

## EQA round: DIF3/24 - Peripheral Blood Morphology Evaluation

Deadline: 13.9.2024

Setup: Slovakia

AV = assigned value

N<sub>tot</sub> = total number of the resultsN<sub>eva</sub> = number of the results assessed

CVE = consensus of the experts

N<sub>rel</sub> = relative number of the resultsN<sub>suc</sub> = number of successful results

&gt;&gt;&gt; ... expected result

S<sub>rel</sub> = relative success

&gt; ... acceptable result

± ... result not assessed

Sample Test Group	Frequency of the results				Success		
	AV	N <sub>tot</sub>	N <sub>rel</sub> [%]	Result	N <sub>eva</sub>	N <sub>suc</sub>	S <sub>rel</sub> [%]

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

All results		1	5,6	No changes			
		5	28	Agranulation			
		1	5,6	Neutrophil hypersegmentation			
		1	5,6	Atypical/reactive/pathological monocytes/promono.			
CVE >>>		10	56	Denuded nuclei/cells, nuclear shadows / smudge cells			
>		1	5,6	Vacuolisation			
>		7	39	LGL/big lymphocytes			
CVE >>>		13	72	Lymphocytes - reactive forms			
CVE >>>		5	28	"Hairy" lymphocytes			
		5	28	Lymphocytes - atypical forms (except "hairy")			

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

All results		1	5,6	Normal count			
	CVE >>>	12	67	Neutropenia			
	CVE >>>	17	94	Lymphocytosis			
		1	5,6	Monocytosis			
	>	1	5,6	Monocytopenia			
		1	5,6	Left shift			

**(923) RBC - morphology**

All results	CVE >>>	7	39	No changes			
		11	61	Normocytosis			
		2	11	Macrocytosis			
		1	5,6	Anisocytosis			
		1	5,6	Eliptocytes, ovalocytes			
		2	11	Stomatocytes			
		1	5,6	Drepanocytes			
		3	17	Dacryocytes			
		3	17	Target cells			
		2	11	Polychromasia			
		2	11	Howell-Jolly bodies			
		1	5,6	Rouleaux formation			

**(924) Platelets - morphology**

All results	CVE >>>	7	39	No changes			
	>	10	56	Large platelets			
		2	11	Small platelets			

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

All results	CVE >>>	9	50	Blood smear is pathological			
		9	50	Blood smear within physiological limits or with reactive changes			

**(926) Clinical recommendation - examination**

All results		1	5,6	Not specified			
	CVE >>>	8	44	An examination by the specialist/haematologist is recommended			
		9	50	An examination by the specialist/haematologist is not necessary			

**(927) Estimation of diagnosis**

All results		2	11	Physiological finding			
	>	3	17	Mature lymphocytic cells neoplasms: Exact determination impossible			
		1	5,6	Mature lymphocytic cells neoplasms: CLL (chronic lymphocytic leukaemia)			
	CVE >>>	1	5,6	Mature lymphocytic cells neoplasms: HCL (hairy cell leukaemia)			
		7	39	Other: Viral infection incl. inf. mononucleosis			
		9	50	Other: Other reactive changes			
		1	5,6	Other: Other disease			

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

All results	±	18	100	Acceptable			0
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**(929) How do you rate the staining of the smear?**

All results	±	18	100	Acceptable			0
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Sample Test Group	Frequency of the results			Success			
	AV	N <sub>tot</sub>	N <sub>rel</sub> [%]	Result	N <sub>eva</sub>	N <sub>suc</sub>	S <sub>rel</sub> [%]
(939) <b>Overall assessment (score)</b>		18			18	10	56
Maximum score achievable: 93 points				Criterion (60 % out of the maximum): 56 points			
Minimum score achieved: 32 points (34,4 %)							
Maximum score achieved: 82 points (88,2 %)							
All results		8	44	Unacceptable result			
	>>>	10	56	Satisfactory result			

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

All results		2	11	Hypergranulation/toxic granulation			
		1	5,6	Agranulation			
	CVE >>>	16	89	Neutrophil hypersegmentation			
		5	5,6	Hyposegmentation / asegmentation / pelgeroid			
		5	28	Denuded nuclei/cells, nuclear shadows / smudge cells			
	>	2	11	Vacuolisation			
		4	22	Lymphocytes - reactive forms			

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

All results	CVE >>>	17	94	Neutrophilia			
	CVE >>>	17	94	Lymphocytopenia			
	CVE >>>	8	44	Left shift			

(923) **RBC - morphology**

All results		2	11	Normocytosis			
		1	5,6	Microcytosis			
	CVE >>>	16	89	Macrocytosis			
		1	5,6	Anisocytosis			
		4	22	Poikilocytosis			
	>	3	17	Eliptocytes, ovalocytes			
		3	17	Stomatocytes			
		3	17	Dacryocytes			
		1	5,6	Acanthocytes			
		1	5,6	Echinocytes			
		1	5,6	Target cells			
	>	4	22	Schistocytes (and other fragmentocytes)			
		1	5,6	Polychromasia			
		1	5,6	Hypochromia			
		2	11	Howell-Jolly bodies			
		1	5,6	Rouleaux formation			

(924) **Platelets - morphology**

All results	>	5	28	No changes			
	CVE >>>	12	67	Large platelets			
		3	17	Small platelets			
		1	5,6	Platelet aggregates			
		1	5,6	Platelets hypogranulation			
		1	5,6	Megakaryocytic nucleus fragments			

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

All results	>	12	67	Blood smear is pathological			
	>	6	33	Blood smear within physiological limits or with reactive changes			

(926) **Clinical recommendation - examination**

All results	>	9	50	An examination by the specialist/haematologist is recommended			
	>	9	50	An examination by the specialist/haematologist is not necessary			

(927) **Estimation of diagnosis**

All results		2	11	Anemia: Macrocytosis			
		2	11	Chronic myeloproliferative disease: Exact determination impossible			
		5	28	Platelets disorders: Thrombocytosis			
	CVE >>>	13	72	Other: Other reactive changes			
		6	33	Other: Other disease			

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

All results	±	18	100	Acceptable			
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(929) **How do you rate the staining of the smear?**

All results	±	18	100	Acceptable			
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Sample Test Group	Frequency of the results			Success			
	AV	N <sub>tot</sub>	N <sub>rel</sub> [%]	Result	N <sub>eva</sub>	N <sub>suc</sub>	S <sub>rel</sub> [%]
(939) Overall assessment (score)		18			18	15	83
Maximum score achievable: 75 points				Criterion (60 % out of the maximum): 45 points			
Minimum score achieved: 32 points (42,7 %)							
Maximum score achieved: 73 points (97,3 %)							
All results		3	17	Unacceptable result			
	>>>	15	83	Satisfactory result			

## Summary for all samples

(939) Overall assessment (score)		18			18	10	56
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