

EQA round: DIF2/23 - Peripheral Blood Morphology Evaluation

Deadline: 26.5.2023

Setup: Slovakia

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	11	No changes			
		1	5,6	Hypergranulation/toxic granulation			
	>	3	17	Giant bands and metamyelocytes			
	>	3	17	Agranulation			
		4	22	Neutrophil hypersegmentation			
		1	5,6	Hyposegmentation / asegmentation / pelgeroid			
		3	17	Denuded nuclei/cells, nuclear shadows / smudge cells			
		1	5,6	Cytoplasmatic fragments			
	>	10	56	Vacuolisation			
		1	5,6	Lymphocytes - reactive forms			
		2	11	Nucleus fragments of neutrophiles			
		1	5,6	Abnormal/leukemic promyelocytes			

(922) WBC - count changes (relative)

All results		1	5,6	Neutropenia			
	CVE >>>	9	50	Neutrophilia			
	CVE >>>	14	78	Lymphocytopenia			
		1	5,6	Eosinophilia			
	CVE >>>	15	83	Basophilia			
		3	17	Monocytopenia			
	CVE >>>	16	89	Left shift			

(923) RBC - morphology

All results		1	5,6	No changes			
		5	28	Normocytosis			
	CVE >>>	13	72	Anisocytosis			
		2	11	Poikilocytosis			
		1	5,6	Eliptocytes, ovalocytes			
		5	28	Spherocytes			
	>	3	17	Stomatocytes			
		2	11	Dacryocytes			
	CVE >>>	7	39	Polychromasia			
		1	5,6	Hypochromia			
		3	17	Rouleaux formation			

(924) Platelets - morphology

All results	>	4	22	No changes			
	>	11	61	Large platelets			
		1	5,6	Small platelets			
		1	5,6	Platelet aggregates			
	>	7	39	Platelets hypogranulation			

(925) Clinical recommendation - smear assessment

All results	CVE >>>	18	100	Blood smear is pathological			
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(926) Clinical recommendation - examination

All results	CVE >>>	18	100	An examination by the specialist/haematologist is recommended			
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(927) Estimation of diagnosis

All results		1	5,6	Anemia: Normocytosis			
		2	11	Chronic myeloproliferative disease: Exact determination impossible			
	CVE >>>	18	100	Chronic myeloproliferative disease: CML (chronic myelogenous leukaemia)			
		2	11	Platelets disorders: Thrombocytosis			

(928) How do you rate the technical quality of the smear?

All results	±	17	94	Acceptable			0
	±	1	5,6	Not acceptable (give a reason)			

(929) How do you rate the staining of the smear?

All results	±	14	78	Acceptable			0
	±	4	22	Not acceptable (give a reason)			

Sample Test Group	Frequency of the results			Success				
	AV	N _{tot}	N _{rel} [%]	Result	N _{eva}	N _{suc}	S _{rel} [%]	
(939) Overall assessment					18	18	14	78
Maximum score achievable: 87 points				Criterion (60 % out of the maximum): 53 points				
Minimum score achieved: 23 points (26,4 %)								
Maximum score achieved: 80 points (92 %)								
All results		4	22	Unacceptable result				
	>>>	14	78	Correct result				
Sample B								
(921) WBC - morphology								
All results		1	5,6	Agranulation				
		2	11	Hyposegmentation / asegmentation / pelgeroid				
	CVE >>>	13	72	Denuded nuclei/cells, nuclear shadows / smudge cells				
	>	6	33	Cytoplasmatic fragments				
		1	5,6	Vacuolisation				
		1	5,6	LGL/big lymphocytes				
		1	5,6	Lymphocytes - reactive forms				
	CVE >>>	14	78	Lymphocytes - atypical forms (except "hairy")				
(922) WBC - count changes (relative)								
All results	CVE >>>	18	100	Neutropenia				
	CVE >>>	16	89	Lymphocytosis				
		1	5,6	Lymphocytopenia				
	>	9	50	Monocytopenia				
	>	5	28	Left shift				
(923) RBC - morphology								
All results		2	11	Normocytosis				
	CVE >>>	16	89	Anisocytosis				
		5	28	Poikilocytosis				
	CVE >>>	14	78	Eliptocytes, ovalocytes				
		4	22	Spherocytes				
		5	28	Dacryocytes				
		3	17	Acanthocytes				
		4	22	Echinocytes				
		1	5,6	Target cells				
	>	5	28	Schistocytes (and other fragmentocytes)				
	CVE >>>	13	72	Polychromasia				
	CVE >>>	9	50	Hypochromia				
	CVE >>>	8	44	Basophilic stippling				
		2	11	Howell-Jolly bodies				
		4	22	Rouleaux formation				
		1	5,6	Pappenheimer bodies				
(924) Platelets - morphology								
All results	CVE >>>	11	61	No changes				
		1	5,6	Large platelets				
		3	17	Small platelets				
		1	5,6	Platelet aggregates				
	>	4	22	Platelets hypogranulation				
(925) Clinical recommendation - smear assessment								
All results	CVE >>>	18	100	Blood smear is pathological				
(926) Clinical recommendation - examination								
All results	CVE >>>	18	100	An examination by the specialist/haematologist is recommended				
(927) Estimation of diagnosis								
All results		1	5,6	Anemia: Normocytosis				
		2	11	Acute leukemia: Without closer determination				
	CVE >>>	18	100	Mature lymphocytic cells neoplasms: Exact determination impossible				
		3	17	Platelets disorders: Thrombocytopenia				
(928) How do you rate the technical quality of the smear?								
All results		±	17	94	Acceptable		0	
		±	1	5,6	Not acceptable (give a reason)			
(929) How do you rate the staining of the smear?								
All results		±	17	94	Acceptable		0	
		±	1	5,6	Not acceptable (give a reason)			

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Sample Test Group	Frequency of the results			Success			
	AV	N _{tot}	N _{rel} [%]	Result	N _{eva}	N _{suc}	S _{rel} [%]
(939) Overall assessment		18			18	16	89
Maximum score achievable: 111 points				Criterion (60 % out of the maximum): 67 points			
Minimum score achieved: 62 points (55,9 %)							
Maximum score achieved: 104 points (93,7 %)							
All results		2	11	Unacceptable result			
	>>>	16	89	Correct result			

Summary for all samples

(939) Overall assessment		18			18	14	78
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