Osh State University

Medical Faculty

Department "Biochemistry, Pathophysiology and Pharmacology"

**APPROVED**

Head. chair of MD, PhD Muratov JK

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GUIDELINES FOR TRAINEES

TO EXTRACURRICULAR WORK INDEPENDENTLY

SECTION: **PATHOPHYSIOLOGY OF BLOOD.** 

TOPIC: **leukemia.**

Developed: teacher Ismailov IJ.

Methodical instructions approved at a meeting of the department

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OSH

**Study subject:** Pathology of the blood system. Hemoblastosis

**Aim of the lesson**: to study the picture of perefericial blood of more frequent forms of human leukemia.

**Format:** Preparing for the practical exercises.

**Questions for self-study:**

1. Leukemia. Definition. Etiology.

2. Pathogenesis of leukemia: hyperplasia, anaplasia, dysplasia, metaplasia.

3. The particularities of leukemic cells.

4. Categorization of leukemia (acute and chronic).

5. Morphological picture of perefericial blood in patients with acute and chronic myeloleukosis.

6. Morphological picture of perefericial blood in patients with acute and chronic lympholeukosis.

7. Clinical syndromes under leukemia: anemic, hemorrhagic, infective, metastatic, and intoxicative.

8. The difference between leukosis and leukocytosis.

9. Leukemic reactions and the pathogenesis.

**List of practical skills**

1. Be able to differentiate on the blood picture acute and chronic leukemias

2. Be able to determine the type of leukemia, depending on the number of leukocytes.

**Recommendations to UIRS:**

1. Making the album with the relevant tasks relating to using educational and methodological literature.

2. Master the techniques of creative use of the program material on this topic by using problem solving.

**Self-control on test tasks:**

*1. The term "anaplasia" means:*

b) increase of tumor mass

c) accelerated tumor cells division

d) differentiation disorders of the tumor cells

*2. Itensity of glycolisis in the tumor cells:*

a) rises

b) diminishes

c) is unchanged

*6. Synthesis of nucleic acids in the malignant cells:*

a) rises

b) diminishes

c) has no change

*7. The type of regulation of tumor cells growth is:*

a) endocrine

b) autocrine

c) paracrine

*8. Proliferation of the malignant cells is conditioned by:*

a) activation of the oncogenes

b) intensification of apoptosis

c) inactivation of the suppressor genes

d) derangement of apoptosis

*9. Carbohydrate metabolism in tumor is characterized by:*

a) increase of the glycogen synthesis

b) intensification of glycogenesis

c) activation of glycolysis

d) intensification of glycogenolysis

*10. Lipid metabolism in tumor is characterized by:*

a) intensification of lipolysis

b) intensification of lipogenesis

c) decrease of the fatty acids synthesis

LITERATURE:

1. Lecture material.

2. General and clinical pathophysiology / Ed. by A. V. Kubyshkin – Vinnytsa: Nova Knyha Publishers. – 2011. – P. 421-444.

3. Pathology / ed. by E. Rubin and J.L. Farber. – 2nd ed. – 1994. – P.1051 – 1096.

4. Pathophysiology / ed. by C. Paradiso (Lippincott’s review series). – 1995. – P. 383-401.

5. Pathophysiology of disease: an introduction to clinical medicine / ed. By S. J. McPhee, W. F. Ganong. – 2006. – P.106 –115.

6. Internal medicine / ed. by Harrisons. – 17th edition. – N. Y. – 2008. – P. 667–700.