

VOLGOGRAD STATE  
MEDICAL UNIVERSITY  
Department of Pathological Anatomy

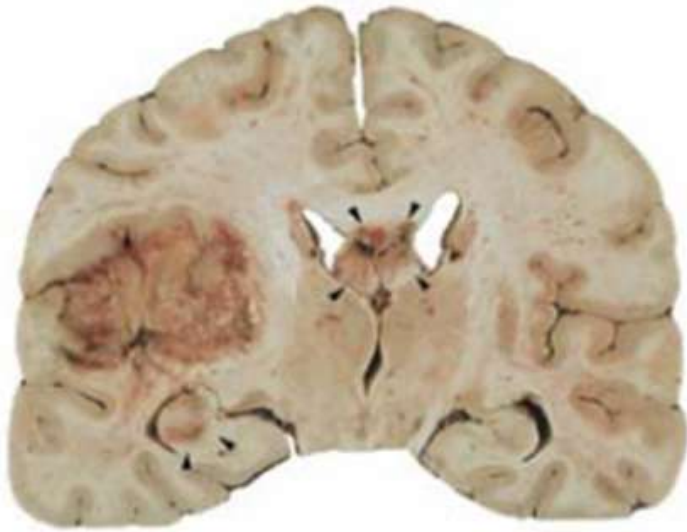
**Diseases of the central and peripheral nervous system.**

## Lesson plan.

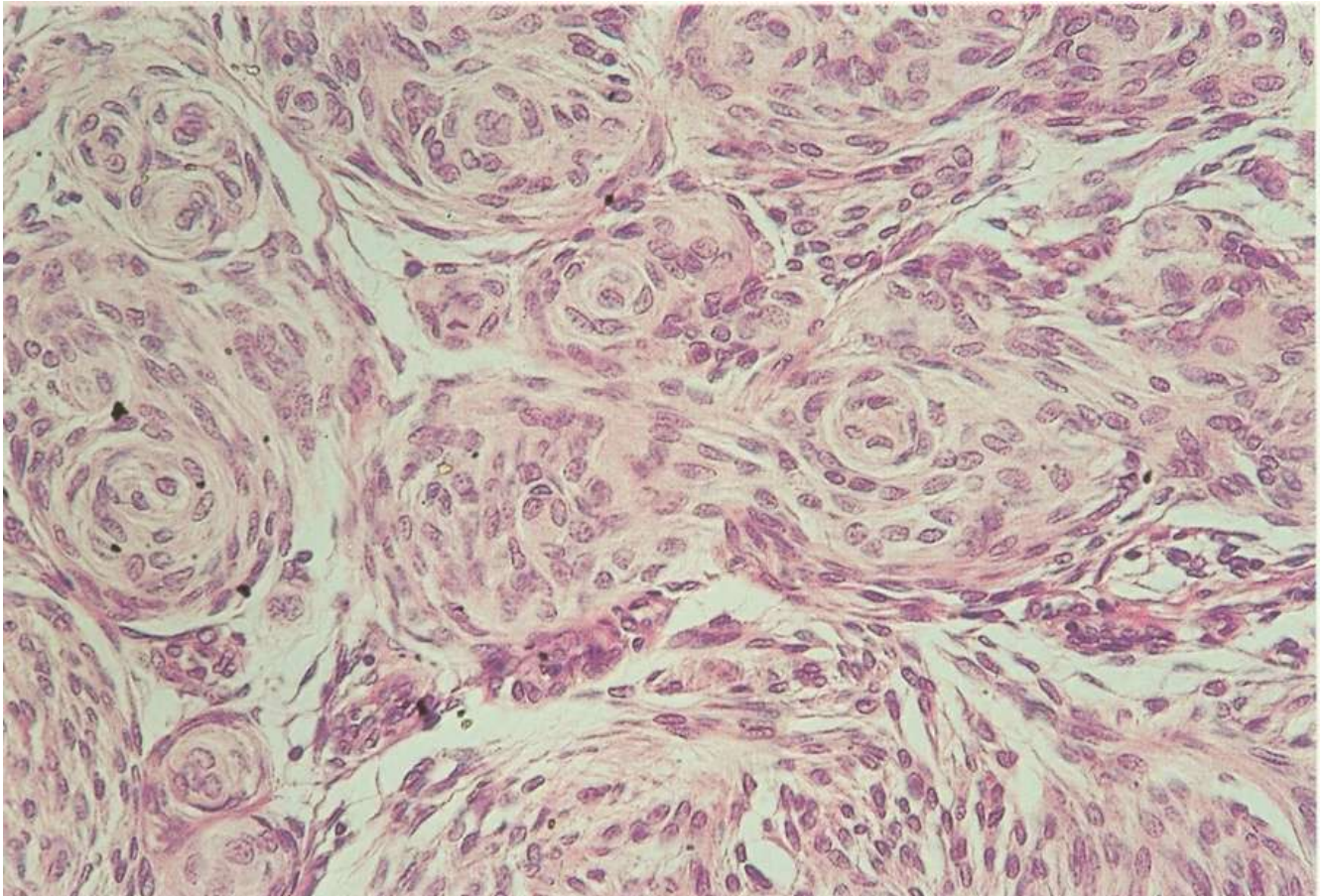
Explore and describe:

Mandatory **macropreparations and micropreparations:**

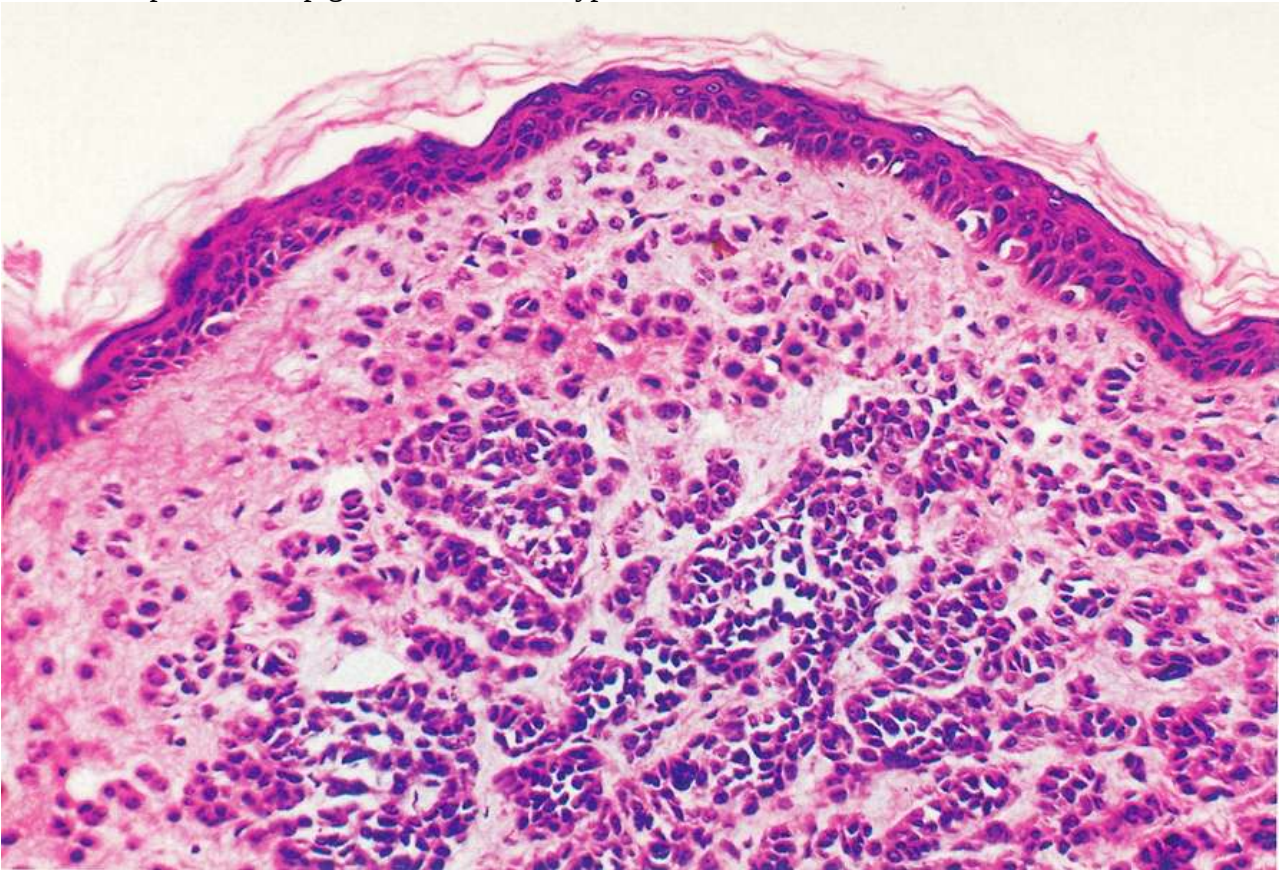
1. Macropreparation "Malignant brain tumor (glioblastoma)". Pay attention to the localization, clarity of the borders of the tumor and its color in the section.



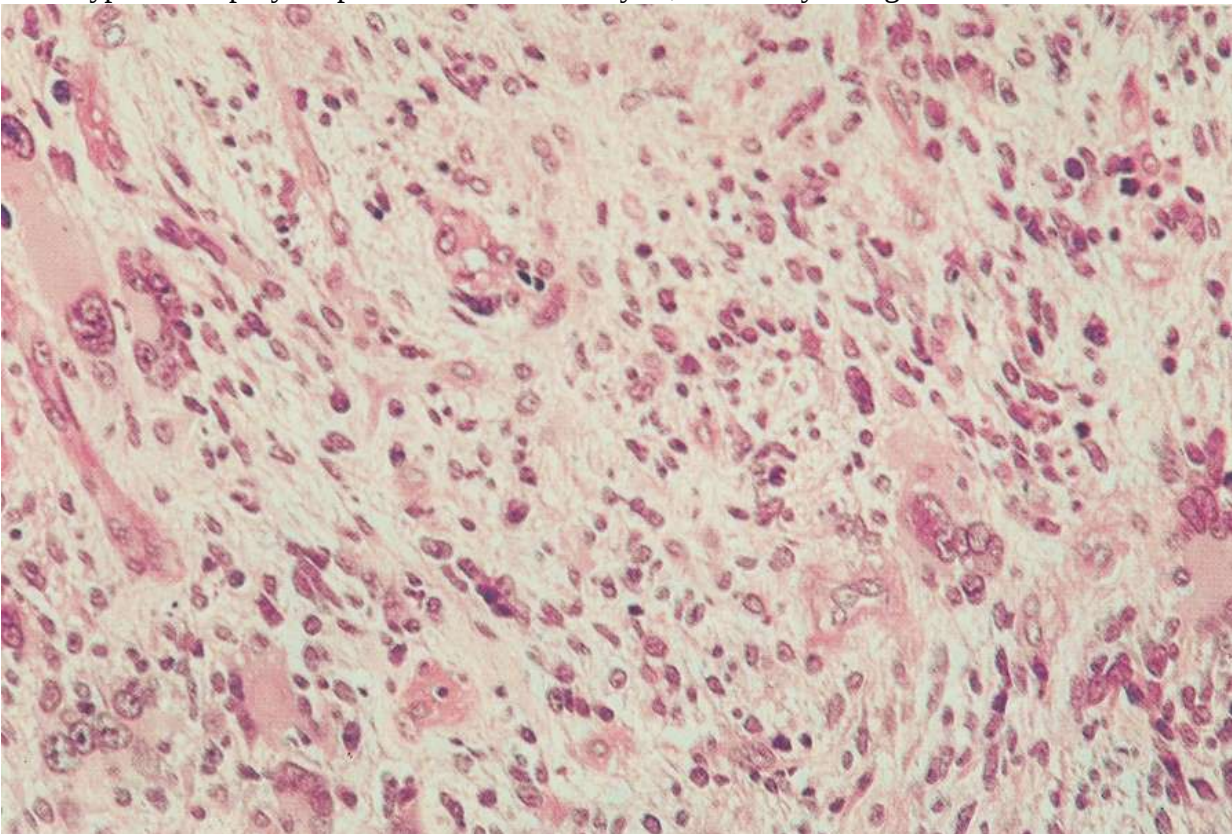
2. Micropreparation "Meningioma" (staining with hematoxylin and eosin). Pay attention to the structure of the tumor (location, size and shape of cells, size and number of nuclei, number of stroma and vessels), secondary changes in concentric shapes.



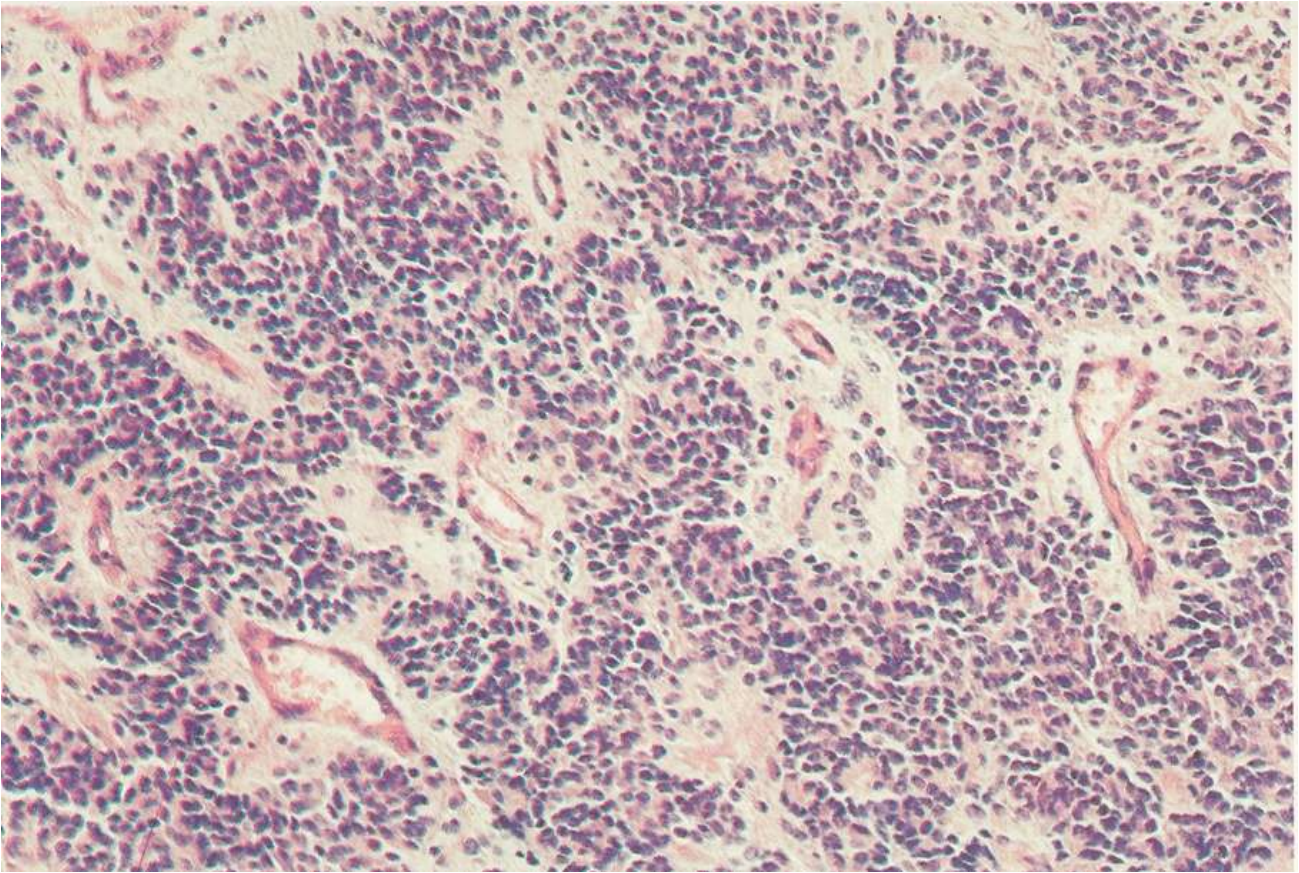
3. Micropreparation "Pigment nevus" (staining with hematoxylin and eosin). Pay attention to the structure of the tumor, the presence of pigment and tissue atypism.



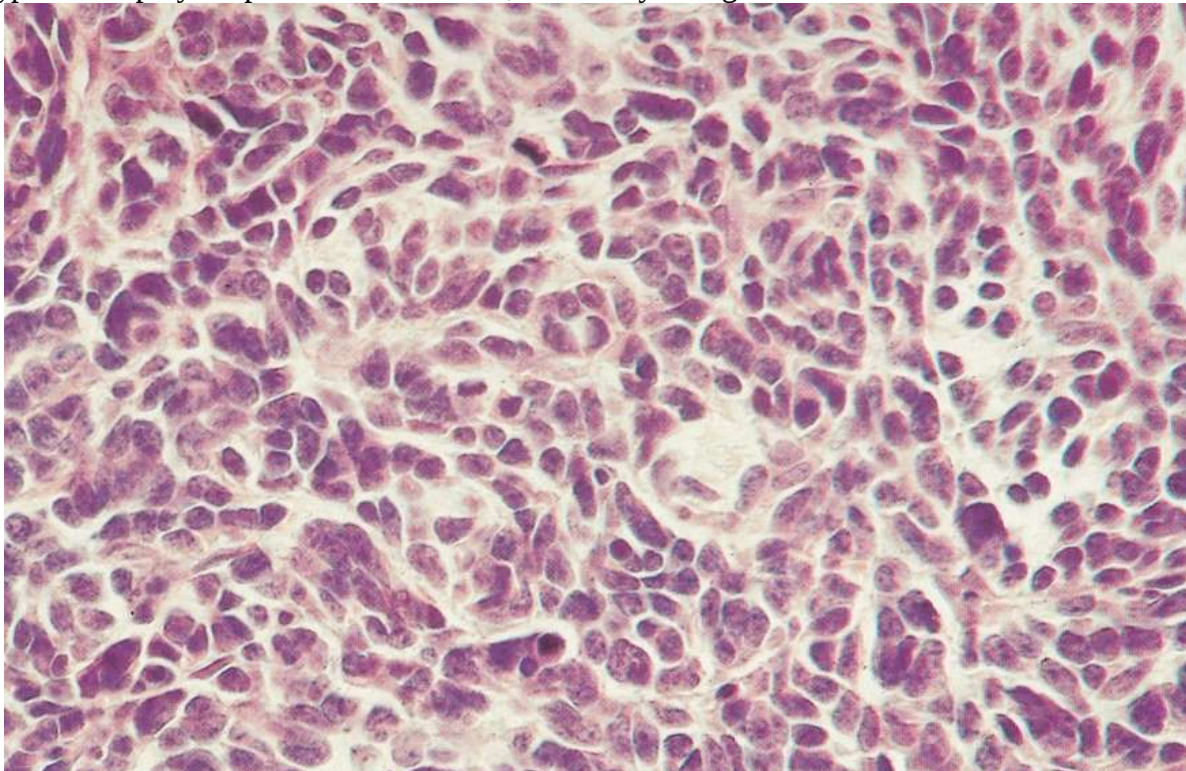
4. Micropreparation "Anaplastic astrocytoma" (staining with hematoxylin and eosin). Pay attention to the structure of the tumor (location, size and shape of cells, size and number of nuclei, number of stroma and vessels), note atypism and polymorphism of tumor astrocytes, secondary changes in tumor tissue.



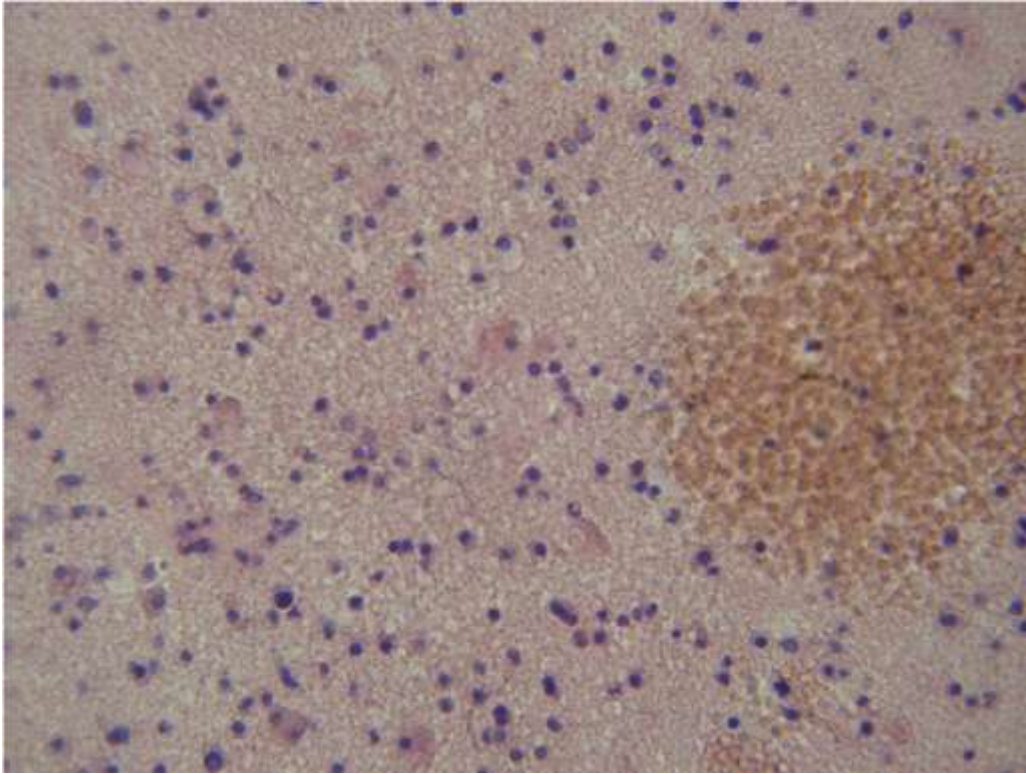
5. Micropreparation "Ependymoma". (staining with hematoxylin and eosin). Pay attention to the structure of the tumor (location, size and shape of cells, size and number of nuclei, number of stroma and vessels), note sockets and pseudo-sockets from tumor cells, secondary changes in tumor tissue.



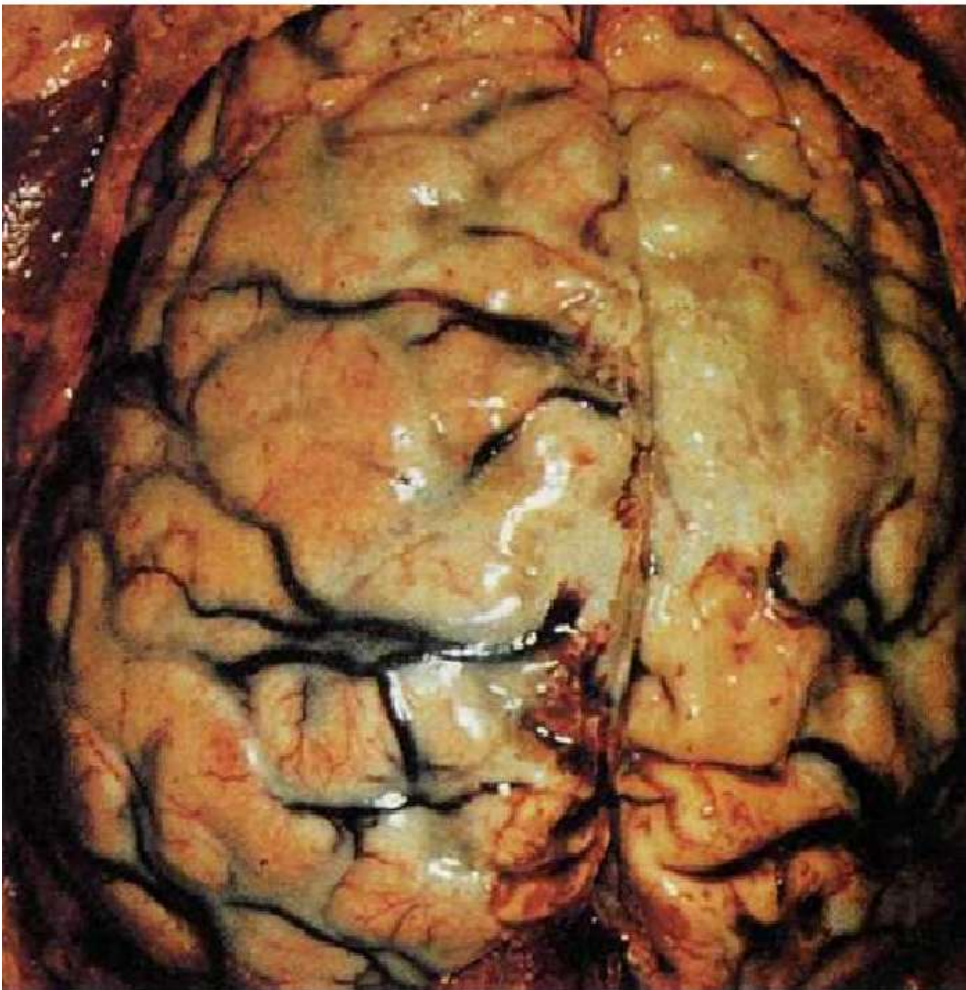
6. Micropreparation "Medulloblastoma" (staining with hematoxylin and eosin). Pay attention to the structure of the tumor (location, size and shape of cells, size and number of nuclei, number of stroma and vessels), note atypism and polymorphism of tumor cells, secondary changes in tumor tissue.



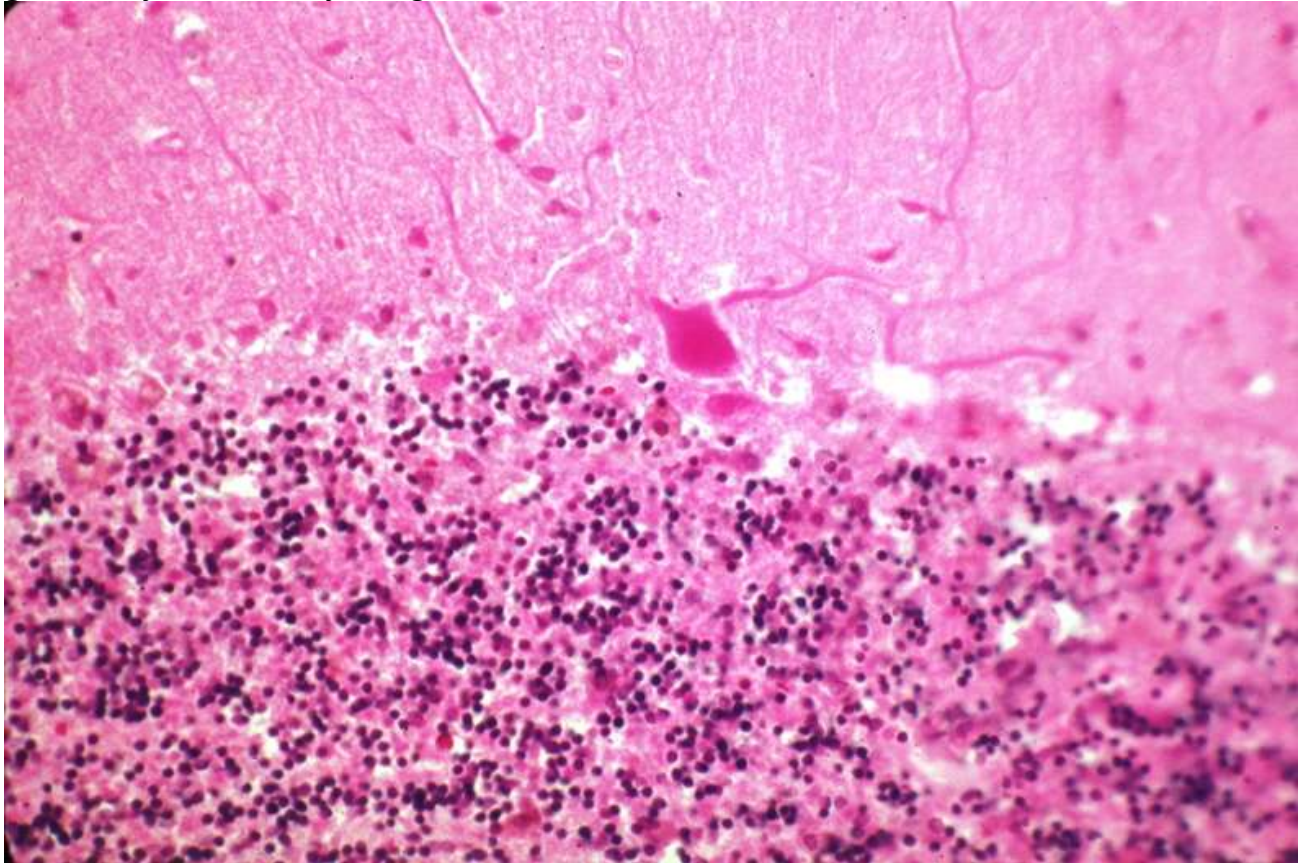
7. Micropreparation "Hemorrhage in the brain" (staining with hematoxylin and eosin). Pay attention to the presence of erythrocytes in the brain tissue (location, size and shape of cells, size and shape of nuclei), the phenomenon of edema in the neuropil and swelling of cells.



8. Macropreparation "Purulent meningitis". Pay attention to the color, thickness and vascular pattern of the membranes of the brain, the state of the surface, the spread of the pathological process.



9. Micropreparation "Ischemic cerebellar infarction" (staining with hematoxylin and eosin). Pay attention to the structure of neurons in the ganglionic layer of the cerebellum (location, size and shape of cells, absence of nuclei, color of the cytoplasm of perikaryons and processes), structural features of cells in the molecular and granular layers, secondary changes in nervous tissue.



**Additional micro-, macro-preparations:**

10. Macropreparation "Wilms' tumor". Pay attention to the structure of the tumor (a combination of three components: blastemal, epithelial and mesenchymal), the nature of growth, size, distribution in relation to the kidney capsule and perirenal space.

11. Micropreparation "Wilms' tumor" (staining with hematoxylin and eosin). Pay attention to the structure of the tumor (a combination of three components: blastemal, epithelial and mesenchymal), cellular and tissue components of the components.

12. Macropreparation "Astrocytoma". (staining with hematoxylin and eosin). Pay attention to the structure of the tumor (location, size and shape of cells, size and number of nuclei, number of stroma and vessels), secondary changes in tumor tissue.

13. Micropreparation "Glioblastoma multiforme" (staining with hematoxylin and eosin). Pay attention to the structure of the tumor (location, size and shape of cells, size and number of nuclei, number of stroma and vessels), secondary changes in tumor tissue.

**List of recommended literature:**

**Basic literature:**

1. "Basic pathology" Vinay Kumar, Ramzi S. Cotran, Stanley L. Robbins, 1997.

**Additional literature:**

1. "Pathology. Quick Review and MCQs" Harsh Mohan, 2004.
2. "Textbook of Pathology" Harsh Mohan, 2002.
3. "General and Systemic Pathology" Joseph Hunter, 2002.

4. "General and Systematic Pathology " Ed. J.C.E. Underwood – Edinburgh: Churchill Livingstone, 1996 (2<sup>th</sup>).
5. "Histology for Pathologist" Ed. S.S.Sternberg – Philadelphia: Lippincott Raven Publ, 1997 (2<sup>th</sup>).
6. "Histopathology. A Color Atlas and Textbook" Damjanov I., McCue P.A. – Baltimore, Philadelphia, London, Paris etc.: Williams and Wilkins, A Waverly Co., 1996.
7. "Muir's Textbook of Pathology" Eds. R.N.M. MacSween, K. Whaley London: ELBS, 1994 (14<sup>th</sup>).
8. "Pathology" Eds. Rubin, J.L. Farber – Philadelphia: Lippincott Raven Publ, 1998 (3<sup>th</sup>).
9. "Pathology Illustrated" Govan A.D.T., Macfarlane P.S., Callander R. – Edinburgh: Churchill Livingstone, 1995 (4<sup>th</sup>).
10. "Robbins Pathologic Basic of Disease" Eds. R.S.Cotran, V.Kumar, T.Collins – Philadelphia, London, Toronto, Montreal, Sydney, Tokyo: W.B.Saunders Co., 1998 (6<sup>th</sup>).
11. "Wheater's Basic Histopathology. A Color Atlas and Text" Burkitt H.G., Stevens A.J.S.L., Young B. – Edinburgh: Churchill Livingstone, 1996 (3<sup>th</sup>).
12. "Color Atlas of Anatomical Pathology" Cooke R.A., Steward B. – Edinburgh: Churchill Livingstone, 1995 (10<sup>th</sup>).
13. "General Pathology " Walter J.B., Talbot I.C. – Edinburgh: Churchill Livingstone, 1996 (7<sup>th</sup>).
14. "Concise Pathology" Parakrama Chandrasoma, Glive R. Taylor.
15. "Pathology" Virginia A. LiVolsi, Maria J. Merino, John S. J. Brooks, Scott H. Saul, John E. Tomaszewski, 1994.
16. "Short lectures on pathology" Zagoroulko A., 2002
17. "Robbins pathologic basis of diseases" Cotran R., Kumar V., Collins T.
18. "General pathology" Dr. Fatma Hafez, 1979.
19. "Anderson's Pathology " Damjanov I., Linder J. – St. Louis: Mosby Inc., 1995 (10<sup>th</sup>).

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