

EQA round: DIF4/24 - Peripheral Blood Morphology Evaluation

Deadline: 25.10.2024

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		1	6,3	Hypergranulation/toxic granulation		
	>	2	13	Giant bands and metamyelocytes		
CVE >>>		4	25	Agranulation		
	>	11	69	Neutrophil hypersegmentation		
		1	6,3	Döhle bodies		
	>	4	25	Atypical/reactive/pathological monocytes/promono.		
		3	19	Denuded nuclei/cells, nuclear shadows / smudge cells		
		2	13	Cytoplasmatic fragments		
CVE >>>		11	69	Vacuolisation		
		1	6,3	"Hairy" lymphocytes		
		1	6,3	Lymphocytes - atypical forms (except "hairy")		
		1	6,3	Abnormal/leukemic promyelocytes		

(922) WBC - count changes (relative)

All results		>	3	19	Neutropenia	
			2	13	Neutrophilia	
CVE >>>			12	75	Lymphocytopenia	
CVE >>>			15	94	Eosinophilia	
CVE >>>			4	25	Basophilia	
		>	3	19	Monocytosis	
CVE >>>			15	94	Left shift	

(923) RBC - morphology

All results	CVE >>>	15	94	Macrocytosis		
	CVE >>>	12	75	Anisocytosis		
		1	6,3	Poikilocytosis		
	>	3	19	Eliptocytes, ovalocytes		
	>	6	38	Spherocytes		
CVE >>>		13	81	Stomatocytes		
	>	4	25	Dacryocytes		
		1	6,3	Schistocytes (and other fragmentocytes)		
	>	2	13	Polychromasia		
		2	13	Hypochromia		
		2	13	Rouleaux formation		

(924) Platelets - morphology

All results			3	19	No changes	
	CVE >>>		11	69	Large platelets	
	CVE >>>		6	38	Platelets hypogranulation	

(925) Clinical recommendation - smear assessment

All results	CVE >>>	16	100	Blood smear is pathological		
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(926) Clinical recommendation - examination

All results	CVE >>>	16	100	An examination by the specialist/haematologist is recommended		
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(927) Estimation of diagnosis

All results		1	6,3	Anemia: Macrocytosis		
		2	13	Acute leukemia: Without closer determination		
		3	19	Acute leukemia: AML (acute myeloid leukemia)		
CVE >>>		6	38	Chronic myeloproliferative disease: Exact determination impossible		
	>	8	50	Chronic myeloproliferative disease: CML (chronic myelogenous leukaemia)		
	>	1	6,3	Chronic myeloproliferative disease: Myelofibrosis		
		2	13	Platelets disorders: Thrombocytopenia		
		1	6,3	Other: Other disease		

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

All results	±	16	100	Acceptable		0
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(929) How do you rate the staining of the smear?

All results	±	16	100	Acceptable		0
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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 (score)		16			16	13	81
Maximum score achievable: 117 points				Criterion (60 % out of the maximum): 71 points			
Minimum score achieved: 39 points (33,3 %)							
Maximum score achieved: 109 points (93,2 %)							
All results		3	19	Unacceptable result			
	>>>	13	81	Satisfactory result			

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

All results	CVE >>>	3	19	No changes			
		3	19	Agranulation			
		3	19	Neutrophil hypersegmentation			
		2	13	Hyposegmentation / asegmentation / pelgeroid			
		4	25	Atypical/reactive/pathological monocytes/promono.			
		3	19	Denuded nuclei/cells, nuclear shadows / smudge cells			
		5	31	Vacuolisation			
		1	6,3	LGL/big lymphocytes			
		2	13	Lymphocytes - reactive forms			
		1	6,3	"Hairy" lymphocytes			

(922) **WBC - count changes (relative)**

All results		1	6,3	Normal count			
	CVE >>>	14	88	Neutrophilia			
	CVE >>>	13	81	Lymphocytopenia			
	>	2	13	Basophilia			
		2	13	Monocytosis			
		3	19	Left shift			

(923) **RBC - morphology**

All results	CVE >>>	11	69	Macrocytosis			
	CVE >>>	13	81	Anisocytosis			
		8	50	Poikilocytosis			
	CVE >>>	5	31	Eliptocytes, ovalocytes			
		3	19	Spherocytes			
		3	19	Stomatocytes			
		1	6,3	Drepanocytes			
		1	6,3	Acanthocytes			
		3	19	Echinocytes			
	CVE >>>	14	88	Target cells			
	CVE >>>	7	44	Schistocytes (and other fragmentocytes)			
	>	3	19	Polychromasia			
		3	19	Hypochromia			
	CVE >>>	15	94	Basophilic stippling			
	CVE >>>	5	31	Howell-Jolly bodies			
		1	6,3	Cabot rings			
		2	13	Rouleaux formation			
	CVE >>>	3	19	Pappenheimer bodies			

(924) **Platelets - morphology**

All results		5	31	No changes			
	CVE >>>	10	63	Large platelets			
		1	6,3	Small platelets			
		2	13	Platelets hypogranulation			

(925) **Clinical recommendation - smear assessment**

All results	CVE >>>	16	100	Blood smear is pathological			
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(926) **Clinical recommendation - examination**

All results	CVE >>>	16	100	An examination by the specialist/haematologist is recommended			
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(927) **Estimation of diagnosis**

All results	>	3	19	Anemia: Without closer determination			
		1	6,3	Anemia: Hypochromia			
	>	3	19	Anemia: Macrocytosis			
		5	31	Anemia: Haemolytic			
		2	13	Anaemia: Thalassemia and other congenital anaemias			
	>	6	38	Myelodysplastic syndrome: Myelodysplastic syndrome			
		1	6,3	Chronic myeloproliferative disease: Exact determination impossible			
		1	6,3	Other: Other reactive changes			

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	AV	N _{tot}	N _{rel} [%]	Result	N _{eva}	N _{suc}	S _{rel} [%]
(928) How do you rate the technical quality of the smear?		16				0	
All results	±	16	100	Acceptable			
(929) How do you rate the staining of the smear?		16				0	
All results	±	16	100	Acceptable			
(939) Overall assessment (score)		16			16	15	94
Maximum score achievable: 123 points				Criterion (60 % out of the maximum): 74 points			
Minimum score achieved: 32 points (26 %)							
Maximum score achieved: 110 points (89,4 %)							
All results		1	6,3	Unacceptable result			
	>>>	15	94	Satisfactory result			

Summary for all samples

(939) Overall assessment (score)		16			16	13	81
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