

## I. General Pathology

1. Biopsy: techniques of obtaining tissue samples, various kinds of bioptical specimens, tissue processing, frozen sections
2. Cytology: techniques of obtaining tissue samples, various kinds of cytological specimens
3. Autopsy, its importance, the autopsy protocol and its parts
4. Histological methods, stainings, light and electron microscopy, histochemistry, immunohistochemistry and other special techniques
5. Disease and its causes
6. Death and postmortal changes
7. Necrosis - types, causes and further evolution
8. Atrophy - types, causes and further evolution
9. Intracellular accumulations of lipids, proteins and carbohydrates, single-gene inborn disorders
10. Amyloidosis
11. Pigments and pigmentations
12. Icterus
13. Pathologic calcifications, stones
14. Pathology of nutrition
15. Hypertrophy, hyperplasia
16. Regeneration, reparation
17. Metaplasia, dysplasia
18. Edema
19. Hyperemia, venostasis
20. Focal disorders of blood supply, ischemia, infarction
21. Haemorrhage
22. Thrombosis incl. DIC
23. Embolisation, metastasis
24. Shock
25. Heart failure - types, causes, complications
26. Causes of inflammation
27. Pathophysiology of inflammation
28. Inflammation - microscopic and macroscopic changes
29. Classification and morphologic patterns of inflammation
30. Specific granulomatous inflammation and its examples (leprosy, sarcoidosis, rhinoscleroma, etc.)
31. Tuberculosis: general morphology
32. Tuberculosis: preimmune type
33. Tuberculosis: organ tuberculosis of adult type
34. Syphilis
35. Immune system and its functions
36. Immune reactions
37. Transplantation
38. Primary and secondary immunodeficiency
39. Autoimmune diseases
40. HIV, AIDS
41. Mechanisms of bacteria and virus-induced injury
42. Bacteriemia, sepsis, pyemia
43. Skin infections
44. Respiratory system infections
45. Gastrointestinal system infections
46. Genitourinary system infections
47. Nervous system infections
48. Staphylococcal infections

49. Streptococcal infections
50. Infectious hepatitis
51. Environmental pollution
52. Injury by physical agents
53. Injury by chemical agents

## II. Oncology

1. Definitions, preneoplastic lesions, pseudotumors
2. Classification of tumors
3. Structure, growth of tumors
4. Invasion and metastases
5. Characteristics of benign and malignant tumors
6. Carcinoma in situ
7. Carcinogenesis, etiology of tumors
8. Effects of tumor on host
9. Grading and staging of tumors, tumor prognosis
10. Fibroma, myxoma, lipoma, angioma (+ sarcomas)
11. Chondroma, chordoma, osteoma (+sarcomas)
12. Leiomyoma, leiomyosarcoma, rhabdomyoma, rhabdomyosarcoma
13. Hemoblastoses, myeloproliferative syndrome
14. Hodgkin's disease
15. Non-Hodgkin malignant lymphomas - Kiel classification
16. Tumors of the squamous stratified epithelium
17. Tumors of transitional epithelium
18. Benign tumors of the glandular epithelium
19. Malignant tumors of the glandular epithelium
20. APUDomas and carcinoid tumors
21. Neuroectodermal tumors of the CNS
22. Tumors of the meninges and peripheral nervous system
23. Tumors of melanocytes
24. Mixed tumors, germinal tumors
25. Choriocarcinoma, mesothelioma
26. Tumors of the heart
27. Tumors of the lymph nodes
28. Tumors of the upper respiratory tract
29. Bronchopulmonary tumors
30. Tumors of the oral cavity, incl. salivary glands and odontogenic tumors
31. Tumors of the esophagus and stomach
32. Neoplasms of the small and large intestine
33. Tumors of the liver, biliary tract and pancreas
34. Tumors of the kidney and urinary tract
35. Testicular tumors
36. Tumors of the prostate and penis
37. Vulvar and cervical tumors
38. Tumors of the endometrium and myometrium
39. Tumors of the ovary
40. Tumors of the breast
41. Intracranial tumors
42. Tumors of the endocrine system
43. Tumors of the musculoskeletal system
44. Skin tumors and pseudotumorous lesions

### III. Special Pathology

1. Congenital heart disease
2. Pericardial disease
3. Endocarditis
4. Acquired heart disease (vitia cordis acquisita)
5. Myocarditis
6. Cardiomyopathy
7. Ischemic heart disease
8. The heart in hypertension
9. Atherosclerosis and other arterial dystrophies
10. Arteritis
11. Aneurysms
12. Pathology of the veins and lymphatic vessels
13. Posthemorrhagic and hemolytic anemia
14. Anemias of diminished erythropoiesis, polycythemia
15. Bleeding disorders
16. Pathology of the spleen
17. Nonneoplastic disorders of white cells
18. Pathology of the thymus
19. Nose and paranasal cavities
20. Larynx and trachea
21. Pediatric lung diseases
22. Bronchitis, asthma
23. Bronchiectasia, bronchostenosis
24. Emphysema, atelectasis
25. Pulmonary edema
26. Pulmonary thrombembolism
27. Pulmonary hypertension
28. Acute and chronic restrictive lung diseases
29. Classification of pulmonary infections, lobar pneumonia
30. Bronchopneumonia
31. Primary atypical pneumonias, fungal infections
32. Pulmonary tuberculosis
33. Pleura
34. Diseases of the oral cavity
35. Pathology of salivary glands
36. Pathology of the esophagus
37. Gastritis
38. Peptic ulcers
39. Developmental disorders, diverticulosis
40. Intestinal vascular disorders
41. Inflammatory diseases, obstructive disease, ileus
42. Enteritis, appendicitis, colitis
43. Malabsorption syndrome
44. Pathology of the peritoneum
45. Liver: metabolism of the bilirubin, jaundice, hepatic failure
46. Hereditary disorders of bilirubin metabolism, pediatric liver disease
47. Circulatory disorders of the liver
48. Viral hepatitis

49. Drug- and toxin-induced liver disease
50. Liver cirrhosis
51. Hemochromatosis, Wilson's disease, alpha-1-antitrypsin deficiency
52. Cholangitis and liver abscess
53. Cholecystitis, cholelithiasis
54. Mucoviscidosis
55. Acute hemorrhagic necrosis of the pancreas, pancreatitis
56. Kidney - malformation, renal cysts
57. Blood supply disorders of the kidney
58. Glomerular diseases, pathogenesis and classification
59. Causes of the nephritic syndrome
60. Causes of the nephrotic syndrome
61. Tubulointerstitial nephritis
62. Acute tubular and diffuse cortical necrosis
63. Hydronephrosis, renal stones
64. Pathology of the renal pelvis, urether and urinary bladder
65. Pathology of the penis and prostate
66. Pathology of the testis
67. Pathology of the vulva and vagina
68. Pathology of the cervix uteri, endometritis, endometriosis
69. Dysfunctional uterine bleeding and endometrial hyperplasia
70. Pathology of Fallopian tubes and ovaries
71. Pathology of the pregnancy
72. Inflammations and fibrocystic changes of the breast
73. Intracranial hypertension, cerebral edema, hydrocephalus
74. Intracranial nontraumatic hemorrhage
75. Intracranial injuries
76. Ischemic cerebral disease
77. Pachymeningitis, leptomeningitis
78. Purulent encephalitis
79. Viral and other encephalitis
80. Degenerative diseases - classification, Parkinson's and Huntington's disease, amyotrophic lateral sclerosis
81. Alzheimer's disease, multiple sclerosis, nutritional and metabolic encephalopathies
82. Pathology of the hypophysis
83. Pathology of the thyroid gland
84. Pathology of the parathyroid glands
85. Pathology of the endocrine pancreas, diabetes mellitus
86. Pathology of the adrenal glands
87. Skeletal muscle pathology
88. Hereditary diseases of the musculoskeletal system
89. Metabolic diseases of the musculoskeletal system - osteomalacia, rachitis, avitaminosis C, osteoporosis, von Recklinghausen's disease
90. Osteomyelitis, tuberculosis, m. Paget, fibrous dysplasia, hypertrophic osteoarthropathy
91. Osteoarthritis, suppurative arthritis, rheumatoid arthritis, spondyloarthropathias
92. Infections and non-infectious inflammatory lesions of the skin
93. Granulomatous lesions, vascular lesions of the skin
94. Pathology of the dermal connective tissue