

EQA round: DIF2/26 - Peripheral Blood Morphology Evaluation

Deadline: 22.5.2026

Setup: all data

AV = assigned value

N_{tot} = total number of the resultsN_{eva} = number of the results assessed

CVE = consensus of the experts

N_{rel} = relative number of the resultsN_{suc} = number of successful results

>>> ... expected result

S_{rel} = relative success

> ... acceptable result

± ... result not assessed

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	No changes		
		6	4	Hypergranulation/toxic granulation		
		1	0,7	Giant bands and metamyelocytes		
CVE >>>		52	35	Agranulation		
		2	1,3	Neutrophil hypersegmentation		
		6	4	Hyposegmentation / asegmentation / pelgeroid		
	>	30	20	Auer rods		
	>	22	15	Döhle bodies		
CVE >>>		117	78	Atypical/reactive/pathological monocytes/promono.		
CVE >>>		121	81	Denuded nuclei/cells, nuclear shadows / smudge cells		
CVE >>>		105	70	Vacuolisation		
		5	3,3	LGL/big lymphocytes		
		6	4	Lymphocytes - reactive forms		
		1	0,7	"Hairy" lymphocytes		
		21	14	Lymphocytes - atypical forms (except "hairy")		
		14	9,3	Abnormal/leukemic promyelocytes		
CVE >>>		100	67	Pathological blasts		

(922) WBC - count changes (relative)

All results		1	0,7	Not specified		
		1	0,7	Normal count		
CVE >>>		141	94	Neutropenia		
		2	1,3	Neutrophilia		
		4	2,7	Lymphocytosis		
	>	59	39	Lymphocytopenia		
		4	2,7	Basophilia		
CVE >>>		138	92	Monocytosis		
CVE >>>		124	83	Left shift		

(923) RBC - morphology

All results	CVE >>>	124	83	Macrocytosis		
	CVE >>>	147	98	Anisocytosis		
		22	15	Poikilocytosis		
	CVE >>>	127	85	Eliptocytes, ovalocytes		
		5	3,3	Spherocytes		
		7	4,7	Stomatocytes		
		27	18	Dacryocytes		
		4	2,7	Acanthocytes		
	>	23	15	Echinocytes		
	CVE >>>	63	42	Target cells		
	CVE >>>	95	63	Schistocytes (and other fragmentocytes)		
	CVE >>>	75	50	Polychromasia		
		5	3,3	Hypochromia		
	>	39	26	Basophilic stippling		
		6	4	Howell-Jolly bodies		
		1	0,7	Cabot rings		
		2	1,3	Pappenheimer bodies		

(924) Platelets - morphology

All results		1	0,7	Not specified		
	>	82	55	No changes		
	>	56	37	Large platelets		
		7	4,7	Small platelets		
		5	3,3	Platelet aggregates		
		1	0,7	Platelet satellitism		
		14	9,3	Platelets hypogranulation		
		2	1,3	Megakaryocytic nucleus fragments		

(925) Clinical recommendation - smear assessment

All results	CVE >>>	150	100	Blood smear is pathological		
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(926) Clinical recommendation - examination

All results	CVE >>>	149	99	An examination by the specialist/haematologist is recommended		
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Sample Test Group	Frequency of the results			Result	Success		
	AV	N _{tot}	N _{rel} [%]		N _{eva}	N _{suc}	S _{rel} [%]
		1	0,7	An examination by the specialist/haematologist is not necessary			
(927) Estimation of diagnosis							
All results		1	0,7	Not specified			
		3	2	Anemia: Without closer determination			
		1	0,7	Anemia: Normocytosis			
		3	2	Anemia: Macrocytosis			
		1	0,7	Anemia: Haemolytic			
	>	43	29	Acute leukemia: Without closer determination			
		3	2	Acute leukemia: ALL (acute lymphoblastic leukemia)			
CVE >>>		108	73	Acute leukemia: AML (acute myeloid leukemia)			
		3	2	Myelodysplastic syndrome: Myelodysplastic syndrome			
		5	3,4	Chronic myeloproliferative disease: Exact determination impossible			
		1	0,7	Other: Other reactive changes			
(928) How do you rate the technical quality of the smear?						0	
All results	±	143	95	Acceptable			
	±	7	4,7	Not acceptable (give a reason)			
(929) How do you rate the staining of the smear?						0	
All results	±	123	83	Acceptable			
	±	26	17	Not acceptable (give a reason)			
(939) Overall assessment (score)						150	134
Maximum score achievable: 135 points		Criterion (60 % out of the maximum): 81 points					
Minimum score achieved: 43 points (31,9 %)							
Maximum score achieved: 127 points (94,1 %)							
All results		16	11	Unacceptable result			
	>>>	134	89	Satisfactory result			

Sample B

(921) WBC - morphology

All results		2	1,3	Not specified			
		3	2	No changes			
		3	2	Hypergranulation/toxic granulation			
		12	8	Giant bands and metamyelocytes			
	>	54	36	Agranulation			
		17	11	Neutrophil hypersegmentation			
		5	3,3	Hyposegmentation / asegmentation / pelgeroid			
		7	4,7	Döhle bodies			
		8	5,3	Atypical/reactive/pathological monocytes/promono.			
CVE >>>		55	37	Denuded nuclei/cells, nuclear shadows / smudge cells			
		6	4	Cytoplasmatic fragments			
	>	23	15	Vacuolisation			
		2	1,3	LGL/big lymphocytes			
		13	8,7	Lymphocytes - reactive forms			
		12	8	Lymphocytes - atypical forms (except "hairy")			
		1	0,7	Nucleus fragments of neutrophiles			
CVE >>>		66	44	Pathological blasts			

(922) WBC - count changes (relative)

All results		1	0,7	Not specified			
		3	2	Neutropenia			
	>	79	53	Neutrophilia			
CVE >>>		138	92	Lymphocytopenia			
CVE >>>		118	79	Basophilia			
		8	5,3	Monocytosis			
CVE >>>		146	97	Left shift			

(923) RBC - morphology

All results		2	1,3	Normocytosis			
		1	0,7	Microcytosis			
CVE >>>		147	98	Anisocytosis			
	>	39	26	Poikilocytosis			
CVE >>>		116	77	Eliptocytes, ovalocytes			
		13	8,7	Spherocytes			
		9	6	Stomatocytes			
		1	0,7	Drepanocytes			
CVE >>>		148	99	Dacryocytes			

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Sample Test Group	Frequency of the results			Success			
	AV	N _{tot}	N _{rel} [%]	Result	N _{eva}	N _{suc}	S _{rel} [%]
		1	0,7	Acanthocytes			
		4	2,7	Echinocytes			
		2	1,3	Target cells			
	>	26	17	Schistocytes (and other fragmentocytes)			
	CVE >>>	138	92	Polychromasia			
	CVE >>>	103	69	Hypochromia			
	CVE >>>	76	51	Basophilic stippling			
		3	2	Howell-Jolly bodies			
		2	1,3	Cabot rings			
(924) Platelets - morphology							
All results	CVE >>>	149	99	Large platelets			
		10	6,7	Small platelets			
		8	5,3	Platelet aggregates			
	CVE >>>	76	51	Platelets hypogranulation			
	CVE >>>	68	45	Megakaryocytic nucleus fragments			
(925) Clinical recommendation - smear assessment							
All results	CVE >>>	150	100	Blood smear is pathological			
(926) Clinical recommendation - examination							
All results	CVE >>>	150	100	An examination by the specialist/haematologist is recommended			
(927) Estimation of diagnosis							
All results		1	0,7	Anemia: Without closer determination			
		2	1,4	Anemia: Normocytosis			
		2	1,4	Anemia: Hypochromia			
		2	1,4	Anemia: Haemolytic			
		1	0,7	Acute leukemia: Without closer determination			
		17	11	Myelodysplastic syndrome: Myelodysplastic syndrome			
	CVE >>>	55	37	Chronic myeloproliferative disease: Exact determination impossible			
		16	11	Chronic myeloproliferative disease: CML (chronic myelogenous leukaemia)			
	CVE >>>	86	58	Chronic myeloproliferative disease: Myelofibrosis			
		1	0,7	Chronic myeloproliferative disease: Essential thrombocythemia			
		1	0,7	Mature lymphocytic cells neoplasms: Exact determination impossible			
		1	0,7	Other: Other disease			
(928) How do you rate the technical quality of the smear?							
All results		150				0	
	±	145	97	Acceptable			
	±	5	3,3	Not acceptable (give a reason)			
(929) How do you rate the staining of the smear?							
All results		149				0	
	±	132	89	Acceptable			
	±	17	11	Not acceptable (give a reason)			
(939) Overall assessment (score)							
		150			150	141	94
Maximum score achievable: 135 points Criterion (60 % out of the maximum): 81 points							
Minimum score achieved: 57 points (42,2 %)							
Maximum score achieved: 127 points (94,1 %)							
All results		9	6	Unacceptable result			
	>>>	141	94	Satisfactory result			

Summary for all samples

(939) Overall assessment (score)	150	150	130	87
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