WBC and other nucleous elements - types of cells		7	Eosinophil segment	70 %
	>>>	3	Basophiles	30 %
WBC - morphology	>>>	8	No changes	80 %
		1	Hypogranulation/agranulation	10 %
	>	1	Vacuolisation	10 %
RBC - morphology	>>>	8	Anisocytosis	80 %
	>	3	Poikilocytosis	30 %
		1	Spherocytes	10 %
	>>>	7	Stomatocytes	70 %
	>>>	10	Dacryocytes	100 %
		1	Acanthocytes	10 %
	>	3	Echinocytes	30 %
	>	4	Target cells	40 %
	>>>	5	Schistocytes (and other fragmentocytes)	50 %
	>>>	7	Polychromasia	70 %
	>>>	2	Hypochromia	20 %
	>>>	10	Basophilic stippling	100 %
		1	Howell-Jolly bodies	10 %
		3	Rouleaux formation	30 %
		2	Anisochromia	20 %
	>	1	Knizocytes	10 %

### Photo 2

Object no.1 WBC and other nucleous elements - types of cells		2	Neutrophil bar	20 %
	>>>	8	Neutrophil segment	80 %
WBC - morphology		3	Hypergranulation/toxic granulation	30 %
		1	Giant bands and metamyelocytes	10 %
		1	Hypogranulation/agranulation	10 %
	>	4	Hyposegmentation or pseudo Pelger anomaly	40 %
		1	Döhle bodies	10 %
	>>>	10	Vacuolisation	100 %
Object no.2 WBC and other nucleous elements - types of cells		3	Neutrophil metamyelocyte	30 %
	>>>	7	Neutrophil bar	70 %
WBC - morphology		5	No changes	50 %
	>>>	1	Hypogranulation/agranulation	10 %
	>>>	3	Döhle bodies	30 %
Object no.3 WBC and other nucleous elements - types of cells	>>>	10	Neutrophil segment	100 %

## Photo 2

Object no.3 WBC - morphology		1	No changes	10 %	
	>>>	3	Hypogranulation/agranulation	30 %	
	>	3	Hyposegmentation or pseudo Pelger anomaly	30 %	
	>>>	4	Döhle bodies	40 %	
Object no.4 WBC and other nucleous elements - types of cells	>>>	7	Neutrophil myelocyte	70 %	
	>>>	3	Neutrophil metamyelocyte	30 %	
	WBC - morphology	>>>	7	No changes	70 %
			1	Hypergranulation/toxic granulation	10 %
			2	Nucleocytoplasmatic asynchrony	20 %
Object no.5 WBC and other nucleous elements - types of cells	>>>	10	Neutrophil bar	100 %	
	WBC - morphology		1	No changes	10 %
		>>>	8	Hypogranulation/agranulation	80 %
			2	Döhle bodies	20 %
RBC - morphology	>	2	Macrocytosis	20 %	
	>>>	8	Anisocytosis	80 %	
		3	Poikilocytosis	30 %	
	>>>	9	Spherocytes	90 %	
		2	Stomatocytes	20 %	
	>>>	5	Dacryocytes	50 %	
		1	Target cells	10 %	
		2	Polychromasia	20 %	
	>>>	6	Howell-Jolly bodies	60 %	
		1	Pappenheimer bodies	10 %	
	>	3	Anisochromia	30 %	
		2	Knizocytes	20 %	

## Photo 3

Object no.1 WBC and other nucleous elements - types of cells	>>>	8	Lymphocyte	80 %	
		2	Plasma cell	20 %	
	WBC - morphology	>	8	No changes	80 %
		>>>	1	Lymphocytes - reactive forms	10 %
			1	Lymphocytes - atypical forms	10 %
Object no.2 WBC and other nucleous elements - types of cells	>>>	10	Neutrophil segment	100 %	
	WBC - morphology	>>>	7	No changes	70 %
			2	Hypergranulation/toxic granulation	20 %
			1	Hyposegmentation or pseudo Pelger anomaly	10 %
Object no.3 WBC and other nucleous elements - types of cells	>>>	10	Monocyte	100 %	
	WBC - morphology	>>>	3	No changes	30 %
			6	Atypical/reactive monocytes	60 %
			5	Vacuolisation	50 %
		RBC - morphology	>	1	No changes
>	3		Normocytosis	30 %	
	3		Microcytosis	30 %	
	3		Anisocytosis	30 %	
	2		Poikilocytosis	20 %	
>	4		Eliptocytes, ovalocytes	40 %	
>	8		Spherocytes	80 %	
	1		Polychromasia	10 %	
	2		Anisochromia	20 %	
>	2		Knizocytes	20 %	
Platelets - morphology	>>>	9	No changes	90 %	
		1	Anisocytosis	10 %	

## Photo 4

Object no.1 WBC and other nucleous elements - types of cells	>>>	10	Neutrophil segment	100 %	
	WBC - morphology	>>>	6	No changes	60 %
			1	Hypergranulation/toxic granulation	10 %
			2	Hyposegmentation or pseudo Pelger anomaly	20 %
			1	Vacuolisation	10 %
Object no.2 WBC and other nucleous elements - types of cells		1	Neutrophil myelocyte	10 %	
	>>>	9	Basophiles	90 %	
	WBC - morphology	>>>	8	No changes	80 %
			2	Nucleocytoplasmatic asynchrony	20 %
Object no.3 WBC and other nucleous elements - types of cells	>>>	10	Bare nuclei, smudge cell	100 %	
	WBC - morphology		2	No changes	20 %
Object no.4 WBC and other nucleous elements - types of cells	>>>	9	Neutrophil segment	90 %	

## Photo 4

Object no.4 WBC and other nucleous elements - types of cells		1	Monocyte	10 %	
WBC - morphology	>>>	8	Hypogranulation/agranulation	80 %	
		1	Döhle bodies	10 %	
		1	Atypical/reactive monocytes	10 %	
		1	Nucleocytoplasmatic asynchrony	10 %	
	>>>	8	Vacuolisation	80 %	
	RBC - morphology		1	Macrocytosis	10 %
		>>>	8	Anisocytosis	80 %
			3	Poikilocytosis	30 %
>>>		8	Eliptocytes, ovalocytes	80 %	
>		5	Spherocytes	50 %	
>		5	Stomatocytes	50 %	
>		2	Dacryocytes	20 %	
>>>		2	Acanthocytes	20 %	
>>>		6	Target cells	60 %	
		3	Schistocytes (and other fragmentocytes)	30 %	
		1	Polychromasia	10 %	
		1	Basophilic stippling	10 %	
>>>		5	Howell-Jolly bodies	50 %	
>		1	Pappenheimer bodies	10 %	
		1	Anisochromia	10 %	
Platelets - morphology	>>>	10	Large platelets	100 %	
	>>>	8	Anisocytosis	80 %	
		1	Megakaryocytic nucleus fragments	10 %	

## Evaluation of the results - scoring system

## NF1/18

	Photo 1	Photo 2	Photo 3	Photo 4
<b>Maximal achievable score:</b>	<b>75</b>	<b>90</b>	<b>35</b>	<b>75</b>
Successful participants (success 60 % and more):	5 (it is 50 %)	4 (it is 40 %)	6 (it is 60 %)	9 (it is 90 %)
Minimal success in this round:	40,0 %	41,1 %	37,1 %	25,3 %
Maximal success in this round:	76,0 %	75,6 %	85,7 %	90,7 %
<b>Number of participants: 10</b>				
<b>Number of participants that succeeded:</b>	in all 4 photos: 2 (it is 20 %)			
	in 3 photos: 3 (it is 30 %)			
	in 2 photos: 2 (it is 20 %)			
	in 1 photo: 3 (it is 30 %)			
	in no photo: 0 (it is 0 %)			