



TOPICS FOR PATHOLOGY FINAL EXAM 2019/2020

General pathology

1. Definition of disease. Scope of pathology. Clinical features of death. Alterations of the body after death.
2. Pathology of cellular injury and death.
3. Necrosis. Apoptosis.
4. Adaptations: hypertrophy, hyperplasia, atrophy, metaplasia. Calcification.
5. Intracellular accumulations. Pigments.
6. Hyperemias, edema.
7. Hemorrhage.
8. Thrombosis.
9. Embolism.
10. Disseminated intravascular coagulation. Shock.
11. General features of acute inflammation. Features of inflammation caused by bacteria.
12. Sepsis. SIRS. Defects in neutrophilic granulocyte function.
13. Morphological classification of acute inflammation. Acute serous and fibrinous inflammation.
14. Acute purulent inflammation.
15. Acute hemorrhagic, pseudomembranous, and necrotising inflammation. Comparison of acute inflammation caused by bacteria and viruses.
16. Causes and morphological classification of chronic inflammation. Macrophages.
17. Granulation tissue, fibrosis, granulomatous inflammation. Round cell infiltrates.
18. Chronic inflammation associated with exudation, fibrosis or ulceration.
19. Regeneration. Repair by connective tissue.
20. Wound healing. Keloid.
21. Recognition of antigens. T-lymphocytes and natural killer cells. B-lymphocytes and plasma cells.
22. Type I hypersensitivity. Eosinophils. Mastocytes.
23. Type II, III, and IV hypersensitivity.
24. Pathology of kidney transplantation.
25. Autoimmune diseases in general.
26. Immunodeficiencies.
27. Structure and nomenclature of tumors. Teratoma. Hamartoma.
28. Classification of tumors according to clinical behavior. Cachexia.
29. Gross and histologic features of tumors. Epidemiology of malignant tumors.
30. Predisposing conditions to cancer.
31. Spread of malignant tumors.
32. Benign epithelial tumors.
33. Carcinomas in general. Histological types of carcinomas. Adenocarcinoma.
34. Squamous cell carcinoma. Basocellular carcinoma. Carcinoma of nasopharynx and oropharynx.
35. Tumors of melanocytes.
36. Carcinogenesis: general features. Repair of DNA. Regulation of the cell cycle and apoptosis. Malignant transformation: defects in DNA repair, evasion of cell death, and limitless replicative potential.
37. Oncogens. Tumor suppressor genes.
38. Malignant phenotype. Flow chart: molecular basis of cancer.
39. Chemical carcinogenesis and occupational cancers.
40. Carcinogenesis induced by radiant-energy, UV light exposure, viruses and bacteria. Tumor immunology.
41. Clinical aspects of tumors. Paraneoplastic syndromes.
42. Prognosis, grading and staging of tumors. Surgical pathology report of cancers. Morphologic methods in the diagnosis of cancer.
43. Amyloidosis.
44. Pathology of prolonged bed rest.
45. Pathology of smoking.
46. Pathology of ethanol abuse.
47. Cystic fibrosis.
48. Pathology of obesity.
49. Pathology of ageing. Pathology in the elderly.



50. Definition, classification, pathogenesis and metabolic features of diabetes.
51. Long term complications of diabetes.

Systematic pathology

52. Arteriosclerosis. Atherosclerosis.
53. Consequences of atherosclerosis.
54. Aneurysms of aorta. Dissection of aorta.
55. Benign essential hypertension.
56. Malignant essential hypertension. Secondary hypertension.
57. Classification of vasculitis. Vasculitides affecting the large and the medium vessels.
58. Small vessel vasculitides.
59. Disorders of the veins.
60. Vascular tumors.
61. Hypertrophy of the heart. Congestive heart failure: general features. Acute and chronic left-sided heart failure.
62. Acute and chronic right-sided heart failure. Hypertensive heart disease.
63. Arrhythmias.
64. Classification of ischemic heart disease. Transmural myocardial infarction.
65. Subendocardial infarction. Chronic ischemic heart disease.
66. Valvular heart disease in adults: causes, consequences. Degenerative valvular diseases. Rheumatic fever - induced heart disease.
67. Infective endocarditis. Nonbacterial thrombotic endocarditis. Pathology of the prothetic heart valve.
68. Cardiomyopathy.
69. Myocarditis.
70. Congenital heart disease.
71. Diseases of the pericardium. Tumors of the heart and pericardium.
72. Sudden, unexpected death in adults.
73. Features of glomerulonephritis. Nephrotic syndrome and the podocytes.
74. Glomerular diseases associated with the nephrotic syndrome.
75. Glomerular diseases associated with the nephritic syndrome. Crescentic glomerulonephritis.
76. Glomerular diseases leading to hematuria. Chronic sclerosing glomerulonephritis.
77. Renal disorders in diabetic patients.
78. Thrombotic microangiopathies.
79. Classification of acute renal failure. Acute tubular necrosis.
80. Drug-induced tubulointerstitial nephritis. Renal disorders in multiple myeloma.
81. Acute pyelonephritis. Reflux nephropathy.
82. Chronic pyelonephritis.
83. Renal stones. Urinary tract obstruction. Hydronephrosis.
84. Diseases of the renal artery and its branches. Renal infarction. Diseases of the small arteries and arterioles: an overview.
85. Cystic diseases of the kidney.
86. Pathology of chronic kidney damage.
87. Tumors of the kidney.
88. Atelectasis. Pulmonary edema.
89. Respiratory distress syndrome in newborn.
90. Acute respiratory distress syndrome. Respiratory failure.
91. Pulmonary thromboembolism. Pulmonary hypertension.
92. Bronchiectasis.
93. COPD.
94. Bronchial asthma. Stenosis of the bronchi.
95. Pneumoconioses.
96. Chronic restrictive (interstitial) lung diseases.
97. Sarcoidosis. Hypersensitivity pneumonitis.
98. Acute bacterial pneumonias.
99. Pulmonary abscess. Atypical pneumonias.
100. Tuberculosis.
101. Acute bronchitis, bronchiolitis. Pathology of the pleura.



102. Tumors of the lungs.
103. Diseases of the nose, sinuses, nasopharynx, and larynx.
104. Congenital diseases of the oral cavity. Diseases of the teeth and the periodontium.
105. Inflammations and reactive proliferations of the oral and pharyngeal mucosa.
106. Tumors and premalignant conditions of the oral mucosa.
107. Inflammatory diseases of the salivary glands. Sialolithiasis.
108. Tumors of the salivary glands.
109. Non-neoplastic diseases of the esophagus.
110. Tumors of the esophagus.
111. Gastritis.
112. Chronic peptic ulcer disease.
113. Epithelial tumors of the stomach.
114. Vascular diseases of the bowels. Angiodysplasia.
115. Idiopathic inflammatory bowel disease.
116. Diarrhea. Enterocolitis.
117. Pathology of malabsorption. Diverticulosis of the large bowel.
118. Polyps of the small and large bowel, polyposis.
119. Colorectal carcinoma. Hematochezia.
120. Pathology of the appendix.
121. Neuroendocrine tumors, lymphomas and stromal tumors of the gastrointestinal tract.
122. Congenital malformations of the stomach, bowels, and anus.
123. Ileus.
124. Peritonitis. Tumors of the peritoneum.
125. Functions of liver. Jaundice.
126. Acute and chronic hepatitis.
127. Alcoholic injury of the liver. Non-alcoholic steatosis and steatohepatitis.
128. Autoimmune and genetic diseases of the liver.
129. Drug-induced liver injury. Cirrhosis of the liver. Liver involvement in systemic diseases.
130. Tumors of the liver.
131. Non-neoplastic diseases of the gallbladder and the extrahepatic ducts.
132. Tumors of the gallbladder and the extrahepatic bile ducts.
133. Acute pancreatitis.
134. Chronic pancreatitis.
135. Carcinoma of the pancreas. Islet cell tumors of the pancreas.
136. Classification of anemias. Aplastic anemia.
137. Classification of myeloid tumors. Acute myeloid leukemia.
138. Classification of chronic myeloproliferative diseases. Chronic myeloid leukemia. Polycythemia vera.
139. Essential thrombocytosis. Myelofibrosis. Myelodysplastic syndromes.
140. Classification of lymphoid tumors. General features of non-Hodgkin lymphomas.
141. Chronic lymphoid leukemia. Mantle cell lymphoma. Follicular lymphoma. Marginal zone lymphoma.
142. Acute lymphoid leukemias. Diffuse large B-cell lymphoma. Burkitt lymphoma.
143. Hodgkin's lymphoma.
144. Multiple myeloma.
145. Lymphadenitis. Infectious mononucleosis.
146. Disorders of the spleen. Thymoma. Tumors of the Langerhans cells.
147. Basic pathological alterations of the central nervous system. Brain edema and herniation.
148. Hydrocephalus.
149. Trauma of the central nervous system.
150. Hypoxic encephalopathy. Cerebral infarction.
151. Intracerebral hemorrhage. Hypertensive cerebrovascular disease.
152. Subarachnoid hemorrhage.
153. Demyelinating diseases.
154. Classification and causes of dementias. Alzheimer's disease.
155. Parkinson's disease. Parkinsonism.
156. Amyotrophic lateral sclerosis. Prion disease.
157. Infections of the central nervous system: general features. Leptomeningitides. Brain abscess.
158. Viral and fungal encephalitis.



159. Gliomas.
160. Medulloblastomas, brain metastases. Clinical features of brain tumors. Meningioma. Schwannoma. Neuroblastoma.
161. Toxic and metabolic damage of the nervous system. Fetal alcohol syndrome.
162. Developmental abnormalities of the central nervous system. Perinatal brain injury.
163. Systemic lupus erythematosus.
164. Rheumatoid arthritis and other autoimmune arthritides.
165. Scleroderma.
166. Myositides.
167. Tumors of the urinary tract and the urinary bladder.
168. Non-tumorous diseases of the urinary bladder.
169. Pathology of the penis and the male urethra.
170. Prostatitis. Prostatic nodular hyperplasia.
171. Carcinoma of the prostate.
172. Non-tumorous disorders of the testis and epididymis. Male infertility.
173. Testicular tumors.
174. Benign lesions of the breast. Lesions of the male breast.
175. Tumors of the breast.
176. Pathology of the vulva and vagina.
177. Diseases of the cervix of uterus.
178. Diseases of the endometrium and myometrium.
179. Non-tumorous disorders of the ovaries and Fallopian tubes.
180. Tumors of the ovary.
181. Pathology of pregnancy.
182. Tumors of the pituitary. Hypopituitarism.
183. Pathology of the adrenal cortex and medulla.
184. Hypothyroidism. Goiters.
185. Hyperthyroidism. Graves-Basedow disease.
186. Thyroiditis.
187. Tumors of the thyroid.
188. Pathology of the parathyroid glands. Multiple endocrine neoplasia.
189. Osteoporosis. Renal osteodystrophy.
190. Pathology of bone fracture. Osteomyelitis. Osteonecrosis.
191. Tumors of the bones.
192. Diseases of the joints (except rheumatoid arthritis and other autoimmune arthritides).
193. Soft tissue tumors.