

EQA round: DIF1/24 - Peripheral Blood Morphology Evaluation

Deadline: 15.3.2024

Setup: all data

AV = assigned value

CVE = consensus of the experts

>>> ... expected result

> ... acceptable result

± ... result not assessed

N_{tot} = total number of the resultsN_{rel} = relative number of the resultsN_{eva} = number of the results assessedN_{suc} = number of successful resultsS_{rel} = relative success

Sample Test Group	Frequency of the results			Success		
	AV	N _{tot}	N _{rel} Result [%]	N _{eva}	N _{suc}	S _{rel} [%]

Sample A**(921) WBC - morphology**

All results		2	1,3	Not specified
		5	3,3	No changes
		1	0,7	Hypergranulation/toxic granulation
		5	3,3	Agranulation
		2	1,3	Neutrophil hypersegmentation
		2	1,3	Hyposegmentation / asegmentation / pelgeroid
	>	33	22	Atypical/reactive/pathological monocytes/promono.
		19	12	Denuded nuclei/cells, nuclear shadows / smudge cells
		1	0,7	Cytoplasmatic fragments
	>	35	23	Vacuolisation
CVE >>>		80	52	LGL/big lymphocytes
CVE >>>		113	74	Lymphocytes - reactive forms
		12	7,8	Lymphocytes - atypical forms (except "hairy")
		1	0,7	Nucleus fragments of neutrophiles

(922) WBC - count changes (relative)

All results		1	0,7	Not specified
		31	20	Normal count
CVE >>>		110	72	Neutropenia
CVE >>>		77	50	Lymphocytosis
		2	1,3	Eosinophilia
	>	44	29	Basophilia
	>	78	51	Monocytosis
		1	0,7	Monocytopenia
		3	2	Left shift

(923) RBC - morphology

All results		27	18	No changes
	CVE >>>	91	59	Normocytosis
		3	2	Anisocytosis
		4	2,6	Poikilocytosis
	CVE >>>	56	37	Eliptocytes, ovalocytes
		5	3,3	Spherocytes
	>	58	38	Stomatocytes
		1	0,7	Drepanocytes
		15	9,8	Dacryocytes
		1	0,7	Acanthocytes
		1	0,7	Echinocytes
	CVE >>>	96	63	Target cells
		5	3,3	Schistocytes (and other fragmentocytes)
		4	2,6	Polychromasia
	>	43	28	Hypochromia
		3	2	Howell-Jolly bodies
		7	4,6	Rouleaux formation
		1	0,7	Pappenheimer bodies

(924) Platelets - morphology

All results		86	56	Large platelets
		4	2,6	Small platelets
	CVE >>>	43	28	Platelet aggregates
	CVE >>>	152	99	Platelet satellitism
		3	2	Platelets hypogranulation

(925) Clinical recommendation - smear assessment

All results		105	69	Blood smear is pathological
	>	48	31	Blood smear within physiological limits or with reactive changes

(926) Clinical recommendation - examination

All results		99	65	An examination by the specialist/haematologist is recommended
	>	54	35	An examination by the specialist/haematologist is not necessary

(927) Estimation of diagnosis

All results		1	0,7	Not specified
		4	2,7	Physiological finding

Setup: all data

Sample Test Group	Frequency of the results			Success			
	AV	N _{tot}	N _{rel} [%]	Result	N _{eva}	N _{suc}	S _{rel} [%]
		1	0,7	Anemia: Normocytosis			
		2	1,4	Anemia: Hypochromia			
		3	2	Anaemia: Thalassemia and other congenital anaemias			
		1	0,7	Acute leukemia: AML (acute myeloid leukemia)			
		1	0,7	Myelodysplastic syndrome: Myelodysplastic syndrome			
		1	0,7	Chronic myeloproliferative disease: Exact determination impossible			
		7	4,8	Mature lymphocytic cells neoplasms: Exact determination impossible			
	>	19	13	Platelets disorders: Thrombocytopenia			
	>	70	48	Platelets disorders: Other			
		6	4,1	Other: Viral infection incl. inf. mononucleosis			
	>	79	54	Other: Other reactive changes			
	>	17	12	Other: Other disease			
(928) How do you rate the technical quality of the smear?		151				0	
All results	±	137	91	Acceptable			
	±	14	9,3	Not acceptable (give a reason)			
(929) How do you rate the staining of the smear?		150				0	
All results	±	136	91	Acceptable			
	±	14	9,3	Not acceptable (give a reason)			
(939) Overall assessment (score)		153			153	110	72
Maximum score achievable: 111 points				Criterion (60 % out of the maximum): 67 points			
Minimum score achieved: 33 points (29,7 %)							
Maximum score achieved: 105 points (94,6 %)							
All results		43	28	Unacceptable result			
	>>>	110	72	Satisfactory result			

Sample B**(921) WBC - morphology**

All results		2	1,3	Not specified			
	>	56	37	No changes			
		12	7,8	Agranulation			
		10	6,5	Neutrophil hypersegmentation			
		2	1,3	Döhle bodies			
		3	2	Atypical/reactive/pathological monocytes/promono.			
		2	1,3	Denuded nuclei/cells, nuclear shadows / smudge cells			
	>	30	20	Vacuolisation			
		18	12	LGL/big lymphocytes			
	CVE >>>	67	44	Lymphocytes - reactive forms			
		3	2	Lymphocytes - atypical forms (except "hairy")			

(922) WBC - count changes (relative)

All results		3	2	Not specified			
	CVE >>>	118	77	Normal count			
		28	18	Neutrophilia			
		5	3,3	Lymphocytopenia			
		5	3,3	Basophilia			
		1	0,7	Monocytopenia			
		3	2	Left shift			

(923) RBC - morphology

All results		1	0,7	Normocytosis			
	CVE >>>	137	90	Microcytosis			
		1	0,7	Macrocytosis			
	CVE >>>	145	95	Anisocytosis			
		19	12	Poikilocytosis			
		7	4,6	Eliptocytes, ovalocytes			
		16	10	Spherocytes			
	CVE >>>	129	84	Stomatocytes			
		3	2	Drepanocytes			
		7	4,6	Dacryocytes			
		2	1,3	Echinocytes			
	CVE >>>	120	78	Target cells			
		25	16	Schistocytes (and other fragmentocytes)			
	CVE >>>	64	42	Polychromasia			
	CVE >>>	137	90	Hypochromia			
	CVE >>>	140	92	Basophilic stippling			

Setup: all data

Sample Test Group	AV	N _{tot}	N _{rel} [%]	Frequency of the results Result	Success			
					N _{eva}	N _{suc}	S _{rel} [%]	
			9	5,9	Howell-Jolly bodies			
			9	5,9	Rouleaux formation			
			3	2	Pappenheimer bodies			
(924) Platelets - morphology								
All results			31	20	No changes			
	CVE >>>	120	78	Large platelets				
		6	3,9	Small platelets				
		1	0,7	Platelet satellitism				
		2	1,3	Platelets hypogranulation				
(925) Clinical recommendation - smear assessment								
All results			143	93	Blood smear is pathological			
	CVE >>>	10	6,5	Blood smear within physiological limits or with reactive changes				
(926) Clinical recommendation - examination								
All results			145	95	An examination by the specialist/haematologist is recommended			
	CVE >>>	8	5,2	An examination by the specialist/haematologist is not necessary				
(927) Estimation of diagnosis								
All results			1	0,7	Physiological finding			
			2	1,4	Anemia: Without closer determination			
			13	8,8	Anemia: Microcytosis			
			5	3,4	Anemia: Hypochromia			
			1	0,7	Anemia: Haemolytic			
	CVE >>>	132	90	Anaemia: Thalassemia and other congenital anaemias				
		1	0,7	Mature lymphocytic cells neoplasms: Exact determination impossible				
		1	0,7	Platelets disorders: Other				
		3	2	Other: Viral infection incl. inf. mononucleosis				
		13	8,8	Other: Other reactive changes				
		3	2	Other: Other disease				
(928) How do you rate the technical quality of the smear?								
All results			151					0
	±	147	97	Acceptable				
	±	4	2,6	Not acceptable (give a reason)				
(929) How do you rate the staining of the smear?								
All results			150					0
	±	142	95	Acceptable				
	±	8	5,3	Not acceptable (give a reason)				
(939) Overall assessment (score)								
			153					153 143 93
Maximum score achievable: 111 points Criterion (60 % out of the maximum): 67 points								
Minimum score achieved: 32 points (28,8 %)								
Maximum score achieved: 111 points (100 %)								
All results			10	6,5	Unacceptable result			
	>>>	143	93	Satisfactory result				

Summary for all samples

(939) Overall assessment (score)			153					153 108 71
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