PRACTICAL CLASS № 2

Topic: "Disorders of metabolism in the cells and in the tissues. Pathology of accumulation (dystrophy). Disorders of protein, lipid, carbohydrate metabolism. Hyaline changes. Mucoid and fibrinoid swelling. Disorders of chromo proteins metabolism (endogenous pigments). Disorders of nucleic acids metabolism. Pathological calcification. Formation of stones**"**

1. STUDY AND DESCRIBE THE FOLLOWING MACROPREPARATIONS.

PLAN OF MACROPREPARATIONS DESCRIPTION

1. Organ ….

The macropreparation is presented ..... It is advisable to indicate whether the organ is presented in full or in a fragment, by the anatomical department (indicate which).

2. The size of the organ (reduced, increased, within normal limits). The form of the body (indicate if modified).

Organ color (indicate color changes that occurred during the development of the pathological process and under the influence of the fixing solution). Consistency (flabby, elastic, dense, homogeneous or with focal changes).

3. The state of the surface of the organ (smooth, granular, tuberous, with the presence of cicatricial depressions, areas with a changed color).

Describe the organ cover (usually a capsule or serous membrane - normal: smooth, shiny, thin, transparent).

To note the presence of subcapsular formations (hemorrhages, hematomas, etc.), overlays on the capsule (fibrinous films, purulent-necrotic plaque, etc.).

4. View of the organ in section.

To note the state and ratio of anatomical structures such as: a characteristic anatomical pattern, the condition of the cavities (enlarged, narrowed) and their contents (in normal and pathological conditions).

5. If there are pathological inclusions, nodal and cystic formations, foci of suppuration, hemorrhage, etc. in the test drug, you must specify:

• number of entities (1, 2 or multiple);

• localization (which anatomical parts of the organ affects);

• shape (irregular, round, wedge-shaped, etc.);

• color;

• the size and consistency of this education.

* If there is a ulcerative defect, indicate the depth see and characterize the bottom and edges of the defect. In the presence of cystic cavities and abscesses, indicate the nature of the contents (liquid, creamy, the presence of necrotic masses, stones, foreign bodies) and the state of the walls of the formation (by what they are presented, their thickness see).

6. The name of the pathological process.

7. Diseases in which this pathological process most often develops (paragraphs 6 and 7 may coincide).

8. Briefly describe the etiology and pathogenesis of the pathological process and education.

9. Possible complications, the development of which is directly related to the presence of this pathological process.

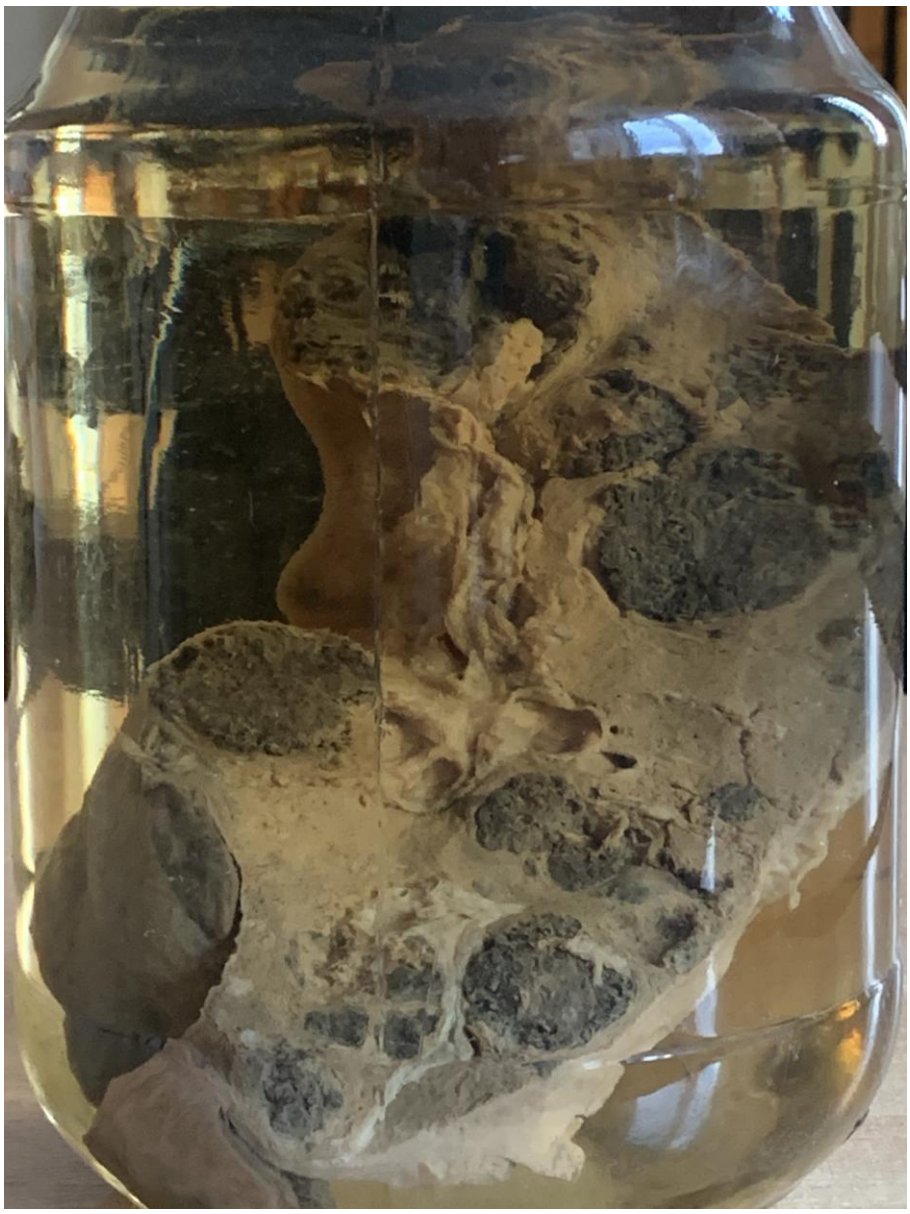
10. Outcome, (favorable, unfavorable). Forecast.

11: Possible causes of death.

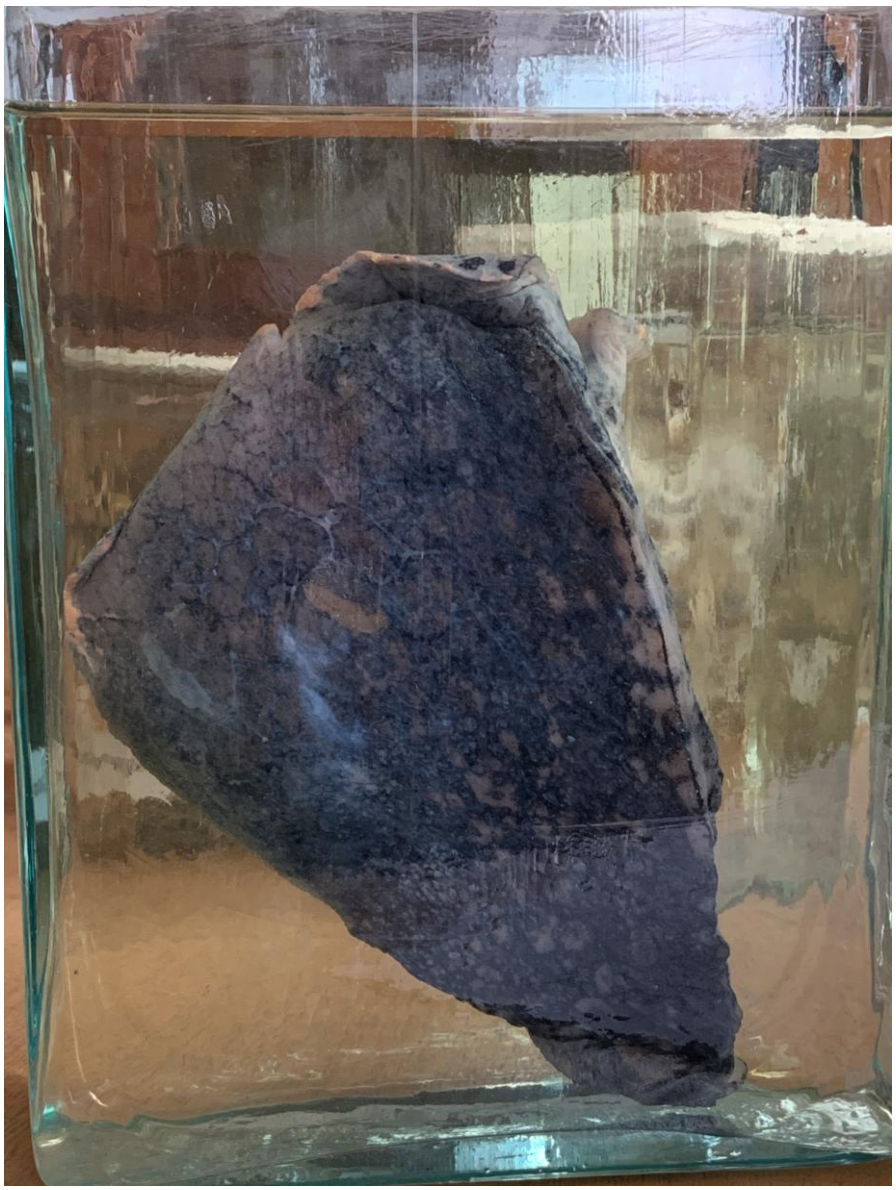
Note: When describing preparations of various organs, it is necessary to supplement the presented scheme or change its design in paragraphs 2 to 5

Macropreparation. Hyalinosis fo the spleen capsula.

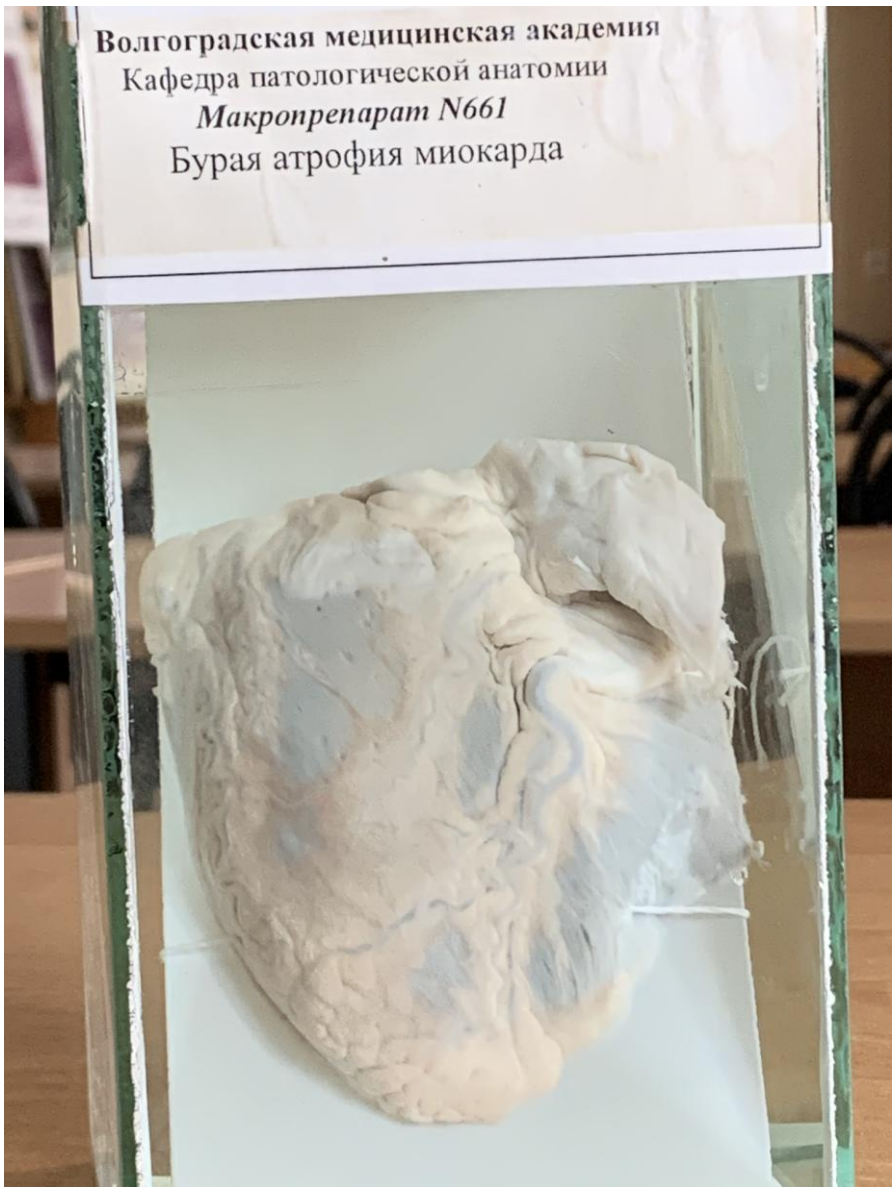
Macropreparation. Pigmental nevus of the skin.



Macropreparation. Metastasis of melanoma in the liver.

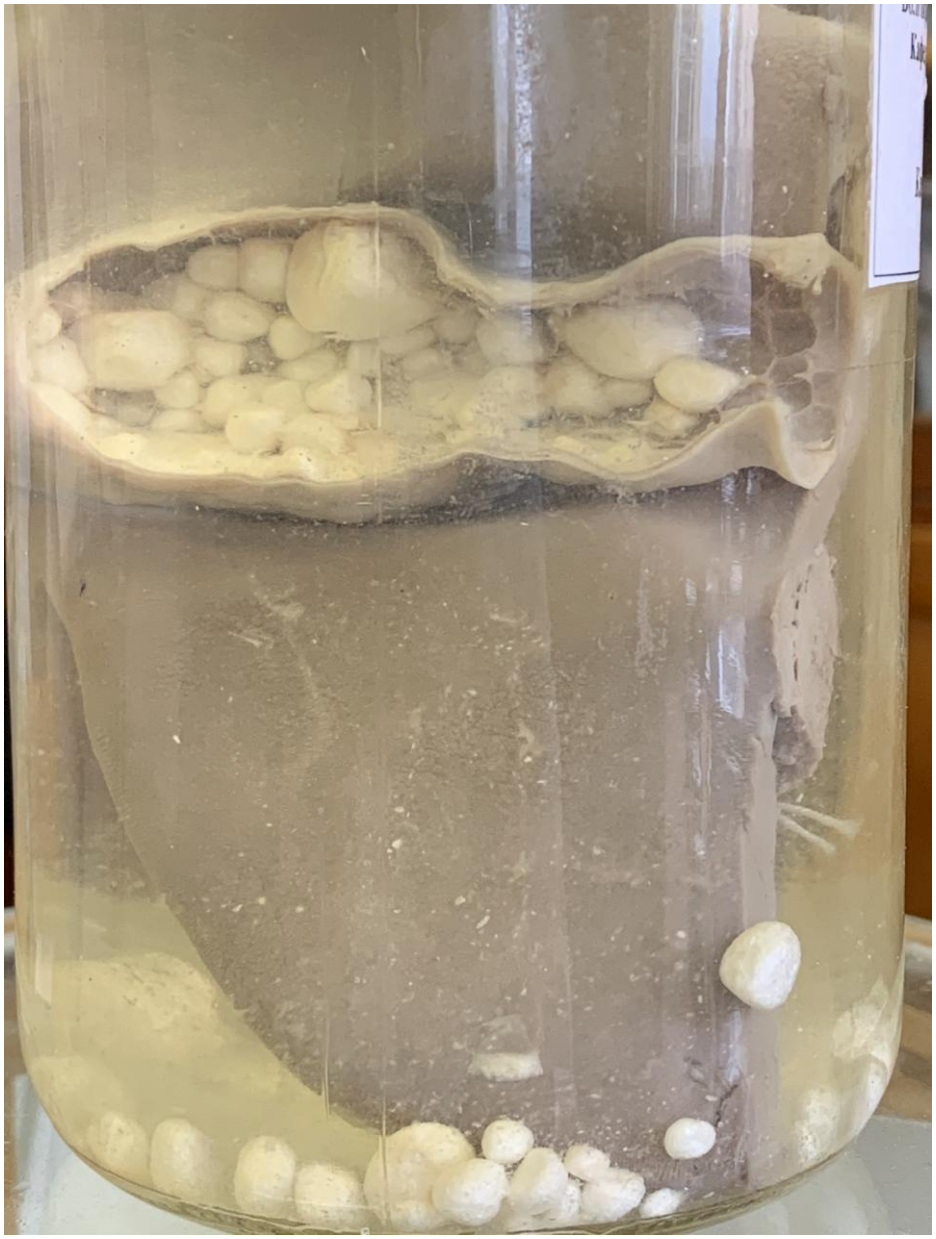


Macropreparation. Anthracosis of the lung.



Macropreparation. Brawn atrophy of the heart.

Macropreparation. Brown induration of the lung



Macropreparation. Stones of the gall bladder.

2. SCHEME FOR THE STUDY AND DESCRIPTION OF MICROPREPARATIONS

1. Determine the organ, tissue, indicate the method of staining

2. Find the basic structural elements of the body (parenchyma, stroma)

3. Determine the pathological process (violation of the structure, the appearance of pathological structures, inclusion, etc.), comparing it with the norm.

4. After identifying pathological changes, indicate:

a) Changes in parenchymal elements (cell sizes, features of the cytoplasm and cell nucleus, the presence of pathological inclusions, etc.):

- parenchyma cells, the state of the membrane and cytoplasm of cells, their nuclei, attitude to dyes, the presence of inclusions in cells, their relationship, the correct formation of parenchyma by cells in various structures are described in detail;

- a description of the glandular structures begins with a description of the cellular elements that make up the gland. The lumen of the glandular structures is described;

- excretory ducts are described separately, both small and large, then the contents of their lumens, the state of the vessels.

b) changes in the stroma (state of fibrous structures, vessels - the width of their lumen, wall thickness, the presence of inclusions, etc.):

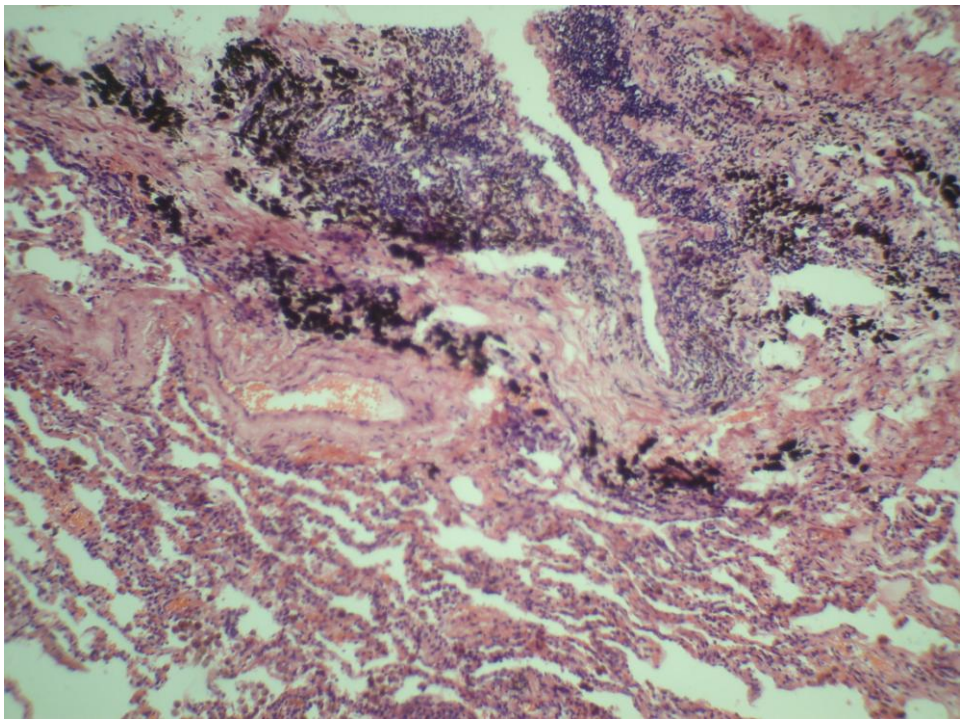
- attention is drawn to the nature of the fibrous structures, the cellular composition of the connective tissue, the presence (absence) of edema, hemorrhages, inflammation, inclusions (including foreign ones).

- Vessels are described (separately arteries, veins, capillaries), the state of the entire wall and its individual layers, the nature of the contents of the lumen of the vessel are noted.

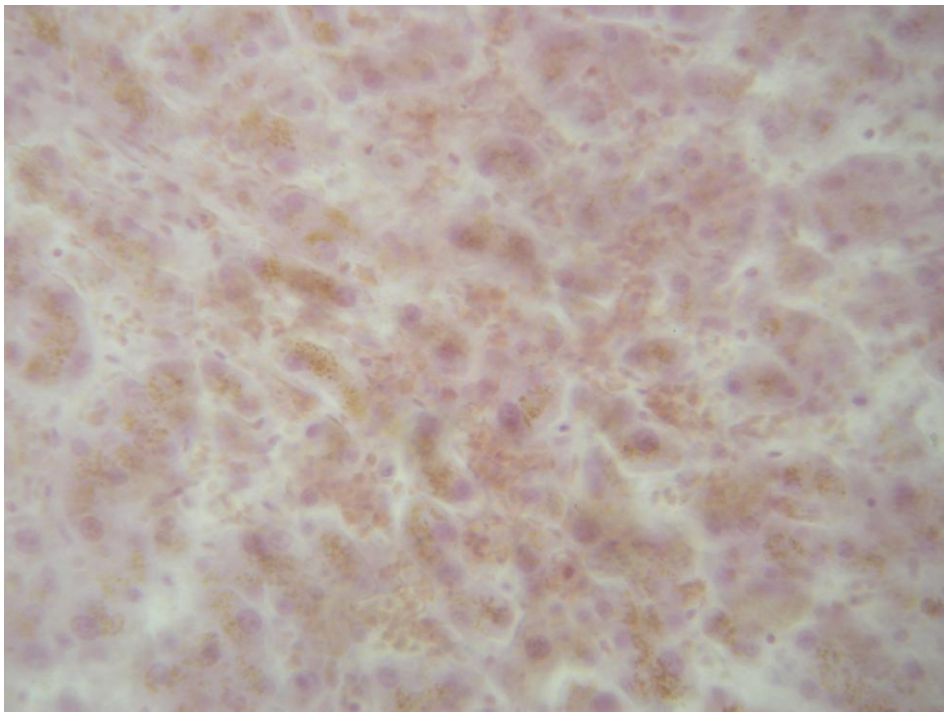
5. Write the conclusion to the album (annotation on micropreparation)

6. If the name of the micropreparation does not coincide with the macropreparations, name the etiology, pathogenesis, complications, outcomes, functional value.

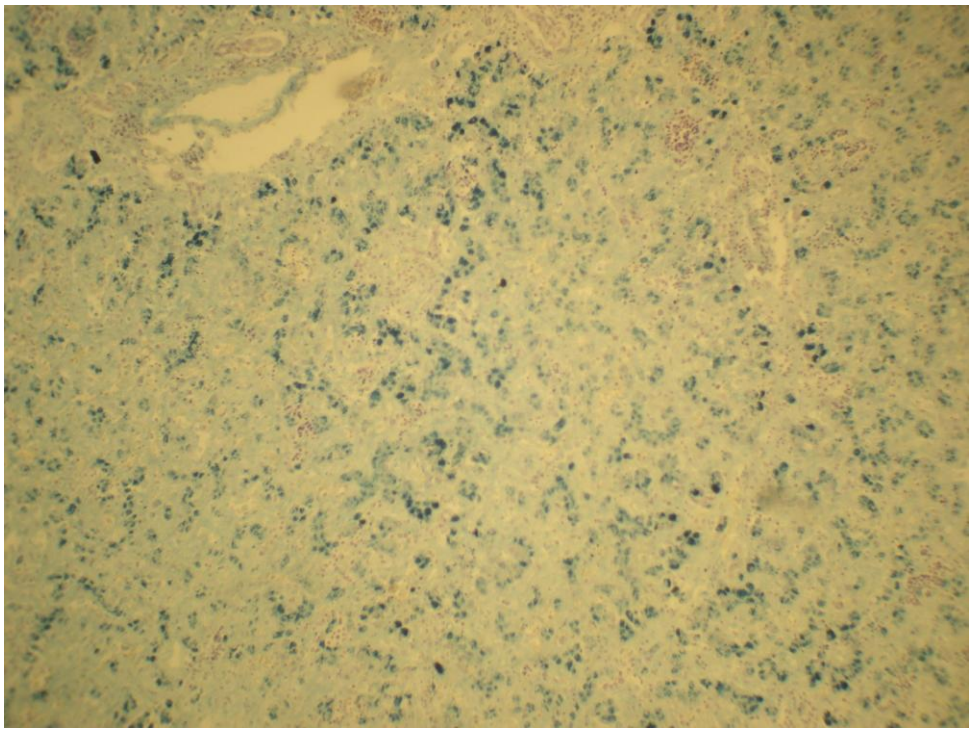
A description of the micropreparation is given next to its schematic drawing, where the main changes are indicated by arrows or numbers.



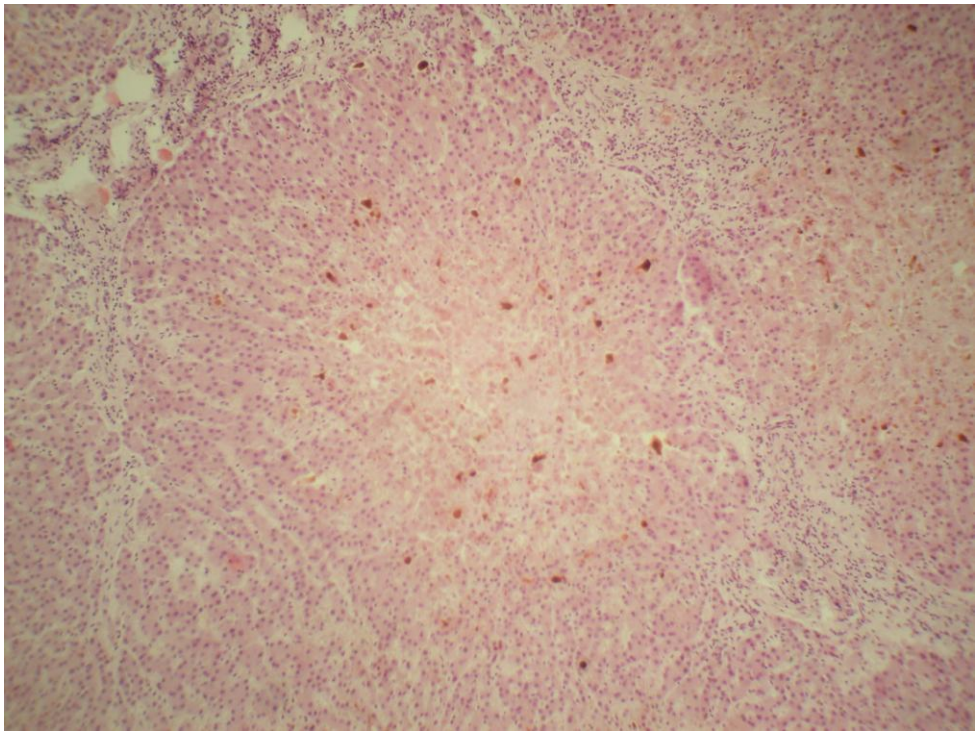
Micropreparation. Anthracosis of the lung. H&E.



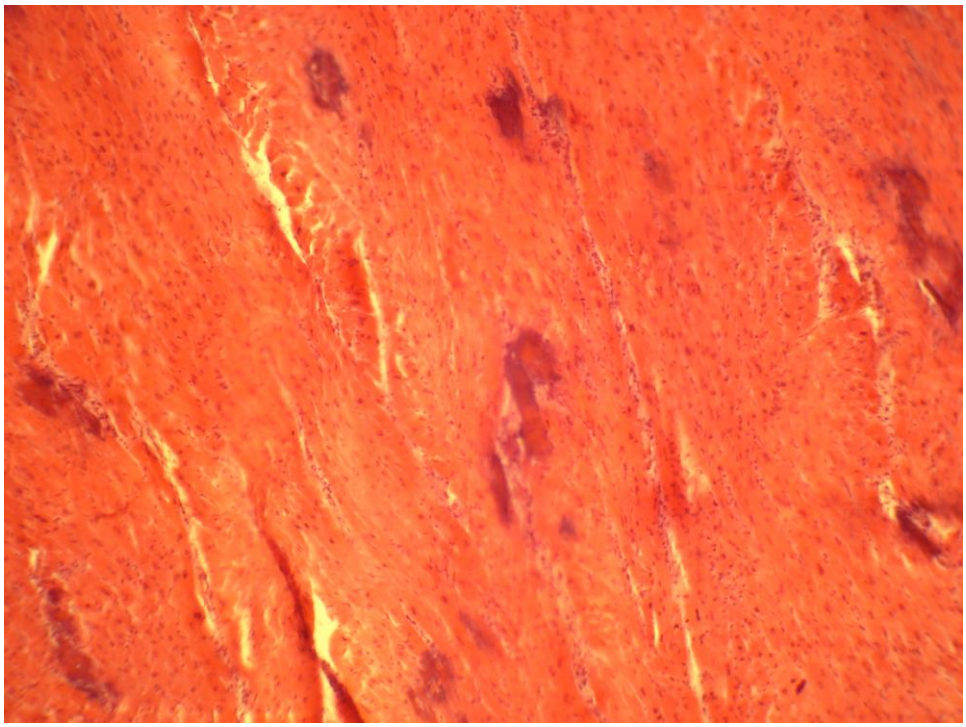
Micropreparation. Hemosiderosis of the liver . H&E.



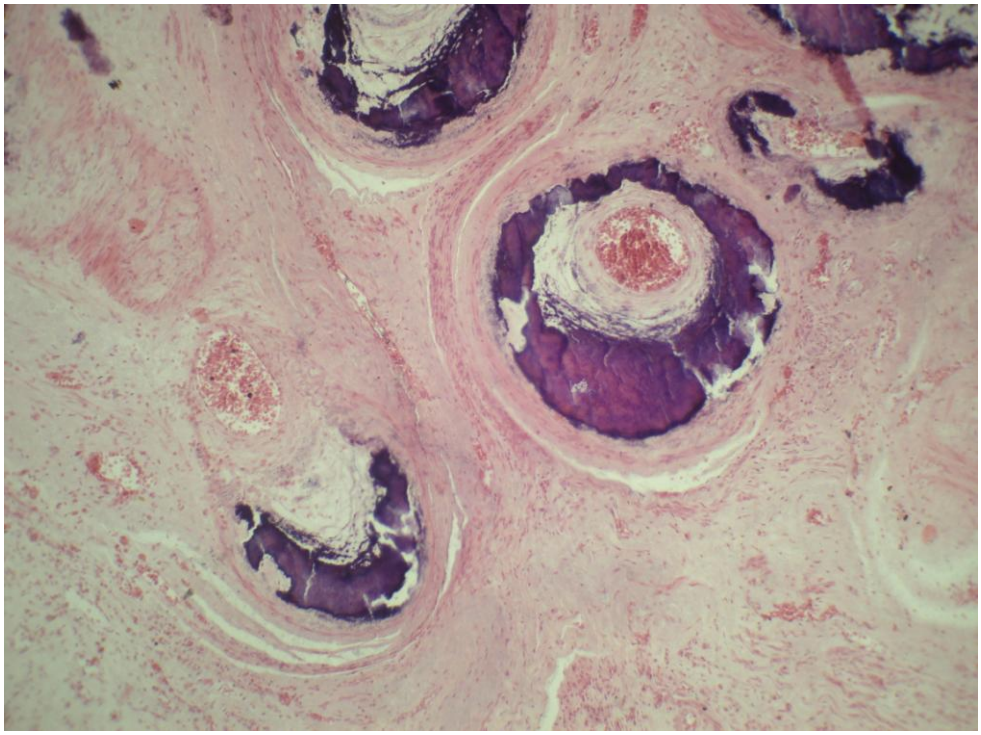
Micropreparation. Hemosiderosis of the liver . Prussian blue reaction.



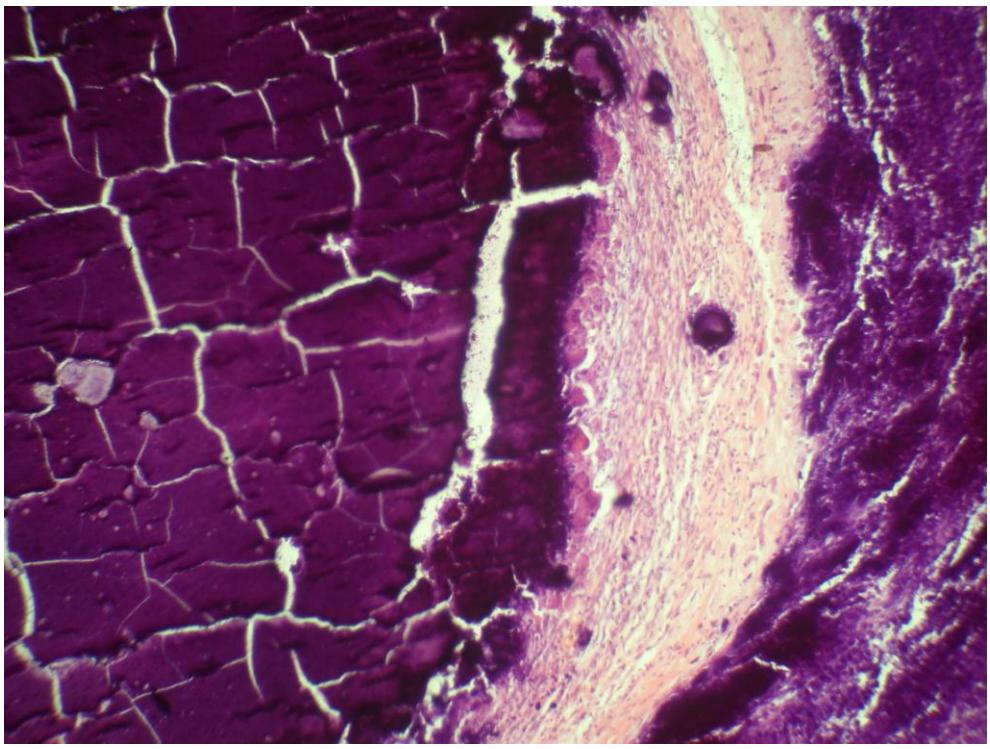
Micropreparation. Liver in mechanical jaundice (intra- and extracellucar cholestasis). Г-э.



Micropreparation. Calcereous metastasis in the myocardium. H&E.



Micropreparation.. Calcinosis of the ovary vesseles. H&E.



Micropreparation. Dystrophic calcification. H&E.