**Cellular lesions. Amyloidosis**

1. **Hydropic degeneration results from:**
2. membrane rupture
3. ATP accumulation
4. oncogene activation
5. Na/K pump dysfunction
6. cytoplasm lysis

**2. Coagulative necrosis:**

1. resemble crumbly cheese
2. may develop as a result of ischemia
3. it is reversible
4. can maintain tissue functionality for 5-7 days
5. affects only extremities

**3. Apoptosis is the result of the following processes:**

1. cellular atrophy
2. cellular death
3. cellular proliferation
4. cellular mutation
5. cellular dysplasia

**4. Identify the morphological variant of necrosis that occurs as a result of cerebral ischemia:**

1. coagulative
2. caseous
3. liquefactive
4. fat
5. post-atherosclerotic

**5. Which of the following cellular responses is indicative of injury due to faulty metabolism:**

1. hydropic swelling
2. lactate production
3. metaplasia
4. intracellular accumulations
5. hypertrophy

**6. A high serum lactate level (lactic acidosis) usually indicates the presence of:**

1. liver failure
2. hypoglycemia
3. immunologic injury
4. cellular hypoxia
5. hypocalcemia

**7. Ischemia of tissue in parenchymatous organs usually produces:**

1. coagulative necrosis
2. liquefactive necrosis
3. caseous necrosis
4. fat necrosis
5. proteic necrosis

**8. Which of the following are potentially reversible cellular responses:**

1. necrosis
2. metaplasia
3. atrophy
4. hyperplasia
5. apoptosis

**9. Which of the following are NOT evidence of irreversible cell injury:**

1. cell swelling (cellular edema)
2. calcification of mitochondria
3. nuclear pyknosis
4. rupture of the lysosomes
5. lipidic degeneration

**10. Ions of which chemical element is involved in "reperfusion injury":**

1. calcium
2. magnesium
3. phosphate
4. potassium
5. sodium

**11. Caseous necrosis is characteristic for:**

1. peripancreatic calcinosis
2. gangrenous diabetic foot
3. myocardial infarction
4. abscess
5. pulmonary tuberculosis

**12. Which of the following are NOT characteristic of reversible cell injury:**

1. reduced oxidative phosphorylation
2. ATP depletion
3. cellular shrinking
4. changes in ion concentrations
5. karyolysis

**13. Which of the following describes hyperplasia:**

1. increase in the number of cells (mitosis) in an organ or tissue
2. decrease in the number of cells (mitosis) in an organ or tissue
3. increase in individual cell size in an organ or tissue
4. decrease in individual cell size in an organ or tissue
5. reversible change in which one adult cell is replaced by another adult cell type

**14. Most forms of pathologic hyperplasia are caused by excessive hormonal stimulation or growth factors acting on target cells. What is the most likely consequence of endometrial hyperplasia:**

1. increased risk of miscarriage
2. decreased risk of miscarriage
3. increased risk of endometrial cancer
4. decreased risk of endometrial cancer
5. increased risk of neurologic disease

**15. Which of the following infectious agents is associated with hyperplasia:**

1. papillomavirus
2. enterobacteria
3. staphylococci
4. streptococci
5. parasites

**16. Which of the following describes hypertrophy:**

1. increase in the number of cells (mitosis) in an organ or tissue
2. decrease in the number of cells (mitosis) in an organ or tissue
3. increase in individual cell size in an organ or tissue
4. decrease in individual cell size in an organ or tissue
5. reversible change in which one adult cell is replaced by another adult cell type

**17. Which of the following types of atrophy is involved in ischemia:**

1. decreased workload
2. loss of innervation
3. diminished blood supply
4. inadequate nutrition (protein-calorie)
5. loss of endocrine stimulation

**18. Which of the following is associated with cachexia in patients with chronic**

**inflammatory diseases and cancer:**

1. decreased workload
2. loss of innervation
3. diminished blood supply
4. inadequate nutrition (protein-calorie)
5. loss of endocrine stimulation

**19. Atrophy may be accompanied by residual bodies, such as lipofuscin granules, which can give to tissues the color of:**

1. yellow
2. blue
3. brown
4. white
5. red

**20. Which of the following describes metaplasia:**

1. increase in the number of cells (mitosis) in an organ or tissue
2. decrease in the number of cells (mitosis) in an organ or tissue
3. increase in individual cell size in an organ or tissue
4. decrease in individual cell size in an organ or tissue
5. reversible change in which one adult cell is replaced by another adult cell type

**21. Which of the following cell transformation is involved in respiratory tract cancer:**

1. squamous to columnar
2. squamous to cuboidal
3. columnar to squamous
4. columnar to cuboidal
5. cuboidal to squamous

**22. In Barrett esophagus, metaplasia occurs as a result of refluxed gastric juice. Which of the following epithelial transformation occurs:**

1. squamous to columnar
2. squamous to cuboidal
3. columnar to squamous
4. columnar to cuboidal
5. cuboidal to squamous

**23. Which of the following is associated with cell death and NOT specifically with**

**reversible cell injury:**

1. membrane blebs
2. nucleus shrinking
3. swelling of endoplasmic reticulum
4. swelling of mitochondria
5. myelin figures

**24. Which of the following is NOT associated with cell death:**

1. nuclear condensation (pyknosis)
2. nuclear fragmentation (karyorrhexis)
3. dissolution of the nucleus (karyolysis)
4. decrease in intracellular Ca
5. amorphous mitochondrial densities

**25. Which of the following would NOT cause mitochondrial damage:**

1. increase in cytosolic Ca
2. oxidative stress
3. retention of cytochrome C
4. breakdown of phospholipids through the phospholipase A2 and sphingomyelin

pathways

1. lipid breakdown products (e.g.free fatty acids and ceramide)

**26. Which of the following would NOT be an ultrastructural change seen in a**

**reversibly injured cell:**

1. apoptosis
2. microvilli distortion
3. myelin figures
4. amorphous densities
5. nucleus shrinking

**27. Which of the following has a cheesy, yellow-white appearance at the area of**

**necrosis and is encountered most often in foci of tuberculous infection:**

1. coagulative necrosis
2. liquefactive necrosis
3. caseous necrosis
4. fat necrosis
5. gangrenous necrosis

**28. Chemically induced cell injury from carbon tetrachloride (CCl4) and**

**acetaminophen (Tylenol) affect which organ:**

1. brain
2. kidneys
3. pancreas
4. spleen
5. liver

**29. Which of the following diseases would most likely show glycogen abnormalities,**

**if the PAS reaction is positive in the descending loop of Henle:**

1. hypertension
2. congestive heart failure
3. abdominal aortic aneurysm
4. rheumatoid arthritis
5. diabetes mellitus

**30. Hemosiderin is a hemoglobin-derived, golden yellow-to-brown, granular or crystalline pigment that indicate a local excess of which of the following:**

a. oxygen

b. CO2

c. iron

d. macrophages

e. Ca

**31. Bilirubin is hemoglobin-derived and the normal major pigment found in bile. If found in excess, what color does it change the skin:**

1. black
2. white
3. red
4. yellow
5. blue

**32. Which of the following would NOT be associated with metastatic calcification:**

1. increased secretion of parathyroid hormone (PTH)
2. atherocalcinosis
3. gallbladder lithiasis
4. renal failure
5. decreased secretion of parathyroid hormone (PTH)

**33. Reperfusion cellular injury is caused by:**

1. high intracellular concentrations of Calcium
2. high intracellular concentrations of Potasssium
3. free radical release
4. vitamin E
5. nitric oxide

**34. Apoptosis:**

1. occurs following acute deprivation of blood
2. occurs during embryogenesis
3. leads to damage to neighboring cells
4. follows activation of caspase 3
5. is triggered when there is irreversible damage to cellular DNA

**35. Langhans giant cells:**

1. are the antigen presenting cells in the skin
2. have a peripheral ring of nuclei with central clearing
3. are characteristically seen in tuberculosis
4. have nuclei scattered randomly through the cytoplasm
5. are derived from macrophage

**36. A 48-year-old male with a history of chronic alcoholism will most often have which of the following findings in liver:**

1. cholestasis
2. fatty change
3. hemochromatosis
4. hypertrophy of smooth endoplasmic reticulum
5. coagulative necrosis

**37. A 53-year-old male who is developing an acute myocardial infarction from coronary occlusion has an irreversible injury to the myocardium when:**

1. glycogen is depleted
2. cytoplasmic sodium increases
3. nuclei undergo karyorrhexis
4. intracellular pH diminishes
5. blebs form on cell membranes

**38. After years of dirty city air inhalation, lungs have accumulated:**

1. anthracotic pigment
2. lipofuscin
3. melanin
4. hemosiderin
5. biliverdin

**39. The presence of squamous epithelium in the lower trachea of a 42-year-old female with a history of smoking is called:**

1. dysplasia
2. aplasia
3. anaplasia
4. hyperplasia
5. metaplasia

**40. A 59-year-old female had a cerebral infarction. Months later, a computed tomographic (CT) scan shows a cystic area in her cerebral cortex. The CT finding is a lesion that is the consequence from:**

1. liquefactive necrosis
2. atrophy
3. coagulative necrosis
4. caseous necrosis
5. apoptosis

**41. The light brown perinuclear pigment seen on H&E staining of the cardiac muscle fibers in the heart of an 80 year old male is:**

1. hemosiderin
2. lipofuscin
3. glycogen
4. cholesterol
5. calcium

**42. Karyorrhexis refers to:**

1. disintegration of the cell cytoplasm
2. cell membrane lysis
3. fragmentation of the cell nucleus
4. mitochondrial swelling and lysis
5. oxygen toxicity

**43. The spleen at autopsy on sectioning shows a tan to white, conical -shaped lesion with base on the capsule. This most likely represents the result of:**

1. coagulative necrosis
2. abscess formation
3. metaplasia
4. caseous necrosis
5. liquefactive necrosis

**44. A 3500 gm liver from a 35-year-old female has a yellow, greasy cut surface. This appearance most likely resulted from:**

1. galactosemia
2. iron accumulation
3. tuberculous infection
4. alcoholism
5. hypoxia

**45. The marked enlargement of the uterus that occurs in pregnancy is accompanied by:**

1. increased myometrial cell numbers
2. nuclear anaplasia
3. increased cellular DNA content
4. increased myometrial cell size
5. calcification of myometrium myocyte

**46. A 73-year-old male suffers a "stroke" with loss of blood supply to cerebral cortex in the distribution of the middle cerebral artery. The most likely consequence of this is:**

1. infarction with liquefactive necrosis
2. pale infarction with coagulative necrosis
3. predominant loss of glial cells
4. recovery of damaged neurons if the vascular supply is reestablished
5. wet gangrene with secondary bacterial infection

**47. Physical examination of a 42 year old female reveals scleral icterus. Which of the following underlying conditions is most likely to contribute to this finding:**

1. hypercholesterolemia
2. thrombocytopenia
3. metastatic carcinoma
4. hepatitis
5. diabetes mellitus

**48. In which of the following cases is fat necrosis most often seen:**

1. a 31 year old male has an acute abdomen with marked abdominal pain and an elevated serum amylase
2. a 66 year old female with chronic alcoholism has an elevated serum AST
3. a 23 year old female with a decreased total serum complement has a history of systemic lupus erythematosus
4. a 70 year old female with adenocarcinoma of the colon and metastases to liver has an elevated LDH
5. a 49 year old male with sudden onset of chest pain has an elevated serum creatine kinase

**49. Melting of dead tissue is observed in:**

1. myomalacia
2. encephalomalacia
3. mummification
4. coagulation
5. ossification

**50. Which of the following can be** **myocardial infarction causes:**

1. ossification
2. angiospasm
3. petrification
4. thrombosis
5. embolism

**51. Which of the following are morphological necrosis types:**

1. paranecrosis
2. fat necrosis
3. protein necrosis
4. coagulative necrosis
5. caseous necrosis

**52. Which of the following processes are characteristic of cellular necrosis:**

a. hemochromatosis

1. karyopyknosis
2. hyalinosis
3. cytolysis
4. plasmolysis

**53. Which of the following are etiologic types of necrosis:**

1. lipidic type
2. vascular type
3. focal type
4. toxic type
5. infectious type

**54. Dry gangrene is characterized by:**

1. mummification
2. proliferation
3. hydration
4. encephalomalacia
5. myomalacia

**55. Which of the following are microscopic characteristics of necrosis:**

1. meiosis
2. mitosis
3. plasmorexis
4. plasmochinesis
5. plasmolysis

**56. Necrosis unfavorable outcome is:**

1. organization
2. petrification
3. purulent lysis
4. encapsulation
5. sepsis

**57. Identify changes of cell cytoplasm in necrosis:**

1. karyolysis
2. protein denaturation
3. protein coagulation
4. plasmorexis
5. nucleic acids polymerization

**58. Etiologic types of necrosis are:**

1. parenchymatous type
2. traumatic type
3. allergic type
4. caseous type
5. infectious type

**59. Which of the following are the gangrene types:**

1. wet
2. dry
3. aerobic
4. anabolic
5. caseous

**60. Which of** **the following are necrosis microscopic features:**

1. karyokinesis
2. karyorexis
3. karyolysis
4. karyomitosis
5. karyopyknosis

**61. Relatively favorable necrosis outcomes include:**

1. organization
2. petrification
3. malignization
4. purulent lysis
5. encapsulation

**62. Which of the following are nuclear changes characteristic of necrosis:**

1. chromatin condensation
2. nucleic acids depolymerization
3. glycogen synthesis
4. karyokinesis
5. karyopyknosis

**63. In tuberculosis caseous necrosis is:**

1. coagulative
2. direct
3. indirect
4. wet
5. fibrinoid

**64. Which microscopic changes are characteristic of myocardial infarction:**

1. plasmorexis
2. plasmorrhagia
3. karyokinesis
4. karyolysis
5. cytolysis

**65. In myocardial infarction an important role is assigned to the following factors:**

1. arterial thrombosis
2. hypofunction of the organ
3. allergy
4. functional overload
5. insufficient collateral circulation

**66. Varieties of cell lesion are:**

1. metaplasia
2. degeneration
3. apoptosis
4. necrosis
5. sclerosis

**67. Degeneration causes are:**

a.necrosis

1. dysfunction of transport systems
2. endocrine dysfunction
3. autoregulatory system of cell disturbances
4. apoptosis

**68. The types of degeneration according on their locations are:**

a.parenchymatous type

1. mesenchymal type
2. mixed type
3. proteic type
4. lipidic type

**69. The types of degeneration according on metabolic disturbances are:**

1. carbohydrate degeneration
2. protein degeneration
3. fat degeneration
4. parenchymatous degeneration
5. mesenchymal degeneration

**70. Fatty liver is characterized by:**

1. decreased liver size
2. dense consistency
3. rough surface
4. lipids in hepatocytes
5. absence of nuclei

**71. Which of the following are fatty liver causes:**

1. increased blood flow
2. rheumatic fever
3. hypoxia
4. hypertension
5. decreased blood flow

**72. Myocardial fatty degeneration can be detected by the following stain:**

1. hematoxylin-eosin
2. picrofuchsin
3. sudan-3
4. toluidine blue
5. congo-red

**73. Clinical evidence of parenchymal lipidic degeneration of myocardium is:**

1. increased contractility
2. hypertention
3. decreased contractility
4. rupture of heart
5. hyperemia

**74. Liver steatosis is caused by:**

1. alcoholism
2. viral hepatitis B
3. hypertention
4. viral hepatitis A
5. intoxications

**75. Parenchymal myocardial degeneration develops in the following case:**

1. hypertension
2. avitaminosis
3. diphtheria
4. diabetes mellitus
5. protein starvation

**76. Liver steatosis is usually followed by:**

1. restoration of affected hepatocytes
2. massive necrosis
3. transformation in protein degeneration
4. transformation into liver cirrhosis
5. false lobules appearance

**77. Accumulation of lipids in the wall of the large arteries is typical of:**

1. inflammation
2. cachexia
3. aneurysm
4. obesity
5. atherosclerosis

**78. Which of the following processes is reversible:**

1. apoptosis
2. mucoid intumescence
3. hyalinosis
4. amyloidosis
5. fibrinoid intumescence

**79. In which of the following renal structures amyloid is predominantly deposited:**

vascular wall

1. Capillary loops and mesangium of glomeruli
2. Cytoplasm of nephrocytes
3. vascular lumen
4. basement membrane of the renal tubules.

**80. Heart valves hyalinosis is typical of:**

1. congenital heart diseases
2. rheumatic fever
3. alcoholism
4. hypertensive disease
5. cardiomyopathies

**81. Systemic arteriolar hyalinosis is typical of:**

1. atherosclerosis
2. tuberculosis
3. alcoholism
4. syphilis
5. hypertensive disease

**82. Which of the following structure is subject to hyaline changes:**

1. renal stones
2. bone tissue
3. amyloid
4. cartilaginous tissue
5. fibrous tissue

**83. Amyloid is a protein that deposits in:**

1. cells
2. foci of necrosis
3. nuclei of cells
4. foci of calcification
5. interstitial tissue

**84. Which of the following statements about lipomatosis of the heart are true:**

1. lipids are deposited under the endocardium
2. lipids are deposited under the epicardium
3. lipids are deposited in myocardial stroma
4. lipids are deposited in the cell cytoplasm
5. can lead to heart rupture

**85. Which of the following is amyloid specific stain:**

1. hematoxylin-eosin
2. picrofuchsin
3. congo-red
4. toluidine
5. sudan-3

**86. Amyloidosis is a complication of:**

a.pneumonia

1. hypertensive disease

c. dysentery

d. atherosclerosis

e. bronchiectasis

**87. Which of the following is referred to the macroscopic diagnosis of amyloidosis:**

1. 10% sulfuric acid
2. lugol solution
3. 10% hydrochloric acid
4. 10% osmic acid
5. toluidine blue

**88. The followings is referred to protein mesenchymal degenerations:**

1. mucoid intumescence
2. plasmatic impregnation
3. fibrinoid intumescence
4. amyloidosis
5. hemosiderosis

**89. Small arteries hyalinosis is typical for:**

1. essential hypertension
2. secondary hypertension
3. diabetic microangiopathy
4. diabetic macroangiopathy
5. atherosclerosis

**90. Amyloidosis can be a complication of:**

1. tuberculosis
2. atherosclerosis
3. diabetes mellitus
4. hepatitis
5. hypertension

**91. Which of the followings are etiologic types of amyloidosis:**

1. localized type
2. generalized type
3. primary type
4. secondary type
5. hereditary type

**92. Generalized obesity contributes to:**

1. brown atrophy of the heart
2. acute pancreatitis
3. myocarditis
4. goiter
5. ischemic heart disease

**93. Cardiomegaly in amyloidosis is characterized by deposition of amyloid:**

1. under the endocardium
2. in the cardiomyocytes cytoplasm
3. into stroma
4. in the nerves
5. along vessels

**94. Connective tissue hyalinosis is characterized by:**

1. flaccid consistency
2. dense consistency
3. white – gray color
4. black color
5. semitransparent appearance

**95. Hemoglobinogenic pigments are:**

1. ferritin
2. hemosiderin
3. bilirubin
4. lipofuscin
5. melanin

**96. Mechanical jaundice is typical for:**

1. acute hepatitis
2. cholelithiasis
3. biliary atresia
4. hypoplasia of the bile ducts
5. hemolytic disease

**97. Brown induration of lungs is characterized by accumulation of:**

1. hydrochloric hematin
2. lipofuscin
3. bilirubin
4. coal dust
5. hemosiderin

**98. Metastatic calcification affects the following organs:**

1. lungs
2. pancreas
3. stomach
4. veins
5. heart

**99. Which pigment appears in the area of ​​hemorrhages:**

1. adrenochrom
2. hemosiderin
3. melanin
4. lipofuscin
5. lipochrom

**100. Which of the following** **statements regarding dystrophic calcification are true:**

1. it is predominantly local process
2. it is predominantly generalized process
3. it forms petrifications
4. calcium salts accumulates due to hypercalcemia

e. is a substrate for the formation of gouty tophi

**101. The followings are the causes of parenchymal jaundice:**

1. acute inflammation of the common bile duct
2. hepatocytes injury
3. hemolysis of erythrocytes
4. acute hepatitis
5. liver cirrhosis

**102. According to the mechanism of development jaundice is classified into:**

1. hemolytic jaundice
2. hypostatic jaundice
3. mechanical jaundice
4. parenchymal jaundice
5. biliary jaundice

**103. Metastatic calcification occurs in:**

1. destruction of bones by tumors
2. parathormone excess
3. calcitonin excess
4. hypocalcemia
5. parathormone insufficiency

**104. Dystrophic calcification is referred to:**

1. accumulation of calcium salts into unmodified gastric mucosa
2. calcareous metastases in the kidneys
3. calcification of necrosis foci
4. accumulation of calcium salts into unmodified lungs
5. accumulation of calcium salts into myocardium in condition of hypercalcemia

**105. Prehepatic jaundice causes are:**

1. acute hepatitis
2. hemolytic poisons
3. isoimmune and autoimmune conflicts
4. tumors of duodenal papilla
5. liver cirrhosis

**106. Necrosis is caused by:**

1. biologic factors
2. blood flow disturbances
3. allergic factors
4. pigments
5. smoking

**107. Which of the following are the causes of infarction:**

1. calcification
2. angiospasm
3. thrombosis
4. embolism
5. necrosis

**108. Humid gangrene is characteristic for:**

1. intestine
2. brain
3. kidney
4. myocardium
5. liver

**109. Which of the following disorders is manifested by wet necrosis:**

1. tuberculosis of lung
2. rheumatic pericarditis
3. myocardial infarction
4. spleen infarction
5. ischemic infarction of brain

**110. Which of the following disorders is manifested by caseous necrosis:**

1. milliary tuberculosis of lung
2. myocardial infarction
3. dysentery
4. typhoid fever
5. gangrene

**111. Identify** **localization of gangrene:**

1. kidney
2. myocardium
3. soft tissues of the lower extremities
4. brain
5. intestine

**112. In which of the listed pathological conditions AA amyloidosis can develops:**

a. acute appendicitis

b. chronic abscesses

c. tonsillitis

d. bronchiectasis

e. chronic cholecystitis

**113. What macroscopic changes of organs are observed in amyloidosis:**

a. diminished dimensions

b. increased dimensions

c. dense consistency

d. soft consistency

e. waxy appearance

**114. Which of the listed signs are characteristic of AA amyloidosis:**

a. absence of a previous pathological condition

b. lesions of generalized character

c. predominant injury to the brain, pancreas, arteries, heart

d. the presence of a previous pathological condition

e. predominant injury to the spleen, kidneys, liver, adrenal glands, intestine

**115. In which of the listed pathological conditions can AL amyloidosis develops:**

a. syphilis

b. plasma cell dyscrasia

c. hypertension

d. ischemic heart disease

e. multiple myeloma

**116. In which of the listed pathological conditions amyloidosis AA can develops:**

a. tuberculosis

b. plasma cell dyscrasia

c. lobar pneumonia

d. multiple myeloma

e. chronic osteomyelitis

**117. Which organs are most commonly affected in secondary (reactive) amyloidosis:**

a. spleen, liver, kidneys

b. brain

c. adrenal glands, thymus

d. heart, lungs

e. pancreas, prostate, pituitary gland

**118. The most common cause of death in secondary (reactive) amyloidosis is:**

a. cerebral infarction

b. anemia

c. uremia

d. suppurative appendicitis

e. myocardial infarction

**119. The characteristic changes of the "sago" spleen in amyloidosis are:**

a. spleen is enlarged in dimensions

b. amyloid is deposited in the white pulp

c. amyloid is deposited in the red pulp

d. amyloid is deposited in the spleen capsule

e. spleen has a variegated appearance

**Adaptation and compensation processes**

**1. Metaplasia is:**

1. the replacement of one differentiated cell type with another
2. malignant transformation of the cells
3. an irreversible cellular adaptation
4. benign transformation of the cells
5. degenerative cell derangements

**2. Which of the following tissues is NOT capable of regeneration:**

1. epithelial
2. cardiac
3. skin
4. liver
5. kidney

**3. Characteristic of wound healing by first intention:**

1. is observed in the wounds with lesion not only of the skin but also of the underlying tissue
2. is the simplest healing
3. is encountered in extensive traumatic lesions
4. the epidermis is restored under the crust
5. new capillaries is formed in 3-7 days

**4. Characteristic of wound healing by second intention:**

1. is observed in the wounds with lesion not only of the skin but also of the underlying tissue
2. is the simplest healing
3. is encountered in extensive traumatic lesions
4. the epidermis is restored under the crust
5. new capillaries is formed in 3-7 days

**5. Physiological hypertrophy of the myocardium is caused by:**

1. heart defects
2. cardiosclerosis
3. high physical activity
4. hypertension
5. toxic myocarditis

**6. Which of the following are types of local atrophy:**

1. dysfunctional atrophy
2. ischemic atrophy
3. reparative atrophy
4. compensatory atrophy
5. cachexia

**7. Regenerative hypertrophy due cell hyperplasia is characteristic of the:**

1. liver
2. myocardium
3. kidney
4. brain
5. pancreas

**8. Identify types of pathological regeneration:**

1. hyperregeneration
2. hyporegeneration
3. metaplastic regeneration
4. dysplastic regeneration
5. complete regeneration

**9. In decompensated heart develops:**

1. eccentric hypertrophy
2. concentric hypertrophy
3. adaptive hypertrophy
4. vicarious hypertrophy
5. neurohormonal hypertrophy

**10. Neurohormonal hypertrophy develops in the following organs:**

1. heart: in hypertensive disease
2. mammary glands: in pregnancy
3. urinary bladder: in prostatic hypertrophy
4. kidneys: in hydronephrosis
5. wall of the stomach: in pyloric stenosis

**11. The reduction in size of cells, with decrease of their functional activity is called:**

1. hypertrophy
2. hypoplasia
3. hyperplasia
4. dysplasia
5. atrophy

**12. Organization process includes:**

1. wound healing
2. metaplasia
3. substitution of necrosis area with connective tissue
4. histological accommodation
5. encapsulation

**13. Cause of generalized atrophy is:**

1. alimentary
2. dysfunctional
3. neurotic
4. ischemic
5. compressional

**14. Atrophy due to compression develops in the following case:**

1. **bone marrow irradiation**
2. muscle atrophy due to fracture
3. kidney atrophy due to stones
4. myocardium atrophy due to atherosclerosis
5. brain atrophy due to ischemia

**15. Adaptation processes are:**

1. wound healing
2. atrophy
3. regeneration
4. restructuration of tissues
5. metaplasia

**16. Which of the following are examples of pathological regeneration:**

1. obliteration of umbilical vessels
2. keloid scar formation
3. obliteration of arterial duct
4. excessive bone formation
5. metaplasia

**17. Choose the example of vascular atrophy:**

1. focal atrophy of the myocardium due to coronary artery atherosclerosis
2. atrophy of the adrenal cortex due to corticosteroids administration
3. skeletal muscle atrophy due to fracture
4. atrophy of the optic nerve due to eye ablation

e. brain atrophy in hydrocephalus

**18. Transformation of one differentiated tissue type to another is called:**

1. dysplasia
2. metaplasia
3. anaplasia
4. malignancy
5. hyperplasia

**19. Which of the followings may develop on the background of bronchial epithelium metaplasia:**

1. dystrophy
2. malignant neoplasm
3. atrophy
4. inflammation
5. necrosis

**20. Disturbance of cell proliferation and differentiation with the development of cellular atypia in some cells is called:**

1. hyperplasia
2. dysplasia
3. metaplasia
4. organization
5. anaplasia

**21. Which of the following is the type wound healing:**

1. organization
2. primary intention
3. encapsulation
4. metaplasia

**e.** dysplasia

**22. Recovering of structural elements instead of those destroyed is called:**

1. organization
2. dysplasia
3. regeneration
4. anaplasia
5. metaplasia

**23. What does granulation tissue mean:**

1. fibrous connective tissue
2. young connective tissue
3. mature connective tissue
4. newly formed blood vessels

**e.** young muscular tissue

**24. Pathologic regeneration is manifested by:**

1. restitution
2. hyporegeneration
3. hyperregeneration
4. substitution
5. tissue accommodation

**25. Myocardial infarction is followed** **by:**

**a.** restitution

**b.** substitution

**c.** cardiomyocytes hyperplasia

**d.** cardiomyocytes hypertrophy

**e.** necrosis

**26. Vicarious hypertrophy may develop in the following organs:**

**a.** heart

**b.** lungs

**c.** kidneys

**d.** liver

**e.** urinary bladder

**27. Which of the following are generalized pathological atrophy** **types:**

**a.** senile atrophy

**b.** cancerous cachexia

**c.** cerebral cachexia

**d.** dysfunctional atrophy

**e.** compression atrophy

**28. Label cells are characteristic of the** **following tissues:**

**a.** endocrine organs

**b.** hematopoietic system

**c.** smooth muscles

**d.** serous membranes

**e.** vegetative nervous system

**29. The following regeneration types can be** **distinguished:**

**a.** cellular regeneration

**b.** tissue regeneration

**c.** physiologic regeneration

**d.** pathologic regeneration

**e.** organic regeneration

**30. Which of the following are the pathological regeneration** **causes:**

**a.** acute inflammation

**b.** chronic inflammation

**c.** disturbed innervations

**d.** excessive intake of protein

**e.** insufficient intake of protein

**31. Regenerative hypertrophy due to only cell hypertrophy is characteristic of the following organs:**

**a.** liver

**b.** myocardium

**c.** kidneys

**d.** brain

**e.** pancreas

**32. The following regeneration types can be** **distinguished:**

**a.** neurohormonal regeneration

**b.** compensatory regeneration

**c.** physiological regeneration

**d.** reparative regeneration

**e.** pathological regeneration

**33. Which of the following are the examples of histological accommodation:**

**a.** transformation of stratified squamous epithelium into cylindrical one

**b.** transformation of gastric glandular epithelium into stratified squamous one

**c.** transformation of the alveolar flattened epithelium into cubical one

**d.** transformation of the flattened glomerular nephrotelium into cubical one

**e.** transformation of connective tissue into cartilaginous one

**34. Atrophy due to compression may develop in:**

**a.** ichthyosis

**b.** hydronephrosis

**c.** cachexia

**d.** hydrocephaly

**e.** cirrhosis

**35. Adaptation processes are manifested in:**

**a.** degeneration

**b.** atrophy

**c.** regeneration

**d.** tissue reorganization

**e.** metaplasia

**36. Which of the following are the causes of pathological atrophy:**

**a.** obesity

**b.** malnutrition

**c.** dysfunction of the exocrine glands

**d.** circulatory disorders

**e.** innervation disorders

**37. Morphogenesis of regenerative process consists of the following phases:**

**a.** alteration

**b.** exudation

**c.** proliferation

**d.** emigration

**e.** differentiation

**38. Which pigment accumulates in cachexia:**

**a.** hemomelanin

**b.** melanin

**c.** lipofuscin

**d.** lipochrome

**e.** adrenochrome

**39. Which of the following are myocardial hypertrophy changes:**

**a.** increased sarcoplasmic volume

**b.** cardiomyocytes dystrophy

**c.** cardiomyocytes necrosis

**d.** increased number of myofilaments

**e.** increased nuclear dimension

**40. Liver regeneration is realized through the following mechanisms:**

**a.** cellular regeneration

**b.** intracellular regeneration

**c.** histological accommodation

**d.** atrophy

**e.** dysplasia

**41. Which of the following are the causes of localized atrophy:**

**a.** Simmonds disease

**b.** ischemia

**c.** dysfunctional atrophy

**d.** neurotic atrophy

**e.** cerebral cachexia

**42. The examples of tissue restructuration are:**

**a.** collateral circulation

**b.** atrophy

**c.** dystrophy

**d.** necrosis

**e.** histological accommodation

**43. Vicarious hypertrophy is characteristic of the following organs:**

**a.** spleen

**b.** brain

**c.** kidneys

**d.** adrenals

**e.** liver

**Hemodynamic disorders**

1. **A blood clot recently formed in a varicose vein and is still stationary is known as:**
2. embolus
3. thrombus
4. thromboembolus
5. infarction
6. plaque

**2. What is the term for extravasation of water into the interstitial space:**

1. hyperemia
2. hemorrhage
3. edema
4. embolism
5. infarction

**3. Which of the following types of edema is more commonly known as ascites:**

1. hydrothorax
2. hydrocephalus
3. hydrosalpinx
4. hydropericardium
5. hydroperitoneum

**4. In congestive heart failure (CHF) of the left ventricle, edema develops in the \_\_\_\_ circulation. In CHF of the right ventricle, edema develops in the \_\_\_\_ circulation:**

1. systemic; pulmonary
2. pulmonary; systemic
3. systemic; hepatic
4. hepatic; systemic
5. systemic; cerebral

**5. Which of the following are NOT parts of the Virchow thrombosis triad:**

1. abnormal blood flow
2. hypercoagulability
3. reduction of clotting factors
4. endothelial injury
5. hypocoagulability

**6. Which of the following is commonly associated with arterial thrombosis and not with venous thrombosis:**

1. inactivity
2. atherosclerosis
3. cardiac failure stasis
4. genetic mutations
5. hypercoagulation disorders

**7. Which of the following is the most likely to cause a fat embolism:**

1. reposition of shoulder luxation
2. healing of a chemical burn
3. healing of a heat burn
4. a broken femur
5. congestive heart failure

**8. What is the most common site of origin of pulmonary thromboemboli:**

1. cavity of the left ventricle
2. deep veins of lower extremities
3. cavity of the right ventricle
4. mesenteric veins
5. superficial veins of lower extremities

**9. “Nutmeg Liver “occurs in:**

1. liver cirrhosis
2. liver necrosis
3. chronic passive congestion
4. thrombosis of the portal vein
5. hepatitis

**10. Lines of Zahn are seen in:**

1. venous thrombi
2. pulmonary congestion
3. postmortem clot
4. arterial thrombi
5. amniotic fluid embolism

**11. Mural thrombi is the term used to define thrombi of:**

1. thrombi of the heart valve.
2. venous thrombi of the legs.
3. thrombi of atherosclerotic coronary arteries.
4. thrombi of the ovarian venous plexus.
5. thrombi occurring in the heart chambers.

**12. Hyperemia is characterized by the following:**

1. increased blood flow
2. impaired blood flow
3. develops during exercises
4. it is a passive process
5. it is an active process

**13. Congestion is characterized by the following:**

1. characterizes inflammation
2. develops due to impaired blood outflow
3. it is a passive process
4. it is an active process
5. develops during exercises

**14. Coughing with blood is named:**

1. hematochezia
2. melena
3. hematuria
4. hemoptysis
5. hematemesis

**15. Thrombus is characterized by the following:**

1. it is attached to the vascular wall
2. it is friable
3. it is formed during life
4. it is elastic
5. it is made after death

**16. Cloth is characterized by the following:**

1. It is not attached to the vascular wall
2. it is friable
3. it is formed during life
4. it is elastic
5. it is made after death

**17. Consequences of thrombosis are:**

1. resorption
2. organization
3. congestion
4. thromboembolism
5. cyanosis

**18. Ischemia may lead to:**

1. myocardial infarction
2. liver congestion
3. gangrene of lower extremities
4. stroke
5. acrocyanosis

**19. Tick the ischemia causes:**

1. arterial thrombosis
2. venous thrombosis
3. embolism
4. stroke
5. infarction

**20. Systemic venous congestion is consequence of:**

1. left heart failure
2. right heart failure
3. pulmonary congestion
4. atherosclerosis
5. arteriolosclerosis

**21. A thrombus is composed of:**

1. fibrin
2. platelets
3. red blood cells
4. leukocytes
5. Willebrand factor

**22. Which of the following is chronic congestion of spleen:**

1. brown induration
2. cyanotic induration
3. nutmeg spleen
4. fatty spleen
5. sago spleen

**23. Which of the following are the microscopic changes of nutmeg liver:**

1. selective congestion in the periphery of lobule
2. selective centrilobular congestion
3. centrilobular hemorrhage
4. centrilobular necrosis of hepatocytes
5. centrilobular hypertrophy of hepatocytes

**24. Which of the following refers to internal hemorrhage:**

1. melena
2. hemothorax
3. hemopericardium
4. hematuria
5. hemoperitoneum

**25. Blood in stool is called:**

1. epistaxis
2. hematemesis
3. hemoptysis
4. metrorrhagia
5. melena

**26. Tick the main causes of hemorrhages:**

1. exicosis
2. vascular wall erosion
3. vascular wall rupture
4. blood stasis in the vessels
5. thrombosis

**27. Identify types of generalized edema:**

1. cardiac
2. cerebral
3. renal
4. hepatic
5. pulmonary

**28. Chronic lymphatic stasis is followed by:**

1. elephantiasis
2. tissue hypoxia
3. hemomelanosis
4. sclerosis
5. amyloidosis

**29. Identify morphological variants of interstitial hemorrhages:**

1. hematoma
2. hemorrhagic infiltration
3. ecchymosis
4. apoplexy
5. petechia

**30. Which of the following are the changes of brown pulmonary congestion:**

1. hemomelanosis
2. hemosiderosis
3. sclerosis
4. amyloidosis
5. petechia

**31. Consequences of hemorrhages are:**

1. suppuration
2. encapsulation
3. chylothorax
4. cysts formation
5. melena

**32. Hepatic vein obstruction leads to:**

1. hyperemia
2. liver congestion
3. nutmeg liver
4. hemochromatosis
5. amyloidosis

**33. The types of external hemorrhage are:**

1. hemoptysis
2. petechia
3. hemoperitoneum
4. melena
5. hemothorax

**34. Femoral artery obstructive thrombosis leads to:**

1. ischemia
2. congestion
3. anemia
4. gangrene
5. lymphorrhea

**35. Interstitial accumulation of edematous liquid is called:**

1. ascites
2. anasarca
3. hydrocele
4. hydropericardium
5. hydrocephalus

**36. Air embolism develops in the following cases:**

1. carotid artery injury
2. neck vein injury
3. pneumothorax
4. jugular vein injury
5. carotid artery atherosclerosis

**37. The favorable consequences of thrombosis include:**

1. aseptic autolysis
2. septic autolysis
3. thromboembolism
4. thrombo-bacterial embolism
5. organization

**38. Colliquative necrosis is found in the following organs:**

1. myocardium
2. brain
3. spleen
4. kidneys
5. spinal cord

**39.Thrombus can be:**

1. paradoxical
2. parietal
3. occlusive
4. lipidic
5. tissular

**40. Paradoxical embolism may develop in the following cases:**

1. atrial septal defect
2. ventricular septal defect
3. arteriovenous shunts
4. well-developed collateral circulation
5. aortic wall defect

**41. As regards the localization of myocardial infarction in ventricular wall is classified into:**

1. subendocardial
2. chordal
3. intramural
4. transmural
5. atrial

**42. Lower extremity veins thrombus usually is delivered to:**

1. vena cava inferior
2. jugular vein
3. portal vein
4. right atrium
5. pulmonary artery

**43. A thrombus can be:**

**a.** white with red rim

**b.** white

**c.** mixed

**d.** postmortem

**e.** red

**44. Conical shaped infarcts are usually formed in the:**

1. brain
2. intestine
3. kidneys
4. lungs
5. spleen

**45. The favorable outcomes of thrombosis include:**

1. septic autolysis
2. thromboembolism
3. recanalization
4. vascularization
5. organization

**46. Most common location of hematogenous metastasis of intestinal carcinoma is into the:**

1. lungs
2. heart
3. liver
4. spleen
5. kidneys

**47. Which of the following are thromboembolism sources of the systemic circulation:**

1. left ventricle parietal thrombi
2. right ventricle parietal thrombi
3. auricular thrombi of left atrium
4. auricular thrombi of right atrium
5. aortic thrombi

**48. Which of the following are bacterial embolism sources:**

**a.** purulent thrombophlebitis

**b.** phlebothrombosis

**c.** septic endocarditis

**d**. septic autolysis of thrombus

**e**. aseptic autolysis of thrombus

**49. Fatty lung embolism develops in the following cases:**

1. fatty liver degeneration
2. fracture of the tubular bone
3. subcutaneous tissue crash
4. atherosclerotic plaque ulceration
5. alimentary obesity

**50. Which of the following diseases are leading in myocardial infarction development:**

1. rheumatic fever
2. atherosclerosis
3. syphilis
4. hypertension
5. liver cirrhosis

**51. Thrombobacterial embolus is also called:**

1. organized
2. white
3. mixed
4. septic
5. aseptic

**52. Gas embolism develops in:**

1. vein injury
2. ammoniac intoxication
3. rapid decompression
4. carbon monoxide poisoning
5. pneumothorax

**53. Acute congestion of the pulmonary circulation develops in:**

**a.** decompensated myocardial hypertrophy

**b**. cardiac defects

**c.** cardiosclerosis

**d.** myocardial infarction

**e.** atherosclerosis

**54. Arterial obscuration by thrombus may lead to:**

1. atherosclerosis
2. collateral hyperemia
3. congestion
4. anemia
5. ischemia

**55. Thrombosis is caused by the followings:**

1. vascular wall injury
2. increased blood viscosity
3. slowing of blood flow
4. slowing of lymphatic flow
5. accelerating arterial flow

**56. What is the cause of oncotic edema:**

**a.** congestive heart failure

**b.** acute inflammation.

**c.** neurohumoral dysregulation

**d.** malnutrition

**e**. renal hypoperfusion

**57. What is the cause of hydrostatic edema:**

**a.** congestive heart failure

**b**. acute inflammation.

**c.** neurohumoral dysregulation

**d.** malnutrition

**e.** renal hypoperfusion

**58. Which kind of cells are "heart failure cells":**

**a.** macrophages

**b.** lymphocytes

**c.** leukocytes

**d.** cardiomyocytes

**e.** histiocytes

**59. Which sign is characteristic for the left cardiac insufficiency:**

**a.** hepatomegaly

**b.** splenomegaly

**c.** ascites

**d.** inferior limbs edema

**e.** dyspnea

**60. All the listed clinical signs are characteristic for the right cardiac insufficiency, EXCEPT for:**

**a.** pulmonary edema

**b.** ascites

**c.** nutmeg liver

**d.** chronic venous stasis of the spleen

**e.** chronic venous stasis of kidneys

**61. Which of the pathological processes listed below usually associate with mitral insufficiency:**

**a.** thrombosis of pulmonary veins

**b.** thromboembolism of pulmonary artery

**c.** pulmonary edema

**d.** fibrinous pleuritis

**e.** cardiac tamponade

**62. Which of the listed signs is characteristic for the infarction caused by venous occlusion:**

**a.** it can be white or red

**b.** it occurs only in the lungs

**c.** it is always red (hemorrhagic)

**d.** it is always white (ischemic)

**e.** it is white with hemorrhagic border

**63. As a rule, the pulmonary infarction is:**

**a.** white

**b.** liquefied

**c.** bilateral

**d.** septic

**e.** hemorrhagic

**64. What pathological process may develop in the liver during the progress of cardiac insufficiency:**

**a.** complete recovery

**b.** subtotal necrosis

**c.** stasis cirrhosis

**d.** chronic hepatitis

**e.** biliary stasis

**Acute and chronic inflammation**

**1. Opportunistic infections occur when:**

1. pathogen do not infect the host
2. bacteria cause infectious disease in immunocompromised persons
3. bacteria are spread by poor hand hygiene
4. bacteria spread among hospitalized patients
5. bacteria affect persons in condition of low temperature

**2. An epithelialized track connecting the midportion of the jejunum and a point on the skin three cm left of the umbilicus is an example of a(n):**

1. autolysis
2. choristoma
3. cyst
4. fistula
5. abscess

**3. The "acute phase reaction" in acute inflammation is a group of biochemical changes mediated by:**

1. dilatation of small blood vessels
2. factors released from macrophages
3. histamine and complement components
4. neutrophil injury to tissue
5. the increased erythrocyte sedimentation rate

**4. What's the characteristic cell in inflammation caused by worms:**

1. eosinophil
2. lymphocyte
3. macrophage
4. neutrophil
5. plasma cell

**5.** **Which of the following is associated with acute inflammation:**

1. neutrophils
2. macrophages
3. lymphocytes
4. tissue fibrosis
5. tissue sclerosis

**6. Acute inflammation may be triggered by infections, trauma, physical or chemical agents, tissue necrosis, foreign bodies, and immune reactions. Which of the following is NOT seen in acute inflammation:**

1. modification in vascular caliber
2. decreased blood flow
3. structural changes in the microvasculature (edema)
4. plasma proteins and leukocytes leaving the circulation
5. leukocytic infiltrate to eliminate the offending agent

**7. Vascular changes associated with acute inflammation include \_\_\_\_ and \_\_\_\_ vascular permeability.**

1. vasoconstriction; decreased
2. vasoconstriction; increased
3. vasodilatation; decreased
4. vasodilatation; increased
5. vasodilatation; normal

**8. Which of the following is NOT a general principle of the chemical mediators of inflammation:**

1. mediators originate either from plasma or from cells
2. the production of active mediators is triggered by microbial products or by host proteins
3. one mediator can stimulate the release of other mediators by target cells themselves
4. mediators can act on one or few target cell types
5. once activated and released from the cell, most of these mediators last a long time (long-lived)

**9.** **Which of the following is NOT true regarding contribution to inflammation:**

1. lysosomal constituents increase vascular permeability and tissue damage
2. oxygen free radicals amplify the cascade that elicits the inflammatory response
3. neuropeptides help initiate and propagate the inflammatory response
4. the response to hypoxia decreases vascular permeability
5. the response to necrotic cells is pro-inflammatory

**10. One possible outcome of acute inflammation is resolution, with the other outcomes being chronic inflammation and fibrosis (loss of function). Which of the following is NOT associated with resolution:**

1. agenesis
2. clearance of mediators and acute inflammatory cells
3. replacement of injured cells
4. normal function
5. angiogenesis

**11. Which of the following develops, histologically, as an eosinophilic meshwork of threads or sometimes as an amorphous coagulum:**

1. serous inflammation
2. fibrinous inflammation
3. suppurative inflammation
4. ulcers
5. gangrenous inflammation

**12. Which of the following is characterized by the production of large amounts of pus consisting of neutrophils, necrotic cells, and edema fluid:**

1. serous inflammation
2. fibrinous inflammation
3. suppurative inflammation
4. ulcers
5. gangrenous inflammation

**13. Which of the following is marked by the outpouring of a thin fluid that, depending on the size of injury, is derived from either the plasma or the secretions of mesothelial cells lining the peritoneal, pleural, and pericardial cavities:**

1. serous inflammation
2. fibrinous inflammation
3. suppurative inflammation
4. ulcers
5. gangrenous inflammation

**14**. **Granuloma is a focus of chronic inflammation consisting of a microscopic aggregation of macrophages. Which of the following are cause of an infectious granulomas and NOT a foreign body granulomas:**

1. talc
2. sutures
3. microbes
4. sodium urate
5. viruses

**15. Which of the following is NOT a systemic effect of inflammation:**

1. fever
2. increased acute-phase proteins
3. leukocytosis
4. decreased pulse and blood pressure
5. cytokine release (IL-1 and TNF)

**16. On autopsy, the central focal area of coagulative necrosis of the myocardium surrounded by proliferating fibroblasts and angioblasts indicates that the infarction occurred:**

1. 1 to 2 hours before death
2. 7 to 24 hours before death
3. 7 to 14 days before death
4. 25 to 48 hours before death
5. more than 5 months before death

**17. The pain associated with an inflammatory reaction can best be explained by:**

1. damage to nerve endings in direct contact with the inflammatory agent
2. combined effect of increased tissue pressure and certain chemical mediators (e.g. bradykinin)
3. release of serotonin from mast cell
4. direct action of lysosomal enzymes
5. direct action of histamine and fragments of complement

**18. Which of the following is not considered to be a cardinal sign of inflammation:**

1. pain
2. heat
3. cold
4. redness
5. swelling

**19. The cardinal signs of inflammation are most likely associated with:**

1. acute inflammatory reactions
2. chronic inflammatory reactions
3. granulomatous inflammatory reactions
4. wounds healing
5. subacute inflammatory reactions

**20. The cell type that occurs with the least degree of frequency in a chronic inflammatory reaction are:**

1. fibroblasts
2. angioblasts
3. macrophages
4. lymphocytes
5. neutrophils

**21. The characteristic cell found in granulomatous inflammation is:**

1. myofibroblast
2. epithelioid cell
3. plasma cell
4. giant cell
5. activated mast cell

**22. Epithelioid cells are derived from:**

1. microglial cells
2. blood monocytes
3. T-lymphocytes
4. activated basophiles
5. giant cells

**23. The inflammatory cell type considered to be the "hallmark" of acute inflammation is:**

1. epithelioid cell
2. myofibroblasts
3. neutrophils
4. B-lymphocytes
5. Eosinophils

**24. Which of the following cells have the capacity to reproduce at the site of injury:**

1. neutrophiles and macrophages
2. lymphocytes and eosinophils
3. basophiles and neutrophils
4. macrophages and lymphocytes
5. plasma cells and macrophages

**25. The characteristic feature of early hemodynamic changes in acute inflammation is:**

1. decreased flow of blood to the affected tissue
2. increased permeability of capillaries and venules
3. release of histamine into the affected tissue
4. exudation of neutrophils
5. increased blood flow to the affected tissue

**26. At the early stages of acute inflammation, histamine** **is responsible for increased permeability** **in:**

1. veins and capillaries
2. venules and capillaries
3. large arteries and arterioles
4. arterioles and venules
5. veins and large arteries

**27. Which of the following cell types is not an active component of inflammatory process:**

1. neutrophils
2. basophiles
3. erythrocytes
4. monocytes
5. eosinophils

**28. The process by which mobile leukocytes escape from the blood vessel lumen into perivascular tissue is appropriately referred to as:**

1. endocytosis
2. migration
3. margination
4. phagocytosis
5. chemotaxis

**29. The engulfment of foreign particulate matter by inflammatory cells is appropriately referred to as:**

1. migration
2. phagocytosis
3. chemotaxis
4. leukocytosis
5. anaplasia

**30. Each of the following is true for fibrinous exudate, except:**

1. fibrin is the major constituent of fibrinous exudate
2. fibrinous exudate is associated with inflammatory reactions
3. fibrinous exudate is a major constituent of a phlegmon
4. fibrinous exudate occurs primarily on mucous and serous membranes
5. fibrinous exudate serves as a framework for repair processes

**31. Each of the following is a feature of suppurative exudation except:**

1. presence of neutrophiles
2. presence of pyogenic bacteria
3. death of cells
4. liquefaction
5. diphtheric membranes

**32. An exudate characterized by excessive production of mucin is** **appropriately** **referred to as:**

**a**. catarrhal exudate

1. serous exudate
2. non-inflammatory exudate
3. hemorrhagic exudate
4. purulent exudate

**33. Which of the following has the greatest capacity to regenerate:**

**a.** renal glomeruli

1. cardiomyocytes
2. skeletal muscle cells
3. neurons of the central nervous system
4. hepatocytes

**34. Which of following are the types of exudative inflammation:**

1. fibrinous inflammation
2. gangrenous inflammation
3. interstitial inflammation
4. granulomatous inflammation
5. purulent inflammation

**35. Which of following are etiological factors of fibrinous inflammation:**

1. diphtheria bacillus
2. streptococcus
3. anthrax bacillus
4. endointoxication

**e.** staphylococcus

**36. Which of following exudates is characteristic for diphtheritic inflammation:**

1. purulent exudate
2. serous exudate
3. fibrinous exudate
4. hemorrhagic exudate

**e.** catarrhal exudate

**37. Inflammation** **is classified in the following types depending on the nature of exudate:**

1. specific inflammation
2. nonspecific inflammation
3. acute inflammation
4. chronic inflammation
5. invasive inflammation

**38. Which of the following are acute inflammation types:**

1. catarrhal inflammation
2. interstitial inflammation
3. hemorrhagic inflammation
4. fibrinous inflammation
5. granulomatous inflammation

**39. Phlegmon is characterized by:**

1. catarrhal inflammation
2. fibrinous inflammation
3. fibrous-connective delimitation
4. pyogenic membrane presence
5. presence of diffuse purulent inflammation

**40. Which of the following is the initial inflammatory stage:**

1. exudation
2. proliferation
3. alteration
4. phagocytosis
5. pinocytosis

**41. Specify the morphological forms of inflammation:**

1. proliferative inflammation
2. mesenchymal inflammation
3. mixed inflammation
4. exudative inflammation
5. post-necrotic inflammation

**42. Phlegmon commonly occurs in:**

1. subcutaneous adipose tissue
2. lax fibrous-connective tissue
3. brain tissue
4. liver
5. myocardium

**43. Identify the etiology of hemorrhagic inflammation**

1. anthrax
2. peptic ulcer
3. flu
4. thyrotoxicosis
5. pest

**44. Specify the types and varieties of purulent inflammation:**

1. abscess
2. soft phlegmon
3. hard phlegmon
4. crupous inflammation
5. diphteric inflammation

**45. The successive phases of inflammation include:**

1. petrification
2. induration
3. agglutination
4. exudation
5. proliferation

**46. In purulent exudate, unlike the serous one prevail:**

1. exfoliated cells of the surface epithelium
2. exfoliated cells of the mesothelium
3. neutrophils
4. mucus
5. bacteria

**47. At the microcirculation level the following changes may occur as a result of increased vascular permeability:**

1. exudation of plasma
2. exicosis
3. emigration of intravascular cells
4. exudate and cellular infiltrate formation
5. cadaveric hypostasis

**48. Which of the following are acute inflammation types:**

1. putrid inflammation
2. crupous inflammation
3. diphtheric inflammation
4. proliferative inflammation
5. productive inflammation

**49. Specify exudative inflammation type that is typical for upper respiratory tract in diphtheria:**

1. purulent
2. catarrhal
3. crupous
4. diphtheric
5. putrid

**50. Abscess is characterized by:**

1. focal character of purulent inflammation
2. diffuse character of purulent inflammation
3. presence of necrotic tissue in the focus of inflammation
4. availability pf pyogenic membrane
5. absence of pyogenic membrane

**51. Which of the following are the types of phagocytosis:**

1. complete phagocytosis
2. incomplete phagocytosis
3. direct phagocytosis
4. indirect phagocytosis
5. endocytosis

**52. Identify etiology of fibrinous inflammation:**

1. uremia
2. diphtheria
3. dysentery
4. anemia
5. erythremia

**53. Which of the following bacteria may cause nonspecific inflammation:**

1. streptococci
2. mycobacteria tuberculosis
3. meningococci
4. treponema pallidum
5. staphylococci

**54. Crupous inflammation is usually localized at the level of:**

1. oral cavity
2. tonsils
3. pharynx
4. trachea
5. bronchi

**55. Which inflammation types are characterized by cell multiplication:**

1. alterative inflammation
2. exudative inflammation
3. proliferative inflammation
4. parenchymatous inflammation
5. productive inflammation

**56. Acute purulent inflammation is characterized by the following:**

1. fistulas
2. thrombophlebitis
3. cellulitis
4. ichthyosis
5. amyloidosis

**57. Which processes reflect the migration of blood cells during inflammation:**

1. pinocytosis
2. phagocytosis
3. leukocytes diapedesis
4. endocytosis
5. erythrocytes diapedesis

**58. Identify types of acute inflammation:**

1. crupous inflammation
2. putrid inflammation
3. granulomatous inflammation
4. abscess
5. purulent cellulitis

**59. Depending on evolution, the inflammation is classified into:**

1. acute inflammation
2. fibrinous inflammation
3. chronic inflammation
4. specific inflammation
5. nonspecific inflammation

**60. Identify etiology of serous inflammation:**

1. thyrotoxicosis
2. amyloidosis
3. sclerosis
4. uremia
5. tuberculosis

**61. Which of the following are examples of exudative inflammation:**

1. parenchymatous inflammation
2. purulent inflammation
3. catarrhal inflammation
4. interstitial inflammation
5. granulomatous inflammation

**62. Dyphtheric inflammation is typically localized in:**

1. pharynx
2. tonsils
3. esophagus
4. stomach
5. intestine

**63. Successive steps of the inflammatory process are:**

1. coagulation
2. alteration
3. exudation
4. infiltration
5. proliferation

**64. Granulomatous inflammation is a type of:**

1. productive inflammation
2. exudative inflammation
3. interstitial inflammation
4. proliferative inflammation
5. alterative inflammation

**65. Which of the following cells are identified in tuberculous granuloma:**

1. neutrophils
2. lymphocytes
3. epithelioid cells
4. eosinophils
5. mast cells

**66. In which pathological processes develops specific inflammation:**

1. rheumatic fever
2. syphilis
3. tuberculosis
4. typhoid fever
5. dysentery

**67. Which of the following are comprised in tuberculous granuloma:**

1. Virchow cells
2. Langhan’s cells
3. amyloid
4. caseous necrosis
5. fibrinous necrosis

**68. Echinococcosis primarily affects the:**

1. lungs
2. kidneys
3. liver
4. stomach
5. eyes

**69. Which type of inflammation usually occurs in tissue which surrounding parasites:**

1. alterative inflammation
2. exudative inflammation
3. productive inflammation
4. specific inflammation
5. nonspecific inflammation

**70. Heart „in cuirass” is characterized by:**

1. fibrinous inflammation
2. organization and calcification of exudate
3. suppuration
4. adherence formation
5. serous inflammation
6. **The most frequent cause of purulent inflammation are:**
7. viruses
8. toxins
9. protozoa
10. chemicals
11. staphylococci
12. **Microscopically purulent exudate is represented by a large number of:**
13. monocytes
14. lymphocytes
15. neutrophils
16. erythrocytes
17. thrombocytes
18. **Causes of purulent inflammation are the following** **pathogens, EXCEPT:**
19. staphylococci
20. viruses
21. Escherichia coli
22. streptococci
23. klebsiella
24. **Phlegmonous cellulitis is referred to the following type of inflammation:**
25. catarrhal
26. purulent
27. crupous
28. gangrenous
29. diphtheric
30. **Which of the following are examples of exudative inflammation:**
31. fibrinous inflammation
32. purulent inflammation
33. gangrenous inflammation
34. interstitial inflammation
35. granulomatous inflammation
36. **Exudate containing a large amount of neutrophilic leukocytes is called:**
37. serous
38. hemorrhagic
39. purulent
40. fibrinous
41. gangrenous

**Epithelial tumors without specific location**

**1. Which of the following cellular changes is considered to be pre-cancerous:**

1. apoptosis
2. dysplasia
3. metaplasia
4. hyperplasia
5. hypertrophy

**2. Which of the following diseases is characterized by proteinuria:**

1. multiple myeloma
2. liver cirrhosis
3. urinary bladder stone
4. glioblastoma
5. melanoma

**3. Which of the following statements is true about endometrial hyperplasia:**

1. it is the most common in females using contraceptive pills
2. the type known as cystic hyperplasia is strongly precancerous
3. the condition predisposes to endometriosis
4. the condition predisposes to endometritis
5. can be caused by ovarian tumors

**4. Which of the following viruses is related to carcinoma of cervix:**

1. Epstein-Barr virus
2. cytomegalovirus
3. human papilloma virus
4. herpes virus
5. all of the listed

**5. Choose the types of tumor growth with respect to the lumen:**

1. expansive growth
2. exophytic growth
3. endophytic growth
4. unicentrical growth
5. multicentric growth
6. **Which of the following neoplasms are undifferentiated:**
7. glandular neoplasm
8. mucinous neoplasm
9. medular neoplasm
10. renal cell neoplasm
11. colloidal neoplasm
12. **Which of the following are NOT malignant tumor features:**

**a.** invasive growth

**b.** cellular atypia

**c.** no metastasis

**d.** slow growth

**e.** recurrence

1. **Which of the following are the malignant tumor features:**
2. invasive growth
3. cellular atypia
4. no metastasis
5. slow growth
6. recurrence
7. **Which of the following are the types of adenomas:**
8. cystadenoma
9. glandular adenoma
10. acinar adenoma
11. non keratinized adenoma
12. tubular adenoma
13. **Tick the features of solid carcinoma:**
14. late metastasis
15. expansive grow
16. it is undifferentiated neoplasm
17. tissue atypia
18. cellular atypia
19. **The following changes are often identified due to the general influence of malignant tumor on the body:**
20. change in blood enzyme activity
21. reduced red blood cells sedimentation
22. anemia
23. hyperproteinemia
24. hypolipidemia
25. **Which of the following are the ways of malignant tumors metastasis:**
26. relapsing way
27. hematogenous way
28. localized and way
29. lymphogenous way
30. generalized way
31. **Which of the following tumors are differentiated:**
32. large cell carcinoma
33. adenocarcinoma
34. squamous cell carcinoma
35. colloid carcinoma
36. microcellular carcinoma
37. **Which of the following are colloid cancer features:**
38. develops from epithelial tissue
39. it is undifferentiated tumor
40. keratin pearls are characteristic of colloid cancer
41. it metastases

e. exophytic growth

1. **Where is adenoma usually localized:**
2. urinary bladder mucosa
3. esophageal mucosa
4. lymph nodes
5. mammary gland
6. adrenal glands
7. **Tick the types of atypia, which are usually distinguished in tumor cells:**
8. antigenic atypia
9. physical atypia
10. morphological atypia
11. clinical atypia
12. dystrophic atypia
13. **Choose the microscopic types of carcinoma:**
14. glandular
15. fibrous
16. fibrinous
17. nodular
18. squamous
19. **Which of the following is the feature papilloma:**
20. tissue atypia
21. cellular atypia
22. metastasis
23. invasive grow
24. keratin pearls
25. **Which of the following are malignant tumor secondary changes:**
26. calcification
27. malignization
28. mucilaginization
29. necrosis
30. pinocytosis
31. **Which of the following are malignant tumor features:**
32. exophytic growth
33. tissue atypia only
34. metastasis
35. rapid growth
36. recurrence
37. **Which of the following are the types of adenoma:**
38. alveolar adenoma
39. squamous adenoma
40. tubular adenoma
41. papillary adenoma
42. medullary adenoma

**22. Which are the features of squamous cell carcinoma:**

1. expansive growth
2. predominance of stroma over parenchyma
3. predominance of parenchyma over stroma
4. keratin pearls can occur
5. it is differentiated cancer

**23. Which of the following are adenoma types:**

1. adenomatous polyp
2. teratoma
3. fibroadenoma
4. papillary
5. adenocarcinoma

**24. Papilloma can be complicated by:**

1. hemorrhage
2. inflammation
3. resorption
4. malignancy with the development of squamous cell carcinoma
5. malignancy with the development of adenocarcinoma

**25. Which types of tumor growth are distinguished in relation to the lumen of the hollow organ:**

1. expansive growth
2. exophytic growth
3. endophytic growth
4. diffuse growth
5. appositional growth

**26. Which of the following are microscopic types of carcinoma:**

1. mesenchymal
2. fibrinous
3. squamous
4. glandular
5. medullar

**27. Choose the characteristics of adenoma:**

1. tissue atypia
2. cellular atypia
3. ultrastructural atypia
4. exophytic growth
5. infiltrative growth

**28. Which organs and tissues may develop carcinoma:**

1. lymph nodes
2. stomach
3. pancreas
4. spleen
5. bones

**29. Tick the variety of histological atypia of tumor:**

1. cellular atypia
2. tissular atypia
3. organ atypia
4. biochemical atypia
5. mixed atypia

**30. Choose microscopic forms of carcinoma:**

1. mucinous
2. colloidal
3. fibrous
4. desmoid
5. lymphocytic

**31. Which of the following organs may develop adenoma:**

1. thyroid gland
2. hypophysis
3. white matter of the brain
4. spleen
5. bones

**32. Which of the following tumors originate in the glandular epithelium:**

1. papilloma
2. adenomatous polyp
3. mucinous carcinoma
4. medullary carcinoma
5. squamous carcinoma

**33. Choose the features of mucinous carcinoma:**

1. it originates in glandular epithelium
2. it is a differentiated carcinoma
3. invasive growth
4. stroma prevails over parenchyma
5. cellular atypia

**34. Choose the differentiated forms of carcinoma:**

1. adenocarcinoma
2. leukemia
3. squamous cell carcinoma
4. mucinous carcinoma
5. lymphoma

**35. Which of the following tumors are benign:**

1. adenoma
2. papilloma
3. fibroadenoma
4. lymphoma
5. melanoma

**36. Carcinoma “in situ” is characterized by:**

1. invasive growth
2. exophytic growth
3. cellular atypia
4. infiltrative growth
5. it usually affects bones

**37. Malignant organo-specific tumors are characterized by:**

1. expansive growth
2. slow growth
3. invasive growth
4. cellular atypia
5. they affect any type of epithelium

**38. Which of the following are malignant organo-specific tumors:**

1. nephrocarcinoma
2. seminoma
3. fibroadenoma
4. chorioepithelioma
5. adenocarcinoma

**39. Choose organo-specific malignant tumors:**

1. lymphoma
2. polyp
3. thecoma
4. dysgerminoma
5. seminoma

**40. Organo-specific benign tumors are characterized by:**

1. expansive growth
2. rapid growth
3. destructive growth
4. cellular atypia
5. tissular atypia

**41. Which of the following are metastases routes of malignant neoplasms:**

1. invasive route
2. implantation route
3. lymphogenous route
4. morphologic route
5. expansive route

**42. Which of the following tumor are benign:**

1. fibroadenoma
2. papilloma
3. lymphoma
4. dysgerminoma
5. seminoma

**43. Tick cutaneous epithelium tumors:**

1. lymphoma
2. mucinous carcinoma
3. basal cell carcinoma
4. papilloma
5. hydatidiform mole

**44. The term cancer means:**

1. cell division
2. cell multiplication
3. out of control (autonomy)
4. crab
5. lobster

**45. A malignant epithelial cell neoplasm derived from any of the three germ layers is referred to as:**

1. sarcoma
2. carcinoma
3. teratoma
4. mixed cell tumor
5. adenoma

**46. The study of neoplastic growths is referred to as:**

1. tetralogy
2. anaplasia
3. oncology
4. neoplasia
5. dysplasia

**47. A benign epithelial cell neoplasm derived from non-glandular surfaces is referred to as:**

1. papilloma
2. sarcoma
3. adenoma
4. hamartoma
5. squamous cell carcinoma

**48. Identify premalignant mandatory lesions:**

1. xeroderma pigmentosum
2. familial adenomatous polyposis
3. hyperplasia
4. dysplasia
5. metaplasia

**49. All of the following are anaplastic changes EXCEPT:**

1. pleomorphism and hyperchromatism
2. increased mitosis and abnormal mitotic figures
3. nuclei that vary in shape and size
4. presence of undifferentiated cells
5. presence of abundant chromatin in cytoplasmic organelles

**50. Identify liver tumors:**

1. hepatoma
2. hepatocellular carcinoma
3. benign sarcomas
4. nodular hyperplasia
5. bile duct anaplasia

**51. Which of the following is least likely to be used as a means of distinguishing a benign neoplasm from a malignant one:**

1. degree of cellular differentiation
2. rate of growth
3. type and amount of necrosis
4. evidence of metastasis
5. mode of spread

**52. Which one of the following neoplasms is highly invasive but is seldom spread by metastasis:**

1. papilloma of the skin
2. squamous cell carcinomas of the skin
3. adenocarcinomas of the lungs
4. basal cell carcinomas of the skin
5. osteogenic sarcomas of the limbs

**53. Which of the following features is more characteristic of a benign neoplasm:**

1. it grows by expansion and implantation occurs frequently
2. it metastasizes if the brain is the site of origin
3. it usually non-encapsulated and necrosis seldom occurs
4. it tend to recurs after surgical removal
5. it usually occurs singly and does not recur after surgical removal

**54. Which of the following is considered to be the hallmark of malignancy:**

1. anaplasia and the rate of growth of neoplastic mass
2. metastasis and the degree of encapsulation of neoplastic mass
3. formation of giant cells and cellular anaplasia within and around the neoplastic mass
4. presence of undifferentiated cells and evidence of metastasis
5. cellular anaplasia and growth by expansion of neoplastic mass

**55. The process of neoplastic cells moving through the circulatory system and obstruction of vessel is referred to as:**

1. anaplasia
2. neoplasia
3. thrombosis
4. transplantation
5. embolism

**56. The process by which glandular epithelium of the prostate is transformed into squamous epithelium under the influence of estrogens is known as:**

1. neoplasia
2. dysplasia
3. hyperplasia
4. metaplasia
5. anaplasia

**57. A neoplasm characterized by the presence of "cancer pearls" and intercellular bridges is most likely:**

1. basal cell epithelioma
2. pheochromocytoma
3. squamous cell carcinoma
4. histocytoma
5. adenoma

**58. What does pleomorphism mean:**

1. uncontrolled mitosis
2. multiple nuclei
3. variability in shape and size
4. the presence of cells of other tissues in the affected tissue
5. all of the listed

**59. The process when cells move from one site to another is called:**

1. transportation
2. biotransformation
3. metastasis
4. stasis

**e.** flagellation

**60. Metastatic adenocarcinoma of the stomach that specifically goes to the ovary is called:**

1. metastatic adenocarcinoma
2. melanoma
3. Krukenberg 's tumor
4. Wilson's tumor
5. Richtsler's tumor

**61. If a tumor is benign and of squamous origin, it is called:**

1. malignant tumor
2. Krukenburg tumor
3. adenoma
4. papilloma
5. carcinoma

**62. If a tumor is benign and glandular in origin, it is called:**

1. malignant tumor
2. Krukenburg tumor
3. adenoma
4. carcinoma
5. papilloma

**63. Movement to the cell periphery of the nucleus as a result of the cytoplasmic mucin abundance, means:**

1. hypertrophy
2. benign tumor
3. Krukenburgs sign
4. signet-ring cell
5. Wilson rings

**64. What does TNM stand for:**

1. tumor size, metastases in the lymph nodes, malignancy
2. tumor size, tumor nodule, malignancy
3. tumor shape, metastases in the lymph nodes, distant metastasis
4. tumor size, metastases in the lymph nodes, distant metastasis
5. this is not a medical grading system

**DENTISTRY PATHOLOGY**

**1) Which are the odontogenic tumors histological groups**

a) osteogenic

b) epithelial

c) vascular

d) mesenchymal

e) mixed

**2) Which of the following statements characterize ameloblastoma:**

a) benign tumor

b) benign, locally invasive tumor

c) located in maxilla (incisors)

d) located in mandible (the ascending branch)

e) located in mandible (molar region)

**3) Which are the histological forms of ameloblastoma:**

a) follicular

b) alveolar

c) plexiform

d) papillary

e) tubular

**4) Which are the microscopic characteristic signs of follicular ameloblastoma:**

a) diffuse grow

b) stellate and polygonal cells in the centre

c) cubic or cylindrical cells in the centre

d) polygonal and stellate cells at the periphery

e) cubic or cylindrical cells at the periphery

**5) Which of the following are odontogenic epithelial tumors:**

a) ameloblastoma

b) odontoma

c) odontogenic myxoma

d) adenomatoid tumor

e) ameloblastic fibroma

**6) Which are the clinical-anatomical forms of ameloblastoma:**

a) villous

b) cystic

c) nodular

d) diffuse

e) solid

**7) Which are the benign tumors of odontogenic mesenchyme:**

a) dentinoma

b) ameloblastic fibroma

c) myxoma

d) cementoma

e) ameloblastoma

**8) Which are the cementoma histological variants:**

a) compound odontoma

b) basal-cell ameloblastoma

c) cementifying fibroma

d) mixed cementoma

e) gigantiform cementoma

**9) Which of the following are the mixed odontogenic tumors:**

a) ameloblastic fibroma

b) ameloblastic fibro-odontoma

c) adenomatoid tumor

d) odontoameloblastoma

e) odontogenic myxoma

**10) Which of the following are the pseudotumoral jaw disorders:**

a) osteoblastoclastoma

b) chemodectoma

c) cherubims

d) epulis

e) fibrous dysplasia

**11) Which of the following are the epulis histological variants:**

a) simple

b) angiomatous

c) cavernous

d) giant cell

e) fibromatous

**12) Which are the histological signs of giant cell epulis:**

a) it contains granulation tissue

b) it contains hyaline

c) it contains ameloidoblasts

d) it contains osteoclasts

e) it contains hemosiderin deposits

**13) Which of the following are the fibrous dysplasia forms and its preponderant location:**

a) monostotic

b) polyostotic

c) intraosseous

d) mandible

e) maxilla

**14) Which are the Albright syndrome morphological signs:**

a) monostotic fibrous dysplasia

b) polyostotic fibrous dysplasia

c) skin ulcer

d) skin melanosis

e) endocrinopathies

**15) The following are fibrous dysplasia histological characteristics EXCEPT:**

a) bone destruction

b) melanin deposits

c) replacement by fibrous tissue

d) osteoid tissue formation

e) cysts formation

**16) The following are osteoblastoclastoma features, EXCEPT:**

a) it is of odontogenic origin

b) it is of osteogenic origin

c) it is defined node

d) it contains foci of hemorrhage

e) it forms cysts

**17) The following are osteoblastoclastoma microscopic features, EXCEPT:**

a) it contains osteoblasts

b) it contains osteoclasts

c) bone resorption is present

d) it is made of newly formed bone

e) it has glandular structures

**18) Which of the following are histological variants of salivary glands adenomas:**

a) monomorphic

b) pleomorphic

c) follicular

d) cystic

e) basophilic

**19) Which of the following are the macroscopic features of pleomorphic adenoma:**

a) it increases rapidly

b) it grows slowly

c) it is nodule shaped

d) it increases unlimited

e) it is of a thick consistency

**20) Which are the morphological features of pleomorphic adenoma:**

a) it contains glandular structures

b) it contains mesenchymal structures

c) it relapses

d) it does not relapse

e) it does not metastasize

**21) Which of the following are monomorphic adenoma histological variants:**

a) follicular

b) tubular

c) basal cell

d) giant cell

e) clear cell

**22) Which are the adenolymphoma microscopic features:**

a) it affects lymph nodes

b) it is localized in the parotid gland

c) it is well-confined node

d) the epithelium has eosinophilic cytoplasm

e) the epithelium has basophilic cytoplasm

**23) Which are the mucoepidermoid tumor morphological features:**

a) well-defined node

b) epidermoid-type cells

c) acinar cells

d) mucous cells

e) intermediate cells

**24) Which are the progression criteria of malignant mucoepidermoid tumor:**

a) prevail intermediate cells that do not produce mucus

b) mucous cells prevail

c) expansive growth

d) invasive growth

e) it metastasizes

**25) Acinocellular tumor morphological features include the following EXCEPT:**

a) mucus-producing cells

b) basophilic serous cells

c) clear cell

d) it has solid fields

e) it metastasizes

**26) Which is the common malignant tumor of the salivary glands:**

a) mucoepidermoid tumor

b) acinocelular tumor

c) adenolymphoma

d) adenocystic carcinoma

e) follicular carcinoma

**27) Non carious lesions of teeth are the following, except:**

a) dental abrasion

b) fluorosis

c) pulpitis

d) dental erosion

e) cuneiform defects

**28) Which statements are correct about the dental caries characteristic:**

a) frequently affects children, adolescents

b) frequently affects the upper jaw teeth

c) commonly affects the lower jaw teeth

d) first molars are often affected

e) lower incisors are commonly affected

**29) Which are the local factors of dental caries development:**

a) excess of carbohydrates in alimentation

b) oral microbial flora

c) blood type

d) composition of saliva

e) permanent teeth terms eruption

**30) General factors that are important in the dental caries development are the following EXCEPT:**

a) hereditary predisposition

b) metabolism disorders

c) osteo-articular system pathologies

d) content of vitamins and micronutrients

e) hormonal disorders

**31) Dental deposit consists of the following EXCEPT:**

a) microbes

b) food scraps

c) desquamated epithelium

d) cholesterol

e) mucin

**32) Which are the dental caries evolution stages:**

a) macula stage

b) the stages of tanning

c) surface caries

d) circular cavity

e) deep cavity

**33) Which are the microscopic components of cavity decay wall:**

a) softened dentin zone

b) transparent dentin zone

c) granulation tissue

d) fibrous tissue

e) dentin replacement zone

**34) Types of dental caries in children are the following, EXCEPT:**

a) circular

b) retrograde

c) arrested

d) fluorosis

e) early subenamel

**35) Local complications of deep caries are the following EXCEPT:**

a) pulpitis

b) periodontitis

c) periodontosis

d) soft tissue abscess

e) mouth floor phlegmon

**36) General complications of deep dental caries are the following EXCEPT:**

a) rheumatic diseases

b) sepsis

c) vasculitides

d) cerebral stroke

e) allergic reactions

**37) Pulp reactive changes include the following EXCEPT:**

a) circulatory disorders

b) atrophy

c) pulpitis

d) dystrophy

e) cysts

**38) General etiological factors of pulpitis are:**

a) infectious

b) alimentary

c) metabolic

d) toxic

e) hereditary

**39) Local etiological factors of pulpitis are the following, EXCEPT:**

a) traumas

b) chemical factors

c) sialadenitis

d) medium and deep caries

e) thermal agents

**40) The histological structure of dental pulp presents the following EXCEPT:**

a) collagen fibbers

b) fibroblasts

c) myocytes

d) odontoblasts

e) blood and lymphatic vessels, nerve endings

**41) Which are acute pulpits’ variants:**

a) catarrhal

b) serous

c) fibrinous

d) phlegmonous

e) gangrenous

**42) Which are chronic pulpits’ variants:**

a) serous

b) granulating

c) diffuse purulent

d) fibrous

e) fibrinous

**43) The following are local pulpits’ complications, EXCEPT:**

a) periodontitis

b) osteomyelitis

c) periostitis

d) amyloidosis

e) mouth floor phlegmon

**44) Pulpits’ general complications may be the following EXCEPT:**

a) pneumonia

b) endocarditis

c) glomerulonephritis

d) rheumatic diseases

e) vasculitis

**45) Periodontitis causative factors are the following EXCEPT:**

a) pulpitis

b) deep caries

c) Trauma

d) chemical factors

e) psychological factors

**46) Which are periodontitis forms by location:**

a) diffuse

b) acute

c) apical

d) chronic

e) marginal

**47) Which are acute apical periodontitis forms:**

a) serous

b) fibrinous

c) catarrhal

d) focal purulent

e) diffuse purulent

**48) Which are chronic apical periodontitis forms:**

a) granulating

b) granulomatous

c) fibrinous

d) fibrous

e) purulent

**49) Which are granulomas variants in chronic granulomatous periodontitis:**

a) simple

b) "foreign body"

c) specific

d) epithelial

e) cystogranulomas

**50) Periodontitis local complications are the following EXCEPT:**

a) periostitis

b) regional lymphadenitis

c) osteomyelitis

d) primary amyloidosis

e) sinusitis

**51) The peculiarities of periodontitis in children include the following EXCEPT:**

 a) it is located at the polyradicular teeth roots

b) formation hydatid cyst

c) permanent tooth follicle destruction

d) formation of follicular cysts

e) it affects temporary and permanent teeth

**52) Which are the local causes of gingivitis:**

a) dental trauma

b) chemical factors

c) fluorosis

d) infection from dental deposits

e) middle caries

**53) Which are general causes of gingivitis:**

a) infectious diseases

b) cardiovascular disturbances

c) respiratory disturbances

d) endocrine disturbances

e) metabolic disturbances

**54) Which are common morphological forms of gingivitis:**

a) catarrhal

b) ulcerative

c) fibrinous

d) hypertrophic

e) purulent

**55) The main causes of periodontitis are the following EXCEPT:**

a) dental abnormalities

b) the oral soft tissue abnormalities

c) endocrine diseases

d) rheumatic diseases

e) hemi-sinusitis

**56) Morphological picture of periodontal pocket in periodontitis include the following EXCEPT:**

a) it contains detritus in the lumen

b) the wall is made of granulation tissue

c) it contains areas of squamous epithelium

d) it contains areas of bone desorption

e) bone sequesters

**57) Which are the variants of bone resorption in periodontitis:**

a) diffuse

b) sinuous

c) lacunar

d) idiopathic

e) smooth

**58) Which is the frequent complication of periodontitis:**

a) loss of tooth

b) osteomyelitis

c) periostitis

d) apical periodontitis

e) pulpitis

**59) Morphological picture of periodontosis include the following except:**

a) gingival retraction

b) denudation of neck and root of the tooth

c) microvessel sclerosis and hyalinosis

d) dystrophic connective tissue changes

e) periostitis

**60) Inflammatory diseases of jaw are the following except:**

a) osteitis

b) periostitis

c) periodontitis

d) osteomyelitis

e) odontogenic infection

**61) Which are periostitis morphological forms:**

a) catarrhal

b) fibrinous

c) serous

d) purulent

e) fibrous

**62) The morphological picture of jaw osteomyelitis includes the following EXCEPT:**

a) cavity filled with pus

b) pyogenic membrane

c) granulation tissue

d) bone sequesters

e) mucus excess

**63) The odontogenic infection complications are the following EXCEPT:**

a) sepsis

b) sinusitis

c) thrombophlebitis

d) orhitis

e) mediastinitis

**64) Which is the complication of jaws chronic osteomyelitis:**

a) pericarditis

b) pleuritis

c) amyloidosis

d) pneumonia

e) chronic hepatitis

**65) Which are the jaws cysts variants:**

a) serous

b) fibrinous

c) mucinous

d) follicular

e) radicular

**66) Radicular cyst morphological signs include the following, EXCEPT:**

a) it is 0.5-3.0 cm in diameter

b) it is covered by squamous epithelium

c) bone sequesters

d) the wall is fibrous

e) it contains inflammatory infiltration

**67) Acquired diseases of the salivary glands are the following, EXCEPT:**

a) sialadenitis

b) sialolithiasis

c) developmental abnormalities

d) cysts

e) tumors

**68) Which disorders are accompanied by primary sialoadenitis:**

a) mumps

b) tuberculosis

c) sarcoidosis

d) cytomegalovirus infection

e) toxoplasmosis

**69) Which are the secondary sialadenitis causes:**

a) local allergies

b) bacteria

c) viruses

d) heavy metal salts poisoning

e) mechanical factors

**70) Which are acute sialadenitis morphological variants:**

a) catarrhal

b) serous

c) fibrinous

d) purulent

e) hemorrhagic

**71) Clinico-morphological forms of cheilitis are the following, EXCEPT:**

a) exfoliative

b) papillary

c) glandular

d) by contact

e) meteorological

**72) Which are clinico-morphological types of glossitis:**

a) specific

b) exfoliative

c) rhomboid

d) non-specific

e) hypertrophic

**73) The main etiologic groups of stomatitis are the following, EXCEPT**

a) traumatic

b) infectious

c) allergic

d) in pneumopathies

e) in dermatoses

**74) The most common variants of stomatitis by inflammation character are the following EXCEPT:**

a) catarrhal

b) ulcerous

c) gangrenous

d) fibrinous

e) exfoliative

**75) Which are the infectious diseases with oral manifestations:**

a) flu

b) measles

c) scarlet fever

d) chickenpox

e) poliomyelitis

**76) Which are dermatological diseases with oral manifestations:**

a) lichen planus

b) scabies

c) pemphigus

d) dermatitis herpetiformis

e) streptodermia

**77) Blood diseases with oral manifestations are the following, EXCEPT:**

a) hypochromatic anemia

b) pernicious anemia

c) erythremia

d) agranulocytosis

e) posthemorrhagic acute anemia

**78) Vitamin deficiency oral symptoms are accompanied by:**

a) hypovitaminosis A

b) avitaminosis D

c) avitaminosis B2

d) avitaminosis B1

e) avitaminosis C

**79. Which are the first elements that sufferer in the pulp necrosis evolution:**

A. cells;

B. connective fibers;

C. vascular walls;

D. nerve fibers;

E. fundamental substance.

**80. Liquefactive necrosis:**

A. is a form of the pulp gangrene;

B. is produced by enzymes;

C. is dominated by protoplasm coagulation phenomena;

D. is commonly installed after applying arsenic dressings;

E. is caused by the antiphormin type antiseptic solutions;

**81. Which are the factors that may cause pulp necrosis:**

A. repeated trauma of a low-intensity;

B. dislocations, intrusions;

C. diabetes, hypertension;

D. temperatures higher than 75 ° C;

E. temperatures below 0 ° C.

**82. Which of following statements about liquefactive necrosis are true:**

A. it is an aseptic mortification of pulp;

B. the tooth color is changed;

C. biochemical tests are negative;

D. electro vitality tests can give a false positive response;

E. all answers are correct.

**83. Which of following are determining causative factors in pulp gangrene:**

A. prolonged vascular spasms followed by ischemia;

B. avitaminosis (A and C);

C. microorganisms reached the endodontic space;

D. physiological states: menstruation, prolonged labor;

E. dislocations with intrusions.

**84. Devitalizing based on arsenic preparations can be followed by:**

A. coagulation necrosis;

B. liquefactive necrosis;

C. profuse bleeding due to opening of pulp chamber;

D. dry pulp necrosis;

E. yellow-brown or black-purple pulp necrosis

**85. In which of the following cases tooth discoloration occurs:**

A. pulp necrosis;

B. chronic pulpitis

C. pulp gangrene;

D. Acute serous pulpitis

E. acute purulent pulpitis

**86. Which microorganisms are involved in the pulp gangrene pathogenesis:**

A. beta hemolytic streptococcus A;

B. white Staphylococcus;

C. staphylococcus aureus;

D. gonococcus;

E. pneumococcus

**87. The wet gangrene is characterized by:**

A. putrefied firm pulp tissue;

B. radiological image with periapical changes;

C. very soft putrefied pulp tissue;

D. partial loss of the pulp structural configuration;

E. total loss of the pulp structural configuration.

**88. The coagulation necrosis is characterized by:**

A. dry pulp;

B. pulp yellow-brown or black-purple;

C. reduced pulp consistency;

D. removal is done quite easily with the channel tools;

E. often occurs after arsenic

**89. Liquefactive necrosis is produced by:**

A. vegetable enzymes;

B. animal enzymes;

C. antiseptic;

D. arsenic;

E. bradykinin.

**90. Pulp necrosis infection is produced bacterial germs coming from:**

A. oral cavity;

B. neighborhood cysts;

C. lateral root canal;

D. alveolar bone

E. none of the listed

**91. The clinical picture of pulp necrosis includes:**

A. tooth transparency higher than neighboring teeth;

B. thermal pain;

C. pain from chemical irritants;

D. modified tooth staining, brown or yellow-gray;

E. tooth pain on shaft percussion

**92. A pulp necrosis positive diagnosis is based on the following:**

A. changing of tooth color;

B. hypersensitivity to palpation with the probe into the pulp chamber;

C. hypersensitivity to palpation with the probe into the root canal;

D. positive vitality tests;

E. positive bacterial seeding.

**93. Which are the pulp gangrene determining causative factors:**

A. prolonged vascular spasms, followed by ischemia;

B vitamin deficiency;

C. microorganisms reached the endodontic space;

D. dislocations, intrusions;

E. exogenous intoxications with various heavy metals.

**94. Which of the following factor causes pulp gangrene:**

A. formalin;

B. great and sudden increases of temperature;

C. the action of bacterial origin enzymes;

D. circulatory imbalance

E. arsenical dressing.

**95. Necrosis of pulp can have the following course:**

A. remains for a period in this stage;

B. spontaneous healing;

C. chronic pulpitis with closed pulp chamber;

D. pulp gangrene;

E. dental fracture.

**96. Arsenic may cause dental pulp necrosis by:**

A. pH change;

B. precipitating of plasma proteins and cell membrane damage;

C. vascular walls paralysis;

D. blocking cell respiration;

E. collagen depolymerization

**97. Acute hyperaemic apical periodontitis:**

A. represents the initial phase of pulp inflammation

B. represents the initial phase of periodontal ligaments inflammation

C. represents the initial phase of the apical alveolar bone inflammation

D. represents the initial stage of the inter-radicular septum inflammation

E. represents the initial stage of interdental septum inflammation

**98. Pathological picture of acute serous apical periodontitis is dominated by:**

A. vascular changes

B. chemical changes

C. enzymatic changes

D. pain

E. bone resorption

**99. Epithelial cells of epithelial granuloma may originate in:**

A. Epithelial rests of Malassez

B. sinus mucosa

C. oral mucosa in the case of fistulas

D. tooth pulp

E. alveolar bone

**100. The acute serous apical periodontitis is morphologically characterized by:**

A. vascular turgor

B. alveolar ligaments thickened

C. erythrocyte aggregation phenomena

D. fragmentation and depolymerization of Sharpey ligaments

E. internal alveolar cortex shows an irregular outline

**101. Endosseous stage of acute purulent apical periodontitis is characterized by:**

A. rich leukocyte infiltration

B. located pain

C. high pressure inside of tissue

D. mucosal swelling and infiltration

E. bone tissue lysis

**102. Identify evolution and complications of acute purulent apical periodontitis:**

A. external root resorption of iatrogenic nature

B. fistulation, resorption and temporary healing

C. complications with osteomyelitic process

D. root internal resorption of microbial nature

E. suppuration of lodges and cervico-fascial spaces

**103. Chronic fibrous apical periodontitis is morphologically characterized by:**

A. formation of so-called fibrotic granuloma lesions

B. at the periphery of the formation, cell agglomeration is higher than in the middle

C. narrowed blood vessels with thickened walls

D. presence of the lymphoblastic infiltrates

E. presence of dense bone tissue areas with few bone trabeculae and intertrabecular spaces

**104. In the simple fibrotic granuloma on the mechanism of development the following areas are distinguished:**

A. stimulation area

B. colliquative area

C. irritation area

D. exudative area

E. area of necrosis

**105. Wound healing after surgical incision of suppuration will be achieved:**

A. by first intention

B. by second intention

C. after intradermal suture

D. after anatomical plans suture

E. after position suture

**106. Phlegmon is a diffuse suppuration which is characterized by:**

A. presence of fibrin collection

B. presence of necrotic tissue due to the purulent lysis

C. body temperature is not changed;

D. blood leukocyte level is normal;

E. polyuria appears constantly.

**107. In the abscess of the vestibular space, the subperiosteal phase is dominated by:**

A. congestion of teguments

B. high fever

C. congestion of mucosa corresponding to causal tooth

D. deep pain

E. heavily altered general condition

**108. Mouth floor phlegmon can cause:**

A. septic thrombosis of the cranial sinuses

B. septic meningitis

C. facial nerve paresis;

D. acute mediastinitis

E. pulmonary gangrene

**109. Necrotizing fasciitis:**

A. refers to a severe soft tissue suppuration

B. is determined exclusively by anaerobic flora

C. entry gate can always be easily detected

D. debuts with specific clinical manifestations

E. entry gate cannot be always easily detected

**110. Osteoperiostitis:**

A. it is a localized bone inflammatory reaction

B. differential diagnosis is made with osteomyelitis

C. the diagnosis is based only on pathological examination

D. treatment consists of sequestrectomy

E. it is a generalized bone inflammatory reaction

**111. OMF localized syphilis:**

A. It is a nonspecific contagious infection

B. It evolves in several stages

C. The tertiary stage shows gum and tubers in the soft tissues

D. A positive diagnosis is based on specific serological reactions

E. The treatment is surgical

**112. Mouth floor phlegmon:**

A. it is also called Ludwig’s angina

B. the purulent process includes submandibular, sublingual and submental spaces

C. purulent process can be extended towards laterocevical space

D. pathological focus is most commonly located in the pterygomandibular space

E. primary foci are septic dentoparodontal processes or suppurative pericoronitides of superior wisdom teeth

**113. Acute purulent adenitis is characterized by:**

A. diffuse collection

B. well defined collection

C. periadenitis at the periphery

D. the coverings teguments are congested

E. not altered general condition

**115. The maxillary sinus:**

A. It is an annex of the nasal cavity

B. it opens in the superior meatus

C. it opens in the middle meatus

D. it opens in the inferior meatus

E. It is involved in nonspecific immune defense

**116. Mucosa that covers the maxillary sinus wall is:**

A. formed of epithelium with ortokeratosis

B. formed of epithelium with parakeratosis

C. consists of a ciliated cylindrical epithelium

D. consists of a multistratified epithelium

E. consists of a respiratory epithelium

**117. In acute maxillary sinusitis, mucosal inflammatory process goes through three successive stages:**

A. tumor, calor and dolor

B. congestive, catarrhal and purulent

C. margination of phagocytes, diapedesis of phagocytes and phagocytosis

D. exudative, granulation and epithelialization

E. vascular permeability, phagocytosis and cytotoxicity

**118. Chronic maxillary sinusitis mucosa is:**

A. congested

B. hyperplasia

C. atrophied

D. polypoid and cystic

E. extremely altered

**119. Which are the local risk factors in delayed wound healing:**

A. wound remaining foreign body

B. tensioned wound sutures

C. patient age

D. crushed wounds

E. immunosuppression

**120. Brachial cyst:**

A. It is laterocervical lymphadenopathy

B. It is cervical manifestation of Hodgkin lymphoma

C. Differential diagnosis with laterocervical lipoma must be done

D. Intraoral surgical approach

E. Can subject malignant transformation

**121. Thyroglossal duct cysts:**

A. It is also called median neck cyst

B. Appears only in childhood

C. It fistulizes tegumental

D. It appears in the upper laterocervical 1/3

E. differential diagnosis with a lipoma must be done

**122. Sialo- cyst:**

A. It is due accessory salivary glands cystic dilatation

B. It appears only in the elderly

C. It often appears in the upper lip

D. It can be localized in the parotid

E. It can occur on the maxillary sinus floor

**123. Oral mucocele:**

A. It is a malignant tumor

B. It occur after chronic micro traumatisms of oral mucosa

C. It frequently appears at jugal mucosa level

D. It has a fluctuant consistency

E. It is very painful on palpation

**124. Ranula is characterized by:**

A. sublingual retention cyst

B. contains a colorless viscous liquid

C. spontaneous perforation can occur

D. is often complicated by suppuration

E. occurs only in adults

**125. Sebaceous cyst:**

A. It originates in the dermis fat cells

B. It arises by blockage of the salivary glands secretion

C. It originates at hair follicle level

D. It frequently appears on cervicofacial skin

E. Cystic cavity is filled with sebum

**126. Epulis fissuratum:**

A. It is a malignant tumor of the oral cavity

B. It appears in mobile prosthesis wearers

C. It is located on jugal mucosa

D. Mucosal covering membrane may be clinically unremarkable

E. A malignant tumor can be easily suspected

**127. Pyogenic granuloma localized on jugal or lingual mucosa, is also known as:**

A. fibrous epulis

B. granulomatous epulis

C. angiogranulomatos epulis

D. botryomycoma

E. papillomatous hyperplasia

**128. Giant cell peripheral granuloma:**

A. It is associated with [hyperparathyroidism](https://www.google.co.uk/search?espv=2&biw=1220&bih=799&q=hyperparathyroidism&spell=1&sa=X&ved=0ahUKEwjG1cCP_rLQAhWFKCwKHVEcDMcQvwUIGCgA)

B. It is prevalent in males

C. it appears more frequently in young ages

D. It is located palatal

E. It is also called giant cell epulis

**Red and white blood cell disorders**

1. **A patient with a decreased number of red blood cells would be most likely to have disorders with which of the following:**
2. antibody production
3. oxygen delivery to tissues
4. clot formation
5. bacterial infections
6. arterial tension

**2. Select the statements about red blood cells that are incorrect:**

1. mature red blood cells lack nuclei
2. red blood cells contain hemoglobin
3. deoxyhemoglobin carries oxygen
4. red blood cells lack mitochondria
5. red blood cells have Golgi system

**3. The precursor of all lines of blood cells is the:**

1. myeloblast
2. hemocytoblast
3. proerythroblast
4. progranulocyte
5. lymphoblast

**4. When red blood cells are worn out, part of their components are recycled while others are disposed. Select the INCORRECT statement about destruction of red blood cells.**

1. the greenish pigment, biliverdin, is recycled to the bone marrow.
2. iron is carried to the bone marrow by a protein called transferrin.
3. biliverdin and bilirubin impart color to bile.
4. macrophages in the liver and spleen destroy worn out red blood cells.
5. red cells are destroyed by intact heart valves

**5. Which dietary component(s) is/are needed for DNA synthesis, and thus greatly influence the production of red blood cells:**

1. calcium
2. iron
3. vitamin B12 and folic acid
4. protein
5. lipids

**6. Which type of anemia is the most common:**

1. aplastic anemia
2. pernicious anemia
3. hemolytic anemia
4. iron deficiency anemia
5. posthemorrhagic

**7. The type of white blood cell that often arrives at the site of infection first, and contains granules that stain light purple is a:**

1. basophil
2. eosinophil
3. neutrophil
4. monocyte
5. histiocyte

**8. The largest cells in the blood that leave the bloodstream to become macrophages are the:**

1. eosinophils
2. monocytes
3. basophils
4. neutrophils
5. epitheliocyte

**9. A person with eosinophilia is most likely suffering from:**

1. allergies
2. anemia
3. intestinal parasites
4. diabetes
5. syphilis

**10. Which blood cell can be described as being a biconcave disc:**

1. platelet
2. neutrophil
3. eosinophil
4. erythrocyte
5. macrophage

**11. What is the term for erythrocytes of various sizes:**

1. anisocytosis
2. poikilocytosis
3. anemias
4. polycythemias
5. thalassemia

**12. Name macrocytic normochromic anemias:**

1. pernicious anemia
2. sideroblastic anemia
3. folate deficiency anemia
4. iron deficiency anemia
5. sickle cell anemia

**13. Large erythrocytes with normal hemoglobin concentrations are characteristic for:**

1. normocytic-normochromic anemia
2. microcytic-hypochromic anemia:
3. macrocytic normochromic anemia
4. macrocytic hypochromic anemia
5. microcytic hyperchromic anemia

**14. Deficiency of vitamin B-12 and folate acid cause anemia, bacause:**

1. stem cells are unable to differentiate into erythrocytes
2. erythrocytes have malformed hemoglobin molecules
3. erythrocytes have a shorter life span and die prematurely
4. erythrocytes have decreased O2 carrying capacity
5. erythrocytes have increased O2 carrying capacity

**15. Which of the following diseases may be associated with anemia:**

1. chronic renal failure
2. hepatic failure
3. gastric cancer
4. chronic leukemia
5. all of the listed

**16. Identify histological subtypes of Hodgkin's disease:**

1. immunoblastic
2. nodular sclerosis
3. mixed cellularity
4. eosinophilic
5. lymphoblastic predominance

**17. Which type of leukemia is characterized by diffuse leukemic infiltration in the liver along sinusoids:**

1. chronic lymphocytic leukemia
2. acute erithromieloblastic leukemia
3. acute lymphoblastic leukemia
4. chronic myeloid leukemia
5. chronic erythroleukemia

**18. Highlight neoplastic diseases of the hematopoietic tissues with systemic manifestations:**

1. Hodgkin's disease with nodular sclerosis
2. Hodgkin's disease with lymphocyte depletion
3. leukemias
4. leukoderma
5. Hodgkin's disease with mixed cellularity

**19. Acute lymphoblastic leukemia:**

1. disease of children
2. disease of adults
3. is associated with generalized lymphadenopathy
4. prognosis depends on phenotype and karyotype
5. treatment depends on phenotype and karyotype

**20. The following forms of chronic leukemia can be distinguished:**

1. myelocytic leukemia
2. undifferentiated leukemia
3. lymphocytic leukemia
4. lymphoblastic leukemia
5. monocytic leukemia

**21. Depending on the degree of blood cell maturity leukemias is classified in:**

1. leukopenic
2. acute
3. aleukemic
4. chronic
5. leukemic
6. **Acute myeloid leukemia:**
7. has divers origin
8. disease of children
9. disease of adults
10. relapse is rare
11. relapse is frequent

**23. Chronic lymphocytic leukemia:**

1. usually occurs in children
2. usually occurs in middle-aged and elderly
3. develop of the T-lymphopoiesis system
4. develop of the B-lymphopoiesis system
5. has relatively long benign course

**24. Characteristic signs of acute lymphoblastic leucosis:**

1. affects children and adolescents
2. is resistant to chemotherapy
3. atrophy of the spleen
4. leukemic infiltrates in thymus and anterior mediastinum
5. tumor cells belong to T-system of lymphopoiesis

**25. Histological diagnosis criteria for Hodgkin's lymphoma:**

1. mixed cellularity
2. Reed-Sternberg cells
3. diffuse fibrosis
4. lymphocytes proliferation
5. histocytes proliferation

**26. Which of the following statements regarding multiple myeloma are correct:**

1. flat bones are mostly affected
2. tumor cells secrete pathological immunoglobulins
3. tumor cells are T-cell derived;
4. AL- amyloidosis is the most common complication
5. is epidemic process

**27. Which of the listed criteria are associated to multiple myeloma:**

1. renal failure
2. hypercalcemia
3. T-cell proliferation
4. tumor cells secrete paraproteins
5. myocardial infarction.

**28. Which of the following listed statements regarding Hodgkin disease are correct:**

1. massive hepatomegaly;
2. mixed cellularity
3. lymphocytes depletion
4. nodular sclerosis
5. diffuse sclerosis.

**29. Leukemia are characterized by:**

1. generalized lymphadenopathy
2. cerebral abscess
3. leukemic infiltration of parenchymal organs
4. splenomegaly
5. myocardial infarction.

**30. Hemolytic anemia due to extravascular hemolysis is characterized by:**

**a.** hepatomegaly

1. erythremia
2. splenomegaly
3. hyperemia
4. jaundice

**31. Iron deficient anemia can be caused by:**

1. insufficient absorption of iron
2. increased iron resorption
3. as a result of gastric or duodenal resection
4. as a result of appendectomy
5. hemorrhages

**32. Which of the following are etiologic types of hemolytic anemia:**

1. pernicious anemia
2. toxic anemia
3. infectious anemia
4. post transfusion anemia
5. B-12 deficiency anemia

**33. Anemia can be caused by:**

1. hemorrhage
2. erythremia
3. insufficient erythropoiesis of the bone marrow
4. physiologic hemolysis of erythrocytes
5. pathological hemolysis of erythrocytes

**34. Hereditary deficiency of fundic gastric glands can lead to:**

1. post-hemorrhagic anemia
2. pernicious anemia
3. Biermer's disease
4. hemolytic anemia
5. dishormonal anemia

**35. By evolution posthemorrhagic anemia can be:**

1. intravascular anemia
2. acute anemia
3. extravascular anemia
4. chronic anemia
5. vitamin B-12 deficiency anemia

**36. Intravascular hemolytic anemia is caused by:**

1. toxins
2. poisons
3. extensive burns
4. blood transfusion
5. insufficiency of somatotropin

**37. Morphological characteristics of aplastic anemia:**

1. hypocellular bone marrow
2. hypercellular bone marrow
3. increased amount of adipose tissue
4. increased number of megaloblasts
5. decreased amount of adipose tissue

**38. After a hearty but not fatal hemorrhage the following changes occur:**

1. bone marrow become yellow
2. bone marrow become red
3. megaloblastic hematopoiesis
4. extramedullary hematopoiesis
5. reticulocytosis

**39. B-12 deficiency anemia is:**

1. posthemorrhagic
2. megaloblastic
3. leukoanemic
4. hyperchromic
5. hypochromic

**40. Deficient anemia may develop due to insufficiency of:**

1. iron
2. vitamin B-12
3. vitamin C
4. vitamina K
5. folic acid

**41. Iron deficiency anemia develops in the following condition:**

1. teeth extraction
2. gastric resection
3. mastectomy
4. intestinal resection
5. nephrectomy
6. **All of the following statements are true regarding lymphomas, EXCEPT:**
7. Hodgkin's lymphoma arises in the bone marrow
8. the malignant cell of Hodgkin's lymphoma is the Reed-Sternberg cell
9. the most common form of Hodgkin's lymphoma – nodular sclerosis
10. follicular lymphoma is B-cell lymphoma
11. the malignant cell of Hodgkin's lymphoma is the Langhans cell

**Pathology of esophagus and stomach. Intestinal pathology**

**1. The most common cause of intestinal obstruction is:**

1. volvulus
2. neoplasm
3. intussusception
4. hernia
5. adhesions

**2. A two-week-old boy develops persistent projectile vomiting. The most likely diagnosis is:**

1. pyloric stenosis
2. esophageal atresia
3. annular pancreas
4. incomplete rotation of the gut
5. amyloidosis

**3. An endoscopic biopsy of gastric mucosa reveals small intestinal type epithelium this finding is most likely due to:**

1. Chronic gastritis
2. Congenital heterotopia
3. Precancerous dysplasia
4. Metastatic carcinoma
5. Benign neoplasm

**4. Hematemesis is an indication of:**

1. Upper gastrointestinal bleeding
2. Lower gastrointestinal bleeding
3. Middle gastrointestinal bleeding
4. All of the listed
5. None of the listed

**5. The most common cause of upper gastrointestinal hemorrhage (hematemesis or melena) is:**

1. Esophageal varices
2. Gastric carcinoma
3. Peptic ulcer
4. Gastritis
5. All of the listed

**6. The Mallory-Weiss syndrome refers to the occurrence of gastrointestinal hemorrhage as a result of:**

1. Esophageal varices
2. Esophageal peptic ulcers
3. Mucosal tears at the esophagogastric junction
4. Iatrogenic perforation
5. Ulcerogenic drugs
6. **Primary carcinoma is least common in:**
7. Esophagus
8. Stomach
9. Small intestine
10. Colon
11. Rectum
12. **Bilateral ovarian metastases presenting as tumor masses are most characteristically associated with carcinoma of the:**
13. esophagus
14. stomach
15. small intestine
16. appendix
17. colon

**9. What is the most common cause of esophageal varices:**

1. alcoholic cirrhosis
2. cardiac cirrhosis
3. extra-hepatic portal vein obstruction
4. esophagitis
5. all of the listed

**10. Which is characterized by vomiting of blood:**

1. Zenker diverticulum
2. Traction diverticulum
3. Achalasia
4. Mallory-Weiss syndrome
5. Hiatal hernia

**11. Acute erosive gastritis is characterized by:**

1. Pus in the stomach
2. Superficial multiple ulcerations of gastric mucosa
3. A deep ulcer of the stomach with a scarred base
4. A frequent association with gastric cancer
5. Perforation as frequent complication

**12. The most frequent complication of chronic duodenal ulcer is:**

1. Hemorrhage
2. Obstruction
3. Perforation
4. Malabsorption
5. All of the listed

**13. Carcinoma of the stomach usually arises from:**

1. Smooth muscle cells
2. Acid producing cells
3. Pepsinogen producing cells
4. Mucus producing cells
5. Argentaffin cells

**14. Which feature of ulcerative colitis is most closely related to the development of carcinoma?**

1. Age of patient at time of onset
2. The duration of the disorder
3. Severity of manifestations at onset
4. Presence of pseudopolyps
5. Presence of melena

**15. The most typical distribution of the inflammatory process in ulcerative colitis is:**

1. Entire colon and terminal ileum
2. Diffuse, involving entire colon
3. Focal, segmental
4. Rectum and a variable length of contiguous colon
5. Stomach and duodenum

**16. Which neoplasm is most FREQUENTLY found in the appendix?**

1. Carcinoid
2. Villous adenoma
3. Lymphoma
4. Adenomatous polyp
5. Adenocarcinoma

**17. Colonic neoplasms tend to metastasize most frequently to:**

1. Liver
2. Lung
3. Vertebral column
4. Small intestine
5. Kidney

**18. In contrast to carcinoma of the right colon, carcinoma of the left colon tends to be associated with:**

1. anemia
2. diverticulosis
3. malabsorption
4. obstruction
5. No symptoms

**19. Carcinoma of the esophagus is characterized by the following:**

1. adenocarcinoma has higher incidence then squamous cell carcinoma
2. squamous cell carcinoma has higher incidence then adenocarcinoma
3. a tumor with a poor prognosis
4. dysphagia is a common symptom
5. a tumor with good prognosis

**20. The most common fatal complication of chronic peptic ulcer of the stomach is:**

1. Adenocarcinoma
2. Acute gastritis
3. Perforation and peritonitis
4. Pancreatitis
5. Pyloric outlet obstruction

**21. Chronic tonsillitis is characterized by following statements:**

1. lymphoid tissue sclerosis
2. tonsillar sheath sclerosis
3. epithelial metaplasia
4. enlargement of tonsillar lacune
5. epithelial displasia

**22. The most frequent types of acute esophagitis are the following:**

1. catarrhal
2. fibrinous
3. phlegmonous
4. hemorrhagic
5. granulomatous

**23. Microscopic changes in catarrhal gastritis include the following:**

1. edema
2. hyperemia
3. superficial erosions
4. fibrin network
5. epithelioid cells infiltration

**24. Destructive complications in peptic ulcer are:**

1. hemorrhage
2. plasmorrhage
3. stenosis
4. perforation
5. penetration

**25. Choose the macroscopic types of the esophageal cancer:**

1. nodular
2. exophytic
3. diffuse nodular
4. branching
5. diffuse infiltrative

**26. Morphological types of chronic gastritis are:**

1. metaplastic
2. phlegmonous
3. atrophic
4. gangrenous
5. autoimmune

**27. Peptic ulcer complications are the following:**

1. destructive
2. inflammatory
3. invasive
4. malignant transformation

e. benign transformation

**28. Which of the following types of esophagitis it is the most common:**

1. reflux
2. viral
3. fungal
4. acute corrosive
5. chronic granulomatous

**29. Choose the retrograde matastases of the gastric cancer:**

1. Virchow
2. Abrikosov
3. Kaposi
4. Krukenberg
5. Schnitzler

**30. The most frequent localization of the gastric cancer is:**

1. lesser curvature
2. greater curvature
3. pylorus
4. fundus
5. cardia

**31. Choose the histologic zones of the chronic peptic ulcer:**

1. layer of necrotic fibrinoid debris
2. zone of nonspecific inflammation
3. granulomatous inflammation
4. fibrous, collagenous scar

e. specific inflammation

**32. Choose the benign types of the gastric tumors:**

1. diffuse carcinoma
2. villous polyp
3. acute gastritis
4. adenomatous polyp
5. lymphoma

**33. Which gastro-intestinal segments are most frequently involved in Crohn's disease:**

1. small intestine
2. stomach
3. oral cavity
4. colon
5. esophagus

**34. The most common complications in Crohn disease are:**

1. fistulas
2. massive bleeding
3. spreading
4. malignant transformation
5. toxic dilatation

**35. The following statements can be characteristic for the ulcerative colitis:**

1. affects colon and rectum
2. affects small intestine
3. has a pseudopolypous pattern
4. spreads into abdominal cavity
5. it can be followed by peritonitis

**36. The most frequent complications in acute enteritis are:**

1. hemorrhage
2. occlusion
3. stenosis
4. perforation
5. cancer development

**37. The most frequent complications of appendicitis are:**

1. peritonitis
2. cancer
3. mucocele
4. hemorrhage
5. diverticulitis

**38. Choose the benign types of the intestinal tumors:**

1. tubular adenoma
2. villous adenoma
3. melanoma
4. tubulo-villous adenoma
5. lymphoma

**39. The most common cause of the peritonitis are the following, EXCEPT:**

1. gastric ulcer perforation
2. intestinal perforation in typhoid fever
3. gangrenous appendicitis
4. focal pneumonia
5. acute pancreatitis

**40. Acute colitis complications are:**

1. hemorrhage
2. perforations
3. pneumonia
4. appendicitis
5. abscess

**41. Gross features of a benign gastric ulcer include all of the following, EXCEPT:**

1. location on the lesser curvature
2. small size
3. big size
4. smooth base
5. radial arrangement of surrounding mucosal folds

**42. Acute appendicitis is characterized by:**

1. mainly as disease of adolescents
2. most commonly confused clinically with mesenteric lymphadenitis
3. accompanied by luminal obstruction in most cases
4. diagnosed histologically by massive lymphoid infiltration in the submucosa
5. produces watery diarrhea

**43. Histologic changes commonly seen in reflux esophagitis include:**

1. elongated mucosal papillae
2. hyperplasia of the mucosal basal zone
3. intraepithelial eosinophils
4. submucosal varices
5. mucosal destruction

**44. Features of colonic adenomas that are associated with increased risk for carcinoma include all of the following, EXCEPT:**

1. severe dysplasia
2. villous architecture
3. size exceeding 2 cm
4. marked inflammation
5. multiple adenomas

**45. Which of the following inflammatory conditions of the intestine is characterized by segmental involvement of the small/or large bowel, transmural inflammation, and the development of epithelioid granulomas:**

1. Crohn's disease
2. ulcerative colitis
3. cryptosporidiosis
4. diverticulitis
5. colitis cystica profunda

**46. The most common site of gastrointestinal carcinoid tumors** **is:**

1. small bowel
2. colon
3. appendix
4. esophagus
5. stomach

**47. The most common types of intestinal tumors are:**

1. squamous cell carcinomas
2. adenocarcinomas
3. adenosquamous carcinomas
4. large cell undifferentiated carcinomas
5. small cell undifferentiated carcinomas

**48. The intestinal tumors are complicated with:**

1. hemorrhage
2. plasmorrhage
3. bowel perforations
4. neuronal spreading
5. peritonitis

**49. The cause of ulcerative colitis in most cases is:**

1. psychosomatic
2. viral
3. autoimmune
4. bacterial
5. undetermined

**50. Which of the following is associated with an increased risk of esophageal cancer:**

1. herpetic esophagitis
2. candida esophagitis
3. cigarette smoking
4. Mallory-Weiss syndrome

E Barrett's esophagus

**51. Acute gastric erosions occur in each the following settings, EXCEPT:**

1. extensive burns
2. alcohol abuse
3. trauma to the brain
4. irreversible shock
5. pernicious anemia

**52. Which of the following bowel disease is associated with arthritis and uveitis:**

1. Crohn disease
2. pseudomembranous colitis
3. mycobacterium avium intracellulare enterocolitis
4. CMV (cytomegalovirus) colitis
5. vibrio cholera

**53. The most common complication of duodenal peptic ulcer is:**

1. bleeding
2. malignant transformation
3. rupture
4. peritonitis
5. obstruction

**54. Pernicious anemia is usually associated with:**

1. gastric hypersecretion
2. gastric adenocarcinoma
3. hypertrophic gastritis
4. autoantibodies to parietal cells
5. autoantibodies to the intrinsic factor

**55. Familial adenomatous polyposis is characterized by each of the following, EXCEPT:**

1. multiple tubular adenomas
2. autosomal dominant inheritance
3. colonic polyps usually are present at birth
4. high incidence of malignancy
5. multiple villous adenomas

**56. Carcinoma of the oral cavity is most often:**

1. squamous
2. basal cell
3. transitional cell
4. ameloblastic
5. odontogenic

**57. Acute gastric ulceration may be associated with each the following**

**conditions, EXCEPT:**

1. extensive burns
2. cerebrovascular accidents
3. corticosteroid therapy
4. excessive alcohol intake
5. achalasia of esophagus

**58. Anemia associated with gastric carcinoma is usually as a result of:**

1. prolonged blood loss
2. metastases into bones
3. metastases into the small intestine
4. metastases into the liver
5. Vitamin B-12 deficiency

**59. Each of the following is associated with squamous cell carcinoma of the esophagus, EXCEPT:**

1. alcoholism
2. reflux esophagitis
3. chronic esophagitis
4. achalasia
5. smoking

**60. Which of the following pathologic features is not characteristic of squamous cell carcinoma of the esophagus, EXCEPT:**

1. well differentiated glands
2. arises in zones of metaplastic mucosa called Barrett esophagus
3. clinical symptoms usually appear only when the tumor is advanced beyond the point of curative resection
4. mostly occurs in conjunction with esophageal varices
5. early distant metastases are common, whereas lymphatic spread to regional lymph nodes is rare

**61. Each of the following is true about gastric leiomyomas, EXCEPT:**

1. they are most common than gastric adenocarcinoma
2. they may cause erosion and bleeding if are larger than 2 cm
3. they are usually benign
4. they may show a variety of histologic patterns
5. histologic criteria for malignancy include mitotic frequency

**62. Each the following statements about gastric carcinoma are true, EXCEPT:**

1. incidence rates of gastric carcinoma show wide geographic differences
2. prognosis in gastric carcinoma is related to stage of disease
3. absence of acid secretion after pentagastrin stimulation is highly correlated with gastric carcinoma
4. persons with blood group O
5. many tumors are mucin producing

**63. Which of the following types of polyps is non-neoplastic:**

1. tubular adenoma
2. adenomatous polyp
3. juvenile polyp
4. villous adenoma

**e.** hyperplastic polyp

**64. Acute gastritis is best described by what the pathologist sees in this sense, name the term:**

1. hypertrophic gastritis
2. hyperplastic gastritis
3. erosive gastritis
4. atrophic gastritis
5. non-necrotizing granulomatous gastritis

**65. Non-erosive gastritis can lead to each of the following, EXCEPT:**

1. achlorhydria
2. pernicious anemia
3. gastric atrophy
4. gastric carcinoma
5. folate deficiency anemia

**66. Pseudomembranous colitis is a:**

1. granulomatous inflammation that is caused by Campylobacter, and rarely shows transmural involvement
2. non-necrotizing granulomatous inflammatory condition of the colon which is of unknown etiology
3. bacterial infection of the colon characterized by focal mucosal ulceration and the formation of fibrino-mucinous exudate over denuded areas
4. transmural inflammatory condition that is characterized by focal granulomatous inflammatory infiltrates that are best seen along the serosal surface of the colon
5. disease not associated with any known organism and is characterized by focal mucosal ulceration with the formation of a fibrinous exudate over denuded regions

**Pathology of the liver**

**1. Which of the following histologic features of hepatocellular injury is prognostically least favorable:**

1. councilman body formation
2. bile infarct formation
3. collagen formation
4. ballooning degeneration of hepatocytes
5. lobular inflammatory cell infiltrates

**2. Which of the following refers to hepatorenal syndrome:**

1. functional failure of a morphology normal kidney associated with severe liver disease
2. simultaneous toxic damage to the liver and kidneys with functional failure of both
3. immune complex glomerulopathy from chronic antigenemia associated with chronic viral hepatitis
4. acute tubular necrosis due to hypotension after a gastrointestinal bleed in a cirrhotic patient

e. all of the listed

**3. All of the following statements about fulminant viral hepatitis are true, EXCEPT:**

1. It is more common than fulminant hepatitis caused by drugs
2. It is severity is proportional to the immune response to the virus
3. Death usually within 24 hours of the onset of symptoms
4. Histologically, it is commonly indistinguishable from drug induced fulminant hepatitis
5. Survivors usually have lifelong immunity to recurrent infection

**4. Causes of cirrhosis in infancy include all of the following, EXCEPT:**

1. Wilson disease
2. alpha antitrypsin deficiency
3. total parenteral nutrition
4. extrahepatic biliary atresia
5. galactosemia

**5. In which of the following conditions is found Mallory hyaline within hepatocytes:**

1. carbon tetrachloride toxicity
2. Wilson disease
3. viral hepatitis
4. alcoholic liver disease
5. liver cirrhosis

**6. Causes of chronic active hepatitis include:**

1. Wilson's disease
2. alpha antitrypsin deficiency
3. alcohol
4. appendicitis
5. typhoid fever

**7. Which of the following types of liver tumors is most commonly associated with the oral contraceptives:**

1. bile duct adenoma
2. bile duct hamartroma
3. focal nodular hyperplasia
4. hepatocellular carcinoma
5. hepatocellular adenoma

**8. Conditions that are considered to increase the risk for developing of hepatocellular carcinoma include:**

1. alcohol-related cirrhosis
2. HBV-related cirrhosis
3. idiopathic hemochromatosis
4. primary biliary cirrhosis
5. secondary biliary cirrhosis

**9. The most common tumor of the liver it is:**

1. cholangiocarcinoma
2. hepatocellular carcinoma
3. hemangiosarcoma
4. liver cell adenoma
5. metastatic carcinoma

**10. In patients with the most common form of gallstones, the liver secretes more:**

1. bile salts
2. 7 alpha - hydroxylase
3. low density lipoproteins
4. cholesterol
5. calcium carbonate

**11. Alcoholic fatty liver is associated with each of the following, EXCEPT:**

1. decreased membrane phospholipids formation
2. decreased fatty acid oxidation
3. increased triglyceride synthesis
4. decreased lipoprotein synthesis
5. increased mobilization of fatty acids from periphery

**12. The hepatorenal syndrome is associated principally with:**

1. microvesicular fatty liver
2. intrahepatic cholestasis
3. hepatocellular carcinoma
4. cirrhosis
5. extrahepatic biliary obstruction

**13. Unconjugated bilirubin is derived principally from:**

1. glucuronic transferase activity
2. toxic liver injury
3. breakdown of senescent red blood cells
4. decreased intracellular bilirubin transport
5. decreased ligandin

**14. Which of the following is associated with destructive cholangitis:**

1. hepatitis B
2. alcoholic hepatitis
3. primary biliary cirrhosis
4. neonatal hepatitis
5. Dubbin-Johnson syndrome

**15. Central sclerosis of the liver diseases is associated with:**

1. hepatitis B
2. alcoholic hepatitis
3. autoimmune hepatitis
4. neonatal hepatitis
5. Dubbin-Johnson syndrome

**16. The most common cause of hepatocellular carcinoma is:**

1. hepatitis B
2. alcoholic hepatitis
3. autoimmune hepatitis
4. neonatal hepatitis
5. Dubbin-Johnson syndrome

**17. Mallory hyaline is associated with:**

1. autoimmune hepatitis
2. alcoholic hepatitis
3. hepatitis B
4. hepatitis D

e. hepatitis C

**18. Predominantly unconjugated hyperbilirubinemia is typical of :**

1. intravascular hemolysis
2. carcinoma of common bile ducts
3. carcinoma of gallbladder
4. carcinoma of the head of the pancreas
5. viral hepatitis

**19. Ballooned hepatocytes and acidophilic bodies found in a liver biopsy are most indicative of:**

1. alcoholic hepatitis
2. acute viral hepatitis
3. primary biliary cirrhosis
4. hemochromatosis
5. cardiac cirrhosis

**20. The liver of a patient with right-sided heart failure shows:**

1. acute necrosis
2. centrilobular congestion
3. portal vein thrombosis
4. chronic inflammation in the periportal zone
5. nodular regeneration

**21. So-called "bile infarcts" are associated with which of the following:**

1. drug injury
2. hepatitis B
3. alcoholic hepatitis
4. extrahepatic biliary obstruction
5. Wilson disease

**22. Hepatitis A is transmitted primarily by which of the following routes:**

1. blood transfusions
2. snake bites
3. fecal-oral
4. sexual transmission
5. intravenous drug abuse

**23. Which of the following regarding acidophilic bodies is true:**

1. they consist primarily of Mallory hyaline
2. they are necrotic hepatocytes
3. they occur primarily in the setting of chronic persistent hepatitis
4. they can be seen in 25-50% of normal livers
5. they are formed by cytokeratin

**24. Histologic features of acute alcoholic hepatitis include each of the following, EXCEPT**

1. fatty change
2. Mallory bodies
3. infiltration by neutrophils
4. infiltration by monocytes
5. injured hepatocytes

**25. Extrahepatic biliary obstruction is caused by each of the following, EXCEPT**

1. pancreatic carcinoma
2. carcinoma of the ampulla of Vater
3. bile duct carcinoma
4. advanced cirrhosis
5. sclerosing cholangitis

**26. Which of the following conditions could lead to the development of portal hypertension:**

1. cirrhosis
2. portal vein thrombosis
3. severe right sided heart failure
4. hepatic vein thrombosis (Budd-Chiari syndrome)
5. all of the listed

**27. You are evaluating a liver biopsy from a patient with acute viral hepatitis. Which of the following would you expect to see:**

1. abscesses
2. granulomas
3. lymphocytes in portal tracts
4. regenerative nodules
5. well-developed scar tissue

**28. You are caring for an elderly gentleman with a history of ischemic heart disease who has an enlarged and tender liver. You notice that he also has edema of the lower extremities. Gross examination of his liver would most likely reveal:**

1. fibrosis
2. inflammatory exudates
3. nodules
4. "nutmeg" pattern
5. tumor

**29. You are examining a patient with advanced cirrhosis. What would you expect to find:**

1. cervical lymphadenopathy
2. distended abdomen with fluid wave
3. massive hepatomegaly
4. muscular hypertrophy
5. small spleen

**30. It is likely that a gallstone will produce jaundice if impacted in any of the following anatomic sites, EXCEPT:**

1. ampulla of Vater
2. common bile duct
3. common hepatic duct
4. confluence of common bile duct and pancreatic duct
5. cystic duct

**31. In a patient with a history of viral hepatitis, why is it important to know which virus was involved:**

1. to determine the probability of progressive chronic hepatitis
2. to have a better idea of therapeutic options
3. to determine whether the patient can transmit the disease to others
4. to assess risk of malignancy
5. all of the listed

**32. Which of the following is LEAST likely to be associated with portal hypertension due to liver cirrhosis:**

1. ascites
2. pulmonary hypertension
3. spontaneous bacterial peritonitis
4. thrombocytopenia
5. hepatorenal syndrome

**33. Which of the following is associated with the highest rate of progression to chronic hepatitis:**

1. hepatitis A virus
2. hepatitis B virus
3. hepatitis C virus
4. hepatitis D virus
5. hepatitis G virus

**34. The initial step of the fulminant liver necrosis is characterized by:**

1. liver hardening
2. sagging and wrinkled capsule
3. fatty degeneration of hepatocytes and necrobiosis in the center of the lobules
4. the rapid expansion of sinusoids
5. hepatomegaly

**35. Histologic pattern of acute alcoholic hepatitis is reduced to:**

1. fatty degeneration of hepatocytes
2. necrosis biliary ducts
3. leukocyte infiltration and portal tracts necrosis
4. appearance of Russell cells
5. appearance of Mallory bodies

**36. Liver cirrhosis is followed by :**

1. portal hypertension
2. development of intrahepatic portocaval anastomoses
3. development of extrahepatic portocaval anastomoses
4. development of hydrothorax
5. liver laxity

**37. The following cirrhosis types are distinguished on the morphogenesis background:**

1. alcoholic
2. postnecrotic
3. necrotic
4. portal
5. biliary

**38. Hepatic steatosis is characterized by:**

1. proteic dystrophy of hepatocytes
2. lipidic dystrophy of hepatocytes
3. mineral dystrophy of hepatocytes
4. liver hemosiderosis
5. glycogen infiltration of hepatocytes

**39. Viral hepatitis outcomes:**

1. the full restoration of the structure
2. transition of acute hepatitis in chronic
3. transition to hepatosis
4. liver cirrhosis
5. amyloidosis of liver

**40. Progressive massive liver necrosis is accompanied by:**

1. ascites
2. jaundice
3. varices
4. regional lymph node hyperplasia

E hemorrhagic syndrome

**41. What are the two factors that lead to the postnecrotic liver cirrhosis:**

1. fulminant liver degeneration
2. viral hepatitis
3. parasitic hepatitis
4. alcoholic hepatitis
5. bacterial hepatitis

**42. Acute hepatitis can be:**

1. hemorrhagic
2. persistent
3. serous
4. cholestatic
5. purulent

**43. Liver in primary biliary cirrhosis is:**

1. dramatically reduced in size
2. increased in size
3. dense in consistence
4. yellow collared
5. grey-green collared

**44. Epidemic viral hepatitis is characterized by:**

1. alimentary contamination
2. parenteral contamination
3. malignant evolution
4. long incubation period
5. fecal-oral contamination

**45. Decompensated portal hypertension is manifested by:**

1. jaundice
2. ascites
3. esophageal varices
4. a stroke
5. pulmonary hemorrhage

**46. Decompensated portal hypertension is usually complicated by:**

1. pulmonary edema
2. ascites
3. gastrointestinal bleeding
4. hemorrhoids
5. brain hemorrhage

**48. Fulminant massive liver necrosis is usually accompanied by:**

1. ascites
2. hydrothorax
3. varices
4. jaundice
5. hemorrhagic diathesis

**49. Biliary cirrhosis is divided into:**

1. postnecrotic
2. septal
3. primary
4. secondary
5. multicentric

**50. The following are histologic types of liver carcinoma:**

1. postcirrhotic
2. hepatocellular
3. cholangiocellular
4. adenomatous
5. Precirrhotic

**51. Hepatic cirrhosis is defined as:**

1. focal pathological process characterized by fibrosis and replacement of normal liver architecture by nodules with abnormal structure
2. diffuse pathological process characterized by fibrosis and replacement of normal liver architecture by nodules with abnormal structure
3. a diffuse pathological process characterized by lipidic degeneration and chronic inflammatory portal infiltration
4. pathological process characterized by focal purulent inflammation
5. pathological process characterized by inflammation of intrahepatic bile ducts

**52. The main microscopic characteristics of liver cirrhosis are:**

1. fibrous nodules
2. fibrous septa
3. parenchymal nodules
4. inflammatory infiltration
5. newly formed blood vessels

**53. The most important source of excess of collagen in liver cirrhosis is:**

1. Ito cells (perisinusoidal stellate cells)
2. Kupffer cells (stellate reticuloendotheliocytes)
3. inflammatory cells
4. hepatocytes
5. sinusoidal endothelial cells

**54. Parenchymal regenerative nodules in cirrhosis of the liver derives from:**

1. long - term surviving hepatocytes
2. new hepatocytes appeared from stem cells
3. fibroblasts
4. bile duct epithelial cells
5. blood vessels

**55. Identify causes of liver cirrhosis:**

1. viruses
2. alcohol
3. medicines
4. polluted ai
5. X rays

**56. The causes of liver cirrhosis are all listed, EXCEPT:**

1. chronic viral hepatitis B
2. chronic viral hepatitis C
3. Alcoholic and non-alcoholic steatohepatitis
4. hemochromatosis
5. hepatic echinococcosis

**Heart diseases. Atherosclerosis, hypertension**

**1. Which of the following about atherosclerosis is true:**

1. it occurs in the retinal artery
2. foamy macrophages are seen into the atheromatous plaque
3. thinning of the intima is a feature
4. proliferation of smooth muscle cells in the intima is typical
5. raised HDL is associated with atherosclerosis

**2. Which of the following conditions cause aneurysms:**

1. atherosclerotic plaque formation
2. trauma
3. low blood pressure
4. congenital abnormalities in the media of the arterial wall
5. smoking

**3. The primary anatomic site of pressure regulation in the vascular system is:**

1. aorta
2. arteries
3. arterioles
4. capillaries
5. heart
6. **Complications of chronic hypertension include the following, EXCEPT:**
7. left ventricular hypertrophy
8. congestive heart failure
9. renal failure
10. diabetes mellitus
11. brain hemorrhage
12. **Causes of secondary hypertension include all of the following except:**
13. renal artery stenosis
14. adrenal cortical carcinoma
15. chronic pyelonephritis
16. сolloid goiter
17. chronic glomerulonephritis
18. **Patchy destruction of elastic tissue in the aortic media associated with obliterative endarteritis of vasa vasorum is characteristic of:**
19. Marfan’s syndrome
20. giant cell arteritis
21. syphilitic aortitis
22. polyarteritis nodosa
23. Monckeberg’s sclerosis
24. **Which of the following is the most common cause of death in cases of aneurysm:**
25. Hemopericardium
26. congestive heart failure
27. myocardial infarction
28. aortic stenosis
29. aortic coarctation

**8. The most common cause of abdominal aortic aneurysms is:**

1. trauma
2. atherosclerosis
3. syphilis
4. hypertension
5. cystic medial necrosis

**9. Aneurysms of the aortic arch are mostly caused by:**

1. atherosclerosis
2. tuberculosis
3. syphilis
4. congenital defects
5. fungi

**10. Which of the following does not appear to be a risk factor in the development and complications of atherosclerosis:**

1. male gender
2. diabetes mellitus
3. hypertension
4. alcoholism
5. smoking

**11. Following injury produced by cutting the toe nail too short, a 70-year-old diabetic woman developed infection that progressed to gangrene of the left great toe. The most likely vascular disease process is:**

1. infectious arteritis
2. thrombophlebitis
3. arteriosclerosis
4. phlebosclerosis
5. thromboangitis obliterans

**12. The major cause of pulmonary thromboemboli is:**

1. hypertension
2. heart failure
3. atherosclerosis
4. thrombophlebitis
5. varicose veins

**13. Severe (malignant) hypertension is characterized by:**

1. hyperplastic arteriolosclerosis
2. aortic insufficiency
3. Marfan’s syndrome
4. calcific aortic stenosis
5. thromboangitis obliterans

**14. Which of the following factors suggest an undulating course of atherosclerosis:**

1. multilayer plaques
2. monolayer plaque
3. plaques at different stages of development
4. lipidic streaks
5. plaques with calcification

**15. The stages of myocardial infarction are:**

1. hemorrhagic
2. edematous
3. necrotic
4. vascularization
5. organization

**16. Liposclerotic stage of atherosclerosis is characterized by:**

1. formation of atheromatous mass
2. the growth of connective tissue around the lipidic deposites
3. plaque ulceration
4. destruction of elastic and argyrophilic membranes
5. formation of blood clots

**17. Acute coronary occlusion is followed by:**

1. myocardial gangrene
2. myocardial infarction
3. brown atrophy
4. myocardial hypertrophy
5. heart lipomatosis

**18. Which of the following factors are important in the development of atherosclerosis:**

1. hypoglycemia
2. hypercholesterolemia
3. hypertension
4. hypercalcemia
5. hyperlipidemia

**19. Manifestations of atherosclerosis are:**

1. metaplasia
2. calcification
3. amyloidosis
4. lipidic streaks
5. fibrous plaque

**20. Chronic cerebral ischemia due to cerebral artery atherosclerosis is accompanied by:**

1. cerebral cortex cells degeneration
2. extensive bleeding in the brain
3. atrophy of the cerebral cortex
4. hypertrophy of cortical cells
5. the development of dementia

**21. Fibrous plaques, in contrast to streaks are characterized by:**

1. plaque protruding the intima
2. plaques are at the level of the intima
3. white color
4. yellow color
5. plaque ulceration

**22. Which atherosclerotic stages are characterized by calcification:**

1. prelipidic stage
2. lipidic stage
3. ulcerative stage
4. liposclerotic stage
5. atheromathous stage

**23. Which of the following organs are mostly affected by atherosclerosis:**

1. kidney
2. liver
3. brain
4. intestine
5. lung

**24. Myocardial infarction size is determined by:**

1. the degree of arterial stenosis
2. the age of the patient
3. the possibility of collateral circulation
4. functional tension of myocardium
5. thickness of the walls of the heart

**25. Abdominal aortic aneurysm may be complicated by:**

1. aortic thrombosis
2. Leriche syndrome
3. Myasnikov syndrome
4. Budd-Chiari syndrome
5. internal bleeding
6. **Kidney atherosclerosis is characterized by:**
7. kidneys are markedly increased
8. kidney are decreased
9. macronodular surfaces
10. micronodular surfaces
11. kidneys are lardy
12. **Which of the following are myocardial infarction complications:**
13. cardiac tamponade
14. heart defect
15. asystole
16. brown atrophy
17. lung edema
18. **Which of the following atherosclerotic stages are clinically manifested:**
19. prelipidic stage
20. fatty streaks stage
21. atheromatous stage
22. ulcerative stage
23. fatty dots
24. **Which atherosclerotic stage can be complicated by aneurysm:**
25. lipidic stage
26. fibro-lipidic stage
27. atheromatous stage
28. ulcerative stage
29. necrotic stage 3

**30. Morphological manifestations of heart atherosclerosis include:**

1. myocardial infarction
2. postinfarction cardiosclerosis
3. cardiac valvopathy
4. brown atrophy of heart
5. heart lipomatosis
6. **Obstructive atherosclerosis of the femoral artery may be followed by:**
7. ischemia
8. varicose veins
9. elephantiasis
10. gangrene
11. anemia
12. **Subendocardial myocardial infarction may be complicated by:**
13. fibrinous pericarditis
14. parietal thrombosis
15. hemopericardium
16. thromboembolism
17. heart “in cuirass”

**33. Tick the complications that may arise in atherosclerotic plaque ulceration:**

1. artery thrombosis
2. phlebothrombosis
3. atheromatous detritus embolism
4. pulmonary infarction
5. acute arterial occlusion

**34. Slow atherosclerotic narrowing of the heart arteries may lead to:**

1. myocardial infarction
2. diffuse cardiosclerosis
3. macrofocal cardiosclerosis
4. acute cardiac failure
5. chronic cardiac failure

**35. Which of the following organs diseases may develop symptomatic hypertension:**

1. kidney pathology
2. pituitary pathology
3. brain pathology
4. liver pathology
5. spleen pathology

**36. Gross appearance of myocardial infarction is:**

1. red color
2. white color
3. white color with a hemorrhagic rim
4. triangular shape
5. irregular shape

**37. Coronary artery thrombosis is followed by:**

1. gangrene
2. infarction
3. hemosiderosis
4. lipomatosis
5. brown atrophy

**38. Specify atherosclerosis particularly associated with hypertension:**

1. it is limited
2. it is a widespread
3. circular arrangement of fibrous plaques in arteries
4. muscular arteries are affected
5. skip affection of elastic arteries

**39. Tick the changes in the arteries, which characterize hypertensive disease:**

1. elastofibrosis
2. dystrophic calcification
3. plasmatic infiltration
4. hyalinosis
5. atherocalcinosis

**40. Symptomatic hypertension may develop in the following cases:**

1. respiratory diseases
2. liver disease
3. kidney disease
4. CNS diseases
5. vascular diseases

**41. Which of the following factors are directly involved in hypertensive disease pathogenesis:**

1. morphological factor
2. humoral factor
3. reflexogenic factor
4. ontogenetic factor
5. allergic factor

**42. Tick the types of hypertension according to the character of its course:**

1. cerebral hypertension
2. cardiac hypertension
3. benign hypertension
4. malignant hypertension
5. renal hypertension

**43. Which pathological processes may develop in the myocardium due to hypertension:**

1. myocardial infarction
2. gangrene
3. hemorrhage
4. atrophy
5. vicarious hypertrophy

**44. Specify the "severe triad" of diseases that human suffer nowadays:**

1. essential hypertension
2. myocarditis
3. atherosclerosis
4. rheumatic fever
5. ischemic heart disease

**45. Specify the myocardial infarction complications:**

1. lung edema
2. acute ventricular aneurysm
3. cardiogenic shock
4. ventricular fibrillation
5. all of the listed

**46. Which of the following are acute morphological changes that can develop in the kidneys due to arterial hypertension:**

1. arteriolar hyalinosis
2. parenchymatous atrophy
3. infarcts
4. arteriolonecrosis
5. arteriolosclerosis

**47. Specify the types of cardiosclerosis:**

1. postinfarction
2. macrofocal
3. vicarious
4. microfocal
5. infectious

**48. Which of the following processes is characteristic for arterial hypertension:**

1. thrombophlebitis
2. phlebothrombosis
3. elastofibrosis
4. atherocalcinosis
5. all of the listed

**49. Which myocardial infarction stage may be complicated by rupture of heart wall:**

1. allergic stage
2. functional stage
3. necrotic stage
4. organization stage
5. ossification stage

**50. The following changes develop in the kidney in benign hypertension:**

1. shrinkage
2. macronodular surface
3. arteriolohyalinosis
4. arteriolosclerosis
5. Kimmelstiel-Wilson syndrome

**51. The** **location of myocardial infarction is in the:**

1. left ventricle
2. right atrium
3. left atrium
4. right ventricle
5. interventricular septum

**52. The following microscopic changes DOES NOT characterize myocardial infarction:**

1. necrotic myocardial fibers with preserved cell borders and absence of nuclei
2. missing transverse striations of cardiomyocytes
3. increased transverse diameter of myocardial fibers and hyperchromatic, irregular, stellate nuclei
4. perivascular Aschoff granulomas ;
5. vegetations along chordae and valve

**53. Hematuria and lumbar pain appeared in a patient on the 7-th day of myocardial infarction. What pathological process developed in the kidneys and what was the cause:**

1. renal infarction
2. acute pyelonephritis
3. thromboembolism due to the left ventricle parietal thrombus
4. thromboembolism due to aortic vegetations on the surface of the valve
5. thromboembolism due to leaflet mitral vegetation

**54.Morphological manifestations of acute ischemic heart disease are:**

1. atrophy of the heart
2. ischemic dystrophy of cardiomyocytes
3. infarction
4. chronic cardiac aneurysm
5. cardiosclerosis

**55. Myocardial infarction stages are:**

1. ischemic stage
2. necrotic stage
3. functional stage
4. compensatory stage
5. organization stage

**56. Direct causes of myocardial infarction are:**

1. intramural bleeding in the atherosclerotic plaque
2. coronary artery thrombosis
3. coronary artery spasm
4. coronary artery sclerosis
5. myocardial metabolic disorders

**57. Morphological manifestations of chronic ischemic heart disease:**

1. macrofocal cardiosclerosis
2. microfocal cardiosclerosis
3. acute myocardial infarction
4. chronic cardiac aneurysm
5. acute cardiac aneurysm

**58. Most common causes of death in chronic ischemic heart disease are:**

1. heart wall rupture and pericardial tamponade
2. cerebral hemorrhage
3. renal failure
4. chronic cardiovascular failure
5. thromboembolic complications

**59. Most common causes of death in acute ischemic heart disease are:**

1. cardiogenic shock
2. ventricular fibrillation
3. acute cardiovascular insufficiency
4. cerebral hemorrhage
5. acute posthemorrhagic anemia

**60. Most common sudden death causes in myocardial infarction:**

1. angina pectoris
2. ventricular fibrillation
3. pericardial tamponade
4. cardiogenic shock
5. ventricular aneurysm

**61. Myocardial infarction complication are the following:**

1. fibrinous pericarditis
2. aortic aneurysm
3. parietal cardiac thrombosis
4. cardiac rupture
5. aortic coarctation

**62. Renal type of essential hypertension is characterized by:**

1. hydronephrosis
2. arteriolar hyalinosis
3. glomerulosclerosis
4. arteriolosclerotic nephrosclerosis
5. pyelonephritis

**63. Which are the arterioles changes in the chronic benign essential hypertension:**

1. fibrinoid necrosis
2. sclerosis
3. hyalinosis
4. inflammation
5. thrombosis

**64. What arterioles damage develops in hypertensive crisis:**

1. infiltration of plasma
2. fibrinoid necrosis
3. thrombosis
4. hyalinosis
5. sclerosis

**65. What are the most common causes of death in chronic ischemic heart disease:**

1. respiratory failure
2. chronic heart failure
3. thromboembolic complications
4. rhythm disorders
5. renal insufficiency

**66. Ischemic cerebral infarction may develop in obstructive atherosclerosis of the following arteries:**

1. intracerebral arteries
2. renal arteries
3. vertebral arteries
4. carotid arteries
5. pulmonary arteries

**Pulmonary pathology**

**1. Which of the following is true regarding asthma:**

1. it produces dysplastic changes in the respiratory epithelium
2. it is a frequent cause of bronchiectasis
3. it may be triggered by infection
4. it causes centrilobular emphysema
5. all of the listed

**2. Which of the following is commonly associated with panacinar emphysema:**

1. asthma
2. lobar pneumonia
3. bronchopneumonia
4. diffuse alveolar damage
5. alpha-1-antitrypsin deficiency

**3. Which of the following is true regarding viral pneumonia:**

1. characterized histologically by interstitial inflammation
2. much more common than bacterial pneumonia
3. characterized by intraalveolar accumulation of lymphocytes
4. characterized by necrotizing granulomas
5. none of the listed

**4. Lung abscess may occur:**

1. as a complication of focal pneumonia
2. as a result of aspiration of infected material from carious teeth
3. as a result of viral pneumonia
4. as a result of acute bronchitis
5. as a complication of lobar pneumonia

**5. The etiologic agent common to both chronic bronchitis and emphysema is:**

1. hypersensitivity to inhaled antigens
2. persistent viral infection
3. asbestos
4. smoking
5. carbon dust

**6. The most common cause of community acquired pneumonia is:**

1. streptococcus pneumoniae
2. mycoplasma pneumoniae
3. Hemophilus influenzae
4. staphylococcus aureus
5. mycobacterium tuberculosis

**7. Which disease is matched with a characteristic histologic findings:**

1. asthma: granulomas
2. tuberculosis: mucous gland hypertophy
3. chronic bronchitis: eosinophils
4. emphysema: dilated acini
5. acute respiratory distress syndrome: mucus plugging

**8. Which disease is a restrictive lung disease:**

1. emphysema
2. bronchitis
3. pneumoconiosis
4. bronchiectasis
5. asthma

**9. Which of the following is commonly associated with lobar pneumonia:**

1. acute infectious-allergic disease which involves one or more pulmonary lobe
2. acute inflammation of pulmonary parenchyma
3. bronchial acute inflammation
4. chronic interstitial inflammation
5. chronic inflammation which involves one pulmonary lobe

**10.Which of the following is likely to the second stage of the lobar pneumonia.**

1. low elasticity, gray color
2. red colored, flaccid firmness
3. big variegated lung
4. red colored, increased firmness
5. gray colored, increased firmness

**11.Microscopic changes of bronchial epithelium in chronic bronchitis are:**

1. metaplasia
2. proliferative inflammation
3. dysplastic changes
4. smooth muscle atrophy
5. smooth muscle hypertrophy

**12. Characteristic microscopic changes of lung emphysema are:**

1. microcirculatory flow reduction
2. alveolar septa thickness
3. alveolar septa thinness
4. capillary sclerosis
5. hemosiderosis

**13. Complication of necrotizing bronchopneumonia include all of the following, EXCEPT:**

1. chronic bronchitis
2. bronchiectasis
3. pleural fibrosis
4. metastatic abscesses formation
5. permanent lobar solidification

**14. All of the following factors commonly predispose to bacterial pneumonia, EXCEPT:**

1. viral respiratory tract infections
2. smoking
3. congestive heart failure
4. bacterial urinary tract infection
5. general anesthesia

**15. Primary pulmonary hypertension is a pathological process that:**

1. it is strongly associated with cigarette smoking
2. it is often associated with autoimmune disorders
3. it is usually associated with chronic obstructive lung disease
4. it is usually associated with chronic bronchitis
5. it is the underlying cause of most diffuse interstitial fibrotic lung disease

**16. The central cancer of the lung can arise from:**

1. epithelium of the bronchioli
2. alveoli
3. epithelium of the central bronchi
4. blood vessels
5. lymphatic vessels

**17. Bronchiectasis in adults are most often associated with:**

1. bronchial obstruction
2. bronchial infection
3. peripheral carcinoma
4. bronchogenic carcinoma
5. all of the listed

**18. The lung cancer which most commonly produces and secretes hormone-like substances is:**

1. adenocarcinoma
2. large cell undifferentiated carcinoma
3. small cell undifferentiated carcinoma
4. squamous cell carcinoma
5. bronchoalveolar carcinoma

**19. Which of the chronic interstitial pneumonia listed below is characterized by marked proliferation and desquamation of alveolar lining cells:**

1. eosinophilic pneumonitis
2. idiopathic pulmonary fibrosis
3. desquamative pneumonitis
4. lymphoid pneumonitis
5. Hamman-Rich syndrome

**20. Which of the following carcinomas are well – differentiated and develop from cells that line the respiratory airspace without invading the stroma of the lung:**

1. squamous cell carcinoma.
2. anaplastic carcinoma.
3. large cell carcinoma.
4. small cell carcinoma.
5. bronchoalveolar carcinoma

**21. Squamous cell carcinoma of the lung is characterized by each of the following, EXCEPT:**

1. it is found predominantly in the major bronchi
2. it grows slower than oat cell carcinoma
3. it arises from metaplastic bronchial epithelium
4. at the time of diagnosis metastases are widespread and a cure can be achieved only by chemotherapy
5. its tumor cells are readily found in the sputum

**22. All the following statements about lung cancer are true, EXCEPT:**

1. It is related with chronic bronchitis
2. Has a high mortality rate
3. Has recently become more common in females than males
4. It is related to smoking
5. It is to a large extent a preventable form of cancer

**23. Lung adenocarcinomas typically:**

1. metastasize rarely
2. tend to grow more slowly than squamous cell carcinomas
3. have a propensity to invade the pleura
4. are unrelated to cigarette smoking
5. have decreased in frequency over the last 20 years

**24. The most common malignant neoplasm of the lung is:**

1. carcinoid tumor
2. squamous cell carcinoma of the bronchi
3. metastatic carcinoma
4. adenocarcinoma of the bronchi
5. oat cell carcinoma

**25. All of the following are true about chronic bronchitis except that it is:**

1. it is related to cigarette smoking
2. is characterized by the presence of productive sputum
3. related to the hypersecretion of mucus in response to chronic injury
4. characterized by hyperplasia and hypertrophy of mucus-secreting apparatus
5. often caused by alpha-1-antitrypsin deficiency

**26. Which of the following lesions of the lung contain numerous eosinophils:**

1. fibrosing alveolitis
2. sarcoidosis
3. asbestosis
4. Wegener's granulomatosis
5. bronchial asthma

**27. Pulmonary hypertension is a consequence of all of the following, EXCEPT:**

1. idiopathic hypoventilation
2. recurrent pulmonary emboli
3. congenital left-to-right shunts
4. lobar pneumonia
5. left ventricular failure

**28.Which of the following may be associated with asthma:**

1. the ingestion of aspirin
2. tobacco smoke
3. the inhalation of asbestos
4. the inhalation of talc
5. acute silicosis

**29. All of the following are typical for primary tuberculosis EXCEPT:**

1. it is asymptomatic.
2. it is associated with the development of immunity and hypersensitivity to proteins of M. tuberculosis.
3. it heals with the formation of a Ghon complex.
4. the most serious immediate complication is miliary tuberculosis.
5. the majority of patients develop primary progressive tuberculosis

**30. Familial emphysema is usually due to a defect in:**

1. the structure and function of cilia
2. decreased antiprotease activity
3. epithelial chloride transport
4. regulation of immunoglobulin E
5. pulmonary surfactant

**31. The etiologic agent common to chronic bronchitis and emphysema is**

1. a persistent viral infection
2. hypersensitivity to inhaled allergens
3. smoking
4. asbestosis
5. alcohol

**32. Charcot-Leyden crystals occur in:**

1. bronchiolitis obliterans
2. centrilobular emphysema
3. chronic bronchitis
4. asthma
5. bronchiectasis

**33. All of the following are true about bronchial asthma EXCEPT:**

1. changes in both lungs
2. Churchman’s spirals and Charcot-Leyden crystals in sputum
3. prone to develop lung abscess
4. mediated by leukotrienes
5. mucus in bronchi

**34. All of the following are true of hyaline membranes in the lung, EXCEPT:**

1. occur in newborns and adults
2. may be the result of oxygen toxicity
3. occur in shock
4. consist of fibrin
5. contain immune complexes

**35. In acute bacterial pneumonia, the alveolar spaces are most likely to contain:**

1. plasma cells and fibrin
2. lymphocytes and fibrin
3. macrophages and hemorrhage
4. polymorphonuclear leukocytes and fibrin
5. macrophages and fibrin

**36. True statements regarding pulmonary embolism and infarction include all of the following, EXCEPT:**

1. occlusion of pulmonary arteries by thrombi is usually embolic in nature
2. the usual source of pulmonary thrombemboli is the deep veins of the legs
3. when emboli reach the lungs, infarction typically occurs in 80-90% of cases
4. saddle emboli cause sudden death by blockage of pulmonary blood flow
5. multiple small emboli over time may lead to pulmonary hypertension

**37. Which of the following may involve extrapulmonary tuberculosis:**

1. adrenal
2. fallopian tube
3. lymph node
4. pleura
5. all of the listed

**38. Which of the following is a recognized contributing cause of death in a patient with severe pulmonary emphysema:**

1. respiratory acidosis
2. acute intercurrent bacterial infection
3. right sided heart failure
4. severe pneumothorax
5. all of the listed

**39. Which of the following statements best describes compression atelectasis:**

1. consequence of complete obstruction of an airway
2. the mediastinum characteristically shifts toward the atelectatic lung
3. consequence of filling of the pleural space with fluid or air
4. results from loss of pulmonary surfactant
5. consequence of fibrotic changes in the lung

**40. Which of the following conditions is a cause of secondary spontaneous pneumothorax:**

1. emphysema
2. lung abscess
3. interstitial pneumonia
4. tuberculosis
5. viral pneumonia

**41. True statements regarding hyaline membranes and diffuse alveolar injury include all of the following, EXCEPT:**

1. hyaline membranes consist of fibrin and necrotic cell debris
2. the presence of hyaline membranes reflects diffuse alveolar injury
3. hyaline membranes in premature infants are filled with lymphocyte
4. hyaline membranes arise from alveolar injury due to a variety of insults
5. diffuse alveolar injury in respiratory distress syndrome arises by different pathogenic mechanisms

**42. Pneumonia with microabscess formation is most likely due to which of the following organisms:**

1. beta hemolytic streptococcus
2. klebsiella pneumoniae
3. legionella pneumophila
4. pseudomonas aeruginosa
5. staphylococcus aureus

**43. The characteristic of bronchioloalveolar carcinoma is:**

1. accounts for 30% of lung carcinomas
2. is characterized histologically by a solid pattern
3. the mucinous/diffuse variety is associated with a better prognosis
4. the non-mucinous variant may arise from type II pneumocytes
5. develop from the central bronchi

**44. Which of the following statements is correct regarding pulmonary edema:**

1. the primary determinant of colloid osmotic pressure within pulmonary capillaries is the concentration of Na ions
2. high altitude pulmonary edema is an example of neurogenic edema
3. injury to pulmonary vasculature is uncommon due to the unique properties of the endothelial cells therein
4. left-sided congestive heart failure leads to pulmonary edema through increased hydrostatic pressure
5. hemosiderin-laden macrophages usually indicate the presence of acute pneumonia

**45. Which of the following is the pathogenetic mechanism that leads to the development of lung abscess:**

1. aspiration of infected material
2. complication of bacterial pneumonia
3. secondary infection of a pulmonary infarct
4. septic embolization from an infection in another organ
5. all of the listed

**46.Which is TRUE regarding small cell carcinoma of lung:**

1. it is not associated with smoking
2. most commonly peripheral in location.
3. excellent response to chemotherapy
4. overall prognosis (5-year survival) is in the range of 30-40%
5. it is well differentiated

**47. The characteristic lesion in primary pulmonary tuberculosis is:**

1. cavitary lesion in the lung apex
2. Ghon complex
3. localized bronchiectasis
4. milliary lesions
5. tuberculous pneumonia

**48. Which of the following is a cause of pneumothorax:**

1. chest trauma
2. emphysema
3. lung abscess
4. needle biopsy of the pleura
5. all of the listed

**49. Regarding squamous cell carcinoma (SCC) of the lung, which of the following is TRUE:**

1. SCC is a peripheral tumor
2. SCC has a strong association with scarring (scar cancer)
3. is characterized histologically by keratin formation
4. a paraneoplastic syndrome due to ectopic ACTH production is associated with SCC
5. caseous necrosis is present.

**50. Which of the following is a characteristic histologic finding in asthma:**

1. attenuation of the bronchial submucous gland layer
2. attenuation of the basement membrane of bronchial epithelium
3. mixed inflammatory infiltrate in the bronchial walls, with a predominance of mast cells
4. hypertrophy of bronchial wall muscle
5. destruction of alveolar walls

**51. Which of the following statements regarding centriacinar emphysema is TRUE:**

1. it involves the respiratory bronchioli
2. it occurs predominantly in female smokers
3. it affects the right lung more severely than the left
4. it is often associated with chronic alcoholism
5. it is usually seen in drug addicts

**52. All of the following are complications of severe bronchial asthma EXCEPT:**

1. bronchiectasis
2. pneumonia
3. vhronic bronchitis
4. cor pulmonale
5. bronchogenic carcinoma

**53. Viral infections of the lung most commonly cause:**

1. acute airspace pneumonia with accumulation of leukocytes
2. aspiration pneumonia with accumulation of leukocytes
3. interstitial pneumonia with predominantly lymphocytic infiltration
4. granulomatous pneumonia and mast cell degranulation
5. opportunistic pneumonia with eosinophilic accumulation

**Tuberculosis**

**1) The following are tuberculosis complications, EXCEPT:**

a) pulmonary hemorrhage

b) hematogenous spread

c) amyloidosis

d) fibrous obliterate pleuritis

e) purulent pleuritis with empyema

**2) All features listed below are typical for primary tuberculosis, EXCEPT:**

a) lymphogenous spread

b) hematogenous spread

c) may develop more than once in profoundly immunosuppressed patients

d) it develops regional caseous lymphadenitis

e) it is mostly localized, in lung apexes

**3) Secondary tuberculosis is mostly localized in:**

a) brain

b) lungs

c) kidneys

d) bones

e) digestive system

**4) What Mycobacterium Koch type most frequently occurs:**

a) bovis

b) hominis

c) avium

d) poikiloterm

e) scrofulaceum

**5) Name the healed focus of primary tuberculous:**

a) Redeker

b) Assmann

c) Ranke

d) Pott

e) Osler

**6) Which of the following features manifest exacerbation of tuberculous process:**

a) dehydration of necrotic focus

b) petrification of necrotic focus

c) the total necrosis of granuloma

d) encapsulation of necrotic focus

e) perifocal exudation

**7) Which of the listed below features describe the healing of primary tuberculous process:**

a) dehydration of necrotic focus

b) petrification of necrotic focus

c) the total necrosis of granuloma

d) encapsulation of necrotic focus

e) perifocal exudation

**8) Which of the following are morphological features of tuberculous granuloma:**

a) predominance of epithelioid cells

b) absence of vessels in centre of granuloma

c) presence of inflamed vessels in centre of granuloma (endovasculitis)

d) presence of neutrophils

e) central caseous necrosis

**9) Which is the most frequent location of extrapulmonary tuberculosis:**

a) amygdales

b) lymphatic nodes

c) skin

d) spleen

e) appendices

**10) Which of the following are primary tuberculosis features:**

a) it heals by Ranke focus formation

b) may spread hematogenous

c) it is located exclusively in the lung

d) may lead to cancer development

e) purulent leptomeningitis is the most dangerous complication

**11) Which are the contamination routes in tuberculosis:**

a) air

b) by contact

c) parenteral

d) by insects bites

e) alimentary

**12) Which are the tuberculosis types:**

a) endogenous

b) primary

c) recurrent

d) polyetiological

e) secondary

**13) Where the primary tuberculous complex locations are:**

a) liver

b) lungs

c) brain

d) intestine

e) spinal cord

**14) The primary tubercular complex components are:**

a) primary affect

b) thrombophlebitis

c) lymphadenitis

d) cavities

e) lymphangitis

**15) The following are the primary tuberculosis consequences:**

a) fibrosis of the Gohn complex

b) calcification of the Gohn complex

c) amyloidosis

d) progression and generalization of process

e) lung cancer

**16) The following are the secondary tuberculosis causes of depth:**

a) lung hemorrhage

b) cardio-respiratory failure

c) amyloidosis

d) purulent peritonitis

e) liver cirrhosis

**17) On histological examination of the lymph node a massive area of caseous necrosis surrounded by epithelioid cells, lymphocytes and a small number of polynuclear giant cells has been discovered. Which of the following statements are acceptable:**

a) syphilitic granuloma

b) Aschoff granuloma

c) tuberculous lymphadenitis

d) Ziehl-Neelsen staining is necessary to identify pathogenic agent

e) cervical lymph nodes are mostly affected

**18) The patient, who suffered of chronic cavernous pulmonary tuberculosis, died of cachexia. Which macro- and microscopic morphological changes can be detected at autopsy:**

a) brown induration of lung

b) brown atrophy of liver

c) massive deposits of fat under epicardium

d) brown atrophy of myocardium

e) intracellular accumulation of lipofuscin

**19) The following morphological changes occur in cured primary complex:**

a) autolysis of necrotic debris

b) progressive fibrosis

c) exudative inflammation

d) calcification

e) lymphatic spread

**20) Which are the routes of Primary TB progression:**

a) bronhogenous

b) lymphatic

c) primary affect extension

d) perineural

e) hematogenous

**21) Which of the following is the most severe complication of primary tuberculosis:**   
 a) Ranke complex formation

b) progression

c) extension of primary affect

d) sero-fibrinous pleurisies

e) regional lymphadenopathy

**22) Which of the following is the primary tuberculosis mechanism of development:**   
 a) first contact with mycobacterium tuberculosis

b) repeated contact with mycobacterium tuberculosis

c) constant contact with mycobacterium tuberculosis

d) reactivation of dormant primary lesions

e) revaccination

**23) Which is the dissemination way in systemic miliary tuberculosis:**

a) through air

b) lymphatic

c) by contact

d) perineural

e) arterial   
**24) Which is the dissemination way in pulmonary miliary tuberculosis:**

a) through air

b) lymphatic

c) by contact

d) perineural

e) arterial

**25) Patient has suffered over 10 years of secondary pulmonary tuberculosis; the cause of death was renal failure. At autopsy the kidneys were increased in size, the cut section yellow, and positive Virchow reaction. What is the correct diagnosis:**

a) pyelonephritis

b) steatosis

c) amyloidosis

d) paraproteinemic nephrosis

e) necrotic nephrosis

**26) What are the primary tuberculosis morphological manifestations:**

a) lobar caseous pneumonia

b) primary tubercular complex

c) primary affect

d) milliary tuberculosis

e) tubercular lymphadenitis

**27) Choose the primary tuberculosis structure:**

a) focus of serofibrinous broncho-pneumonia

b) focus of hemorrhagic pneumonia

c) focus of caseous pneumonia, lymphangitis and regional lymphadenitis

d) purulent phlebitis

e) thrombarteriitis

**28) Which are the pleural lesion at the primary affect level:**

a) sero-fibrinous pleuritis

b) catharal pleuritis

c) dystrophic change

d) purulent pleuritis

e) calcification

**29) Choose the macroscopic picture of pulmonary primary tuberculous focus:**

a) purulent lymphangitis

b) hemorrhagic pneumonia

c) purulent lymphadenitis

d) micro-abscess

e) caseous pneumonia focus

**30) All of the listed criteria are characteristic for primary tuberculosis, EXCEPT:**

a) subpleural location in the upper zones of lower lobe of the lung

b) regional caseous lymphadenitis

c) may progress by extension of the primary complex

d) lymphatic generalization

e) intracanalicular dissemination by sputum

**31) What of the following organs are commonly affected in systemic tuberculosis:**

a) skin

b) liver

c) heart

d) adrenals

e) uterine tubes and epididymis

**32) Which cell type is considered characteristic for tuberculous granuloma:**

a) plasmacyte

b) epithelial cell

c) Langherhans cell

d) koilocyte

e) epithelioid cell

**33) Which of the following is the most common cavitary tuberculosis cause of death:**

a) cardiogenic shock

b) sepsis

c) pulmonary hemorrhage

d) liver insufficiency

e) purulent peritonitis

**34) Which of the following is the most common secondary tuberculosis cause of death:**

a) sepsis

b) cardio-respiratory failure

c) cerebral edema

d) thromboembolism of pulmonary artery

e) ventricular fibrillation

**35) Which of the following is the most common secondary tuberculosis cause of death:**

a) purulent osteomyelitis

b) purulent leptomeningitis

c) cerebral edema

d) parenchymal organs amyloidosis

e) thromboembolism of pulmonary artery

**36) Which of the factors listed below favoring the secondary tuberculosis development:**

a) malnutrition

b) AIDS

c) old age

d) chronic cholecystitis

e) rheumatic fever

**37) Centre of tuberculous granuloma is represented by a focus of:**

a) fibrinoid necrosis

b) Zencker necrosis

c) steatonecrosis

d) caseous necrosis

e) calcification

**Pathology of kidneys**

1. **The following statements are true about poststreptococcal glomerulonephritis EXCEPT:**
2. it is an autoimmune complex disease
3. acute renal failure is the common fate
4. the glomeruli appear microscopically hypercellular
5. it mostly affects children and young adult
6. oliguria and hematuria are features of the disease
7. **Which of the following statements is true about chronic glomerulonephritis:**
8. the disease affects both kidneys, often in an asymmetrical pattern
9. chronic glomerulonephritis represents the most common fate of poststreptococcal

glomerulonephritis

1. clinically, the patient may develop hypertension and may complain of polyuria
2. All the listed
3. None of the listed
4. **All of the following are features of renal failure EXCEPT:**
5. alkalosis
6. high blood urea
7. anemia
8. inflammation of serous membrane
9. erythremia
10. **Choose the right statements about glomerulonephritis:**
11. glomerular injury
12. renal capsule injury
13. affects both kidneys
14. stones in renal calices
15. presence of blood and protein in urine
16. **Which of the following refers to the primary glomerulonephritis:**
17. diabetes mellitus
18. amyloidosis
19. lipoid nephrosis
20. IgA nephropathy
21. membranoproliferative glomerulonephritis
22. **The nephrotic syndrome is characterized by the following:**
23. hematuria
24. massive proteinuria
25. hypertension
26. generalized edema
27. hyperlipidemia and lipiduria
28. **The nephritic syndrome is characterized by the following:**
29. hematuria
30. massive proteinuria
31. hypertension
32. generalized edema
33. hyperlipidemia and lipiduria
34. **The basic mechanisms in glomerulonephritis development:**
35. immune
36. humoral
37. with antibody formation
38. nervous
39. endocrine
40. **The microscopic changes in acute glomerulonephritis:**
41. swollen kidney
42. pale, gray kidney
43. variegated kidney
44. red pyramid
45. pale pyramid
46. **The microscopic changes of the kidney in chronic glomerulonephritis:**
47. glomerular amyloidosis
48. glomerular sclerosis
49. hypertrophy of the renal tube
50. atrophy of the renal tube
51. hyalinization of the vessels
52. **Choose the most common complication in glomerulonephritis:**
53. pneumonia
54. renal failure
55. pyelonephritis
56. adrenal failure
57. liver failure
58. **The macroscopic pattern of the kidney in lipoid nephrosis:**
59. increased in size
60. decrease in size
61. flaccid
62. pyramids are pale
63. the yellow-pale cortex is thicker
64. **The most common causes of necrotic nephrosis is the following EXCEPT:**
65. poisons
66. xerophthalmia
67. severe infections
68. massive hemolysis
69. traumatic lesions
70. **Which of the following about pyelonephritis is right:**
71. infectious pathology with glomeruli involvement
72. immune mesangial disease
73. pathology of the renal pelvis, calices and interstitial tissue
74. pathology of the convolute tube
75. lesions of the renal pelvis mucosal layer

**15. Which ways of infections spread are characterized for pyelonephritis:**

1. urinary tract way
2. by drinking water
3. descendent way
4. lymphogenic way
5. sexual-transmitted way

**16. The macroscopic changes of the kidneys in acute pyelonephritis are the following EXCEPT:**

1. increased in size
2. hyperemia of the parenchyma
3. renal pelvis dilation
4. renal pelvis contains mucus
5. microabscesses on cut section

**17. The microscopic changes of the kidneys in acute pyelonephritis are the followings EXCEPT:**

1. hyperemia of the mucosal layer
2. leucocytic infiltration of the mucosa
3. epithelial degeneration
4. nonspecific granulomatosis
5. necrosis of the mucosal layer

**18. The macroscopic changes of the kidneys in chronic pyelonephritis are the following EXCEPT:**

1. the kidneys are different in size
2. the surface is macronodular
3. renal pelvis is enlarged
4. thickness of the renal pelvis wall
5. the capsule can be easy removed

**19. The microscopic changes of the kidney in chronic pyelonephritis are the following EXCEPT:**

1. sclerosis of the renal pelvis mucosa
2. pituitary-like appearance of the kidney
3. thyroid-like
4. vascular sclerosis
5. dystrophy and atrophy of the tube

**20. The complications in acute pyelonephritis are the following EXCEPT:**

1. renal abscesses
2. pyonephrosis
3. perinephritis
4. hepatitis
5. sepsis

**21. The following are chronic pyelonephritis complications:**

1. arterial hypotension
2. arterial hypertension
3. pneumonia
4. chronic renal failure
5. icterus

**22. The morphologic changes in nephrolithiasis depend on the following:**

1. stones situation
2. stones size
3. duration of the process
4. number of the kidneys
5. blood pressure

**23. The morphologic changes in nephrolithiasis include the following EXCEPT:**

1. renal parenchyma hypertrophy
2. renal pelvis dilatation
3. hydronephrosis
4. renal parenchyma atrophy
5. pyelonephritis

**24. The complications in nephrolithiasis are the following EXCEPT:**

1. pyelonephritis
2. glomerulonephritis
3. pyonephrosis
4. sepsis
5. chronic renal failure

**25. The morphologic patterns of the kidney in polycystic disease include the following:**

1. numerous cysts
2. polyps of the renal pelvis mucosa
3. renal parenchyma atrophy
4. cortex hypertrophy
5. renal hyperplasia

**26. The following are polycystic kidney disease complications:**

1. nephrotic syndrome
2. pyelonephritis
3. nephrolithiasis
4. cysts suppuration
5. acute glomerulonephritis

**27. The glomerulopathy include:**

1. glomerulonephritis
2. myeloma kidney
3. tubule fermentopathy
4. polycystic kidney disease
5. kidney lithiasis

**28. Nephrotic syndrome is characterized by:**

1. jaundice
2. physical inactivity
3. proteinuria
4. hyperlipidemia
5. edema

**29. 9. y litiasis n for"Thyroid-like" kidney is caused by:**

1. renal amyloidosis
2. Graves disease
3. chronic pyelonephritis
4. acute pyelonephritis
5. extracapillary glomerulonephritis

**30. What is the acute kidney insufficiency most severe complication:**

1. amyloidosis
2. primary contracted kidney
3. nephrolithiasis
4. total cortical necrosis of kidney
5. kidney carbuncle

**31. Chronic glomerulonephritis is characterized by:**

1. micronodular kidneys surface
2. shrunken kidneys
3. large cyanotic kidneys
4. large lardy kidneys
5. large spotted kidneys

**32. Name the acute renal failure stages:**

1. shock
2. latent
3. azotemic
4. oligo-anuric
5. recovery of diuresis

**33. What are extrarenal symptoms of glomerulonephritis:**

1. right ventricle hypertrophy of the heart
2. hematuria
3. oliguria
4. edema
5. left ventricle hypertrophy of the heart

**34. Name diseases, leading to kidney shrinkage:**

1. acute pyelonephritis
2. chronic pyelonephritis
3. chronic glomerulonephritis
4. acute tubular necrosis
5. amyloidic nephrosis

**35. Nephrotic syndrome is characterized by:**

1. ascites
2. gross hematuria
3. proteinuria
4. hypercholesterolemia
5. edema

**36. Which of the following changes are found in uremia:**

1. hemorrhagic diathesis
2. fibrinous pericarditis
3. fibrinous pneumonia
4. pulmonary edema
5. all of the listed

**37. All of the following causes hematuria EXCEPT:**

1. urinary stones
2. cystitis
3. nephrotic syndrome
4. urinary neoplasm
5. leukemia

**38. Which of the following statement is true about crescentic**

**glomerulonephritis:**

1. it is characterized by glomerular necrosis
2. the bowman's capsule show parietal crescent
3. the disease often progresses rapidly to renal failure
4. all of the listed
5. none of the listed

**39 Pathogenetic stages of chronic renal insufficiency are:**

**a.** early renal insufficiency

**b.** impaired renal function

**c.** terminal renal insufficiency

**d.** decreased renal reserves

**e.** atrophy of renal parenchyma

**40. Identify types of azotemia:**

**a.** prerenal

**b.** neurogenic

**c.** renal

**d.** postrenal

**e.** interstitial

**41. Acute nephritic syndrome characteristics are:**

**a.** oliguria

**b.** proteinuria

**c.** generalized edema

**d.** hematuria

**e.** hypertension

**42. Macroscopic signs of chronic pyelonephritis are:**

**a.** asymmetrical involvement kidneys

**b.** at autopsy renal parenchyma is dense due to extensive fibrosis

**c.** when cutting the scars are wide with involving of kidney cortex and medullary layer

**d.** kidneys are increased in size and have irregular shape

**e.** kidneys are shrunken with granular surface

**43. Macroscopic and microscopic changes in nephrosclerosis are:**

**a.** glomerulosclerosis

**b.** tubular atrophy

**c.** the cortex is thin on section

**d.** kidneys are increased in size

**e.** surface is smooth

**44. Microscopic types of renal cell carcinoma are:**

**a.** clear cell

**b.** spindle cell

**c.** granular cells

**d.** giant cell

**e.** undifferentiated cell

**45. Macroscopic pattern of renal cell carcinoma are:**

**a.** yellowish on section

**b.** increased consistency

**c.** partially encapsulated

**d.** foci of necrosis

**e.** does not invade adjacent tissues

**46. Identify the most common malignant tumors of kidneys:**

**a.** renal cell carcinoma

**b.** Wilms tumor

**c.** urothelial carcinoma

**d.** angiosarcoma

**e.** lymphosarcoma

**47. Characteristics of renal cell carcinoma are:**

**a.** is a benign kidney tumor

**b.** metastases are rare

**c.** more common in children

**d.** develops from tubules epithelium

**e.** constitutes 90% of all kidney tumors in adults

**48. Frequent urinary malformations are:**

**a.** ureteral duplication

**b.** bladder exstrophy

**c.** polycystic kidney disease

**d.** renal agenesis

**e.** renal dysplasia

**49. Identify predisposing factors of pyelonephritis**

**a.** obstruction

**b.** diabetes mellitus

**c.** pregnancy

**d.** renal ptosis

**e.** gene mutations

**50. Identify the etiology of renal cell carcinoma:**

**a.** smoking

**b.** von Hippel-Lindau syndrome

**c.** chronic alcoholism

**d.** chronic pyelonephritis

**e.** chronic glomerulonephritis

**Pathology of the male genital system**

1. **The most common cause of scrotal enlargement, caused by an accumulation of serous fluid within the tunica vaginalis is:**
2. elephantiasis
3. chylocele
4. hematocele
5. hydrocele
6. lymphatic obstruction
7. **The failure of testicular descent into the scrotum is called:**
8. testicular atrophy
9. cryptorchidism
10. verrucous carcinoma
11. orchiopexy
12. phimosis

**3. Choose cause of vascular disturbances of testis and its consequence:**

a. orchiopexy

b. phimosis

c. torsion

d. testicular atrophy

e. seminomas

**4. Schiller-Duvall bodies is:**

1. large nuclei with prominent nucleoli

b. Mallory bodies

c. structures resembling primitive glomeruli

1. large cells with basophilic cytoplasm
2. koilocytosis
3. **Benign prostatic hyperplasia virtually always occurs in:**
4. transitional zone of the prostate
5. periurethral zone of the prostate
6. central zone of the prostate
7. peripheral zone of the prostate
8. distal urethra
9. **The main cause of benign prostatic hyperplasia is:**
10. chronic prostatitis
11. bacilli Calmette-Guerin
12. increased level of androgens
13. chronic pelvic pain syndrome
14. increased level of estrogens
15. **The main substrate of benign prostatic hyperplasia is:**
16. chronic prostatitis
17. bacilli Calmette-Guerin
18. excessive estrogen-dependent growth of stromal and glandular elements
19. chronic pelvic pain syndrome
20. excessive androgen-dependent growth of stromal and glandular elements
21. **Most prostatic carcinomas arise from the:**
22. peripheral zone of the prostate
23. central zone of the prostate
24. proximal urethral zone of the prostate
25. periuretheral zone of the prostate
26. transitional zone of the prostate
27. **Nodular hyperplasia of prostate arises from:**
28. central zone of the prostate
29. periurethral zone of the prostate
30. periuretheral zone of the prostate
31. transitional zone of the prostate
32. peripheral zone of the prostate
33. **The main substrate of prostatic carcinomas is:** 
    1. chronic prostatitis
    2. bacilli Calmette-Guerin
    3. excessive estrogen-dependent growth of stromal and glandular elements
    4. chronic pelvic pain syndrome
    5. excessive androgen-dependent growth of stromal and glandular elements
34. **The consequences of cryptorchidism are:**
35. testicular carcinoma
36. phimosis
37. tubular atrophy
38. infertility

e. prostatitis

1. **Morphological changes of testicles in cryptorchidism**
2. normal size in early age
3. microscopic evidence of tubular atrophy
4. hyalinization of basal membranes of seminiferous tubes
5. normal size on puberty
6. increased size on puberty
7. **Causes of testicular inflammation include:**
8. nonspecific epididymitis
9. orchitis
10. mumps
11. tuberculosis
12. AIDS
13. **Select the variants of testicular torsion:**
14. neonatal torsion
15. adult torsion
16. chromosomal abnormality
17. twisting of the spermatic cord
18. the most common urologic emergencies
19. **Identify testicular neoplasms characteristics:**
20. occur in roughly 6 per 100,000 males
21. peak incidence in the 15- to 34-year-old age group
22. peak incidence in the 11- to 22-year-old age group
23. are the most common tumors in men
24. are the rarest tumors in men
25. **Testicular germ cell tumors are subclassified into:**
26. seminomas
27. neuroendocrine tumors
28. nonseminomatous germ cell tumors

d. leydigomas

e. sertoliomas

1. **Identify gross appearance of seminomas:**
2. may contain foci of coagulation necrosis
3. soft consistency
4. well-demarcated
5. gray-white tumors that bulge from the cut surface
6. contain foci of hemorrhage and necrosis
7. **Microscopically, seminomas are composed of:**
8. large, uniform cells with distinct cell borders
9. clear, glycogen-rich cytoplasm
10. large cells with basophilic cytoplasm
11. round nuclei with conspicuous nucleoli
12. large nuclei with prominent nucleoli
13. **Yolk sac tumors are:**
14. the most common primary testicular neoplasm in children younger than 3 years of age
15. it has a very bad prognosis
16. in adults, yolk sac tumors most often are seen admixed with embryonal carcinoma
17. on gross inspection, these tumors often are large
18. a distinctive feature is the presence of Schiller-Duvall bodies
19. **Condylomata acuminata may occur on:**
20. the external genitalia or perineal areas
21. breast
22. most often about the coronal sulcus
23. inner surface of the prepuce
24. face
25. **Identify characteristics of condylomata acuminata:**
26. single sessile, red papillary excrescences
27. multiple pedunculated, red papillary excrescences
28. cells of the spinous layer of the stratified squamous epithelium with vacuolization of the cytoplasm
29. acanthosis
30. atypical basaloid cells
31. **The most frequent agents that cause condylomata acuminata are:**
32. HIV
33. HPV (human papilloma virus) type 6
34. HPV (human papilloma virus) type 18
35. HPV (human papilloma virus) type 11
36. HPV (human papilloma virus) type 2
37. **Microscopically the typical seminoma is composed of:**
38. intratubular germ cells
39. sheets of uniform cells divided into poorly demarcated lobules
40. delicate septa of fibrous tissue contain a moderate amount of lymphocytes
41. large cells with distinct cell borders, pale nuclei with prominent nucleoli
42. cells contain a round nucleus and eosinophilic cytoplasm;
43. **The normal prostate contains several distinct zones, including:**
44. central zone
45. peripheral zone
46. transitional zone
47. periurethral zone
48. proximal urethral zone
49. **Nodular hyperplasia of prostate:**
50. appears from the glands located in the central zone
51. produces early urinary obstruction
52. arises from glands located in periuretheral zone
53. are palpable during digital examination of the rectum
54. arises from glands located in peripheral zone
55. **Benign prostatic hyperplasia is characterized by:**
56. proliferation of benign glandular elements and stroma
57. hyperplastic glands are lined by two cell layers
58. hyperplastic glands are lined by one cell layer
59. acute urinary obstruction
60. proliferation of stratified squamous epithelium
61. **Identify the factors involved in the pathogenesis of prostate cancer:**
62. androgens
63. estrogens
64. heredity
65. external environment
66. somatic mutations
67. **Characteristics of prostate carcinoma are:**
68. occurs mainly in men older than 50 years of age
69. is the less common form of cancer in men
70. advanced lesions appear as firm, gray-white foci
71. lesions without well-defined margins that infiltrate the adjacent glands
72. lesions without well -defined margins that don’t infiltrate the adjacent glands
73. **The characteristic of malignant glands vs benign glands in prostate carcinoma:**
74. malignant glands typically are smaller than benign glands
75. malignant glands are lined by a single uniform layer of cuboidal or columnar epithelium
76. malign glands are bigger than benign ones
77. the basal cell layer always presents in malignant glands
78. malignant glands are crowded together and characteristically lack branching and papillary infoldings
79. **Choose microscopic features for carcinoma of the prostate:**
80. nuclei are enlarged and often contain one or more prominent nucleoli
81. small nuclei with prominent nucleoli
82. mitotic figures are uncommon
83. irregular or ragged glandular structures
84. pleomorphism is not marked
85. **Choose the correct statements:**
86. serum PSA measurement is a useful but imperfect prostate cancer screening test
87. serum PSA measurement is very useful cancer screening test
88. most prostate cancers are clinically silent and are detected by routine monitoring of PSA concentrations
89. the most common acquired genetic lesion in prostatic carcinomas are mutation of *TPRSS2-ETS* fusion genes
90. the most common acquired genetic lesions in prostatic carcinomas are mutation of *TPPRS2-TS* fusion genes
91. **Choose the correct statements:**
92. grading of prostate cancer is made by Gleason system
93. Gleason system correlates with stage and prognosis of prostate cancer
94. grading of prostate cancer is made by Nottingham system
95. carcinoma of the prostate is a common cancer of old men between 65 and 75 years of age
96. carcinoma of the prostate is a common cancer of young men between 30 and 35 years of age
97. **Choose the malformations of the urethral canal:**
98. hypospadias
99. epispadias
100. phimosis
101. condyloma acuminatum
102. balanoposthitis
103. **Balanoposthitis characteristics are:**
104. is infection of the glans penis and prepuce
105. is caused by wide variety of microorganisms
106. is inflammation of testis
107. is caused by HPV
108. may occur on the perineal areas
109. **Balanoposthitis is caused by:**
110. candida albicans
111. anaerobic bacteria
112. Gardnerella
113. pyogenic bacteria
114. human papillomavirus
115. **Most cases of balanoposthitis occur as a consequence of:**
116. HPV type 16
117. congenital anomalies
118. poor local hygiene in uncircumcised males
119. accumulation of desquamated epithelial cells, sweat
120. condyloma acuminatum
121. **Embryonal carcinoma characteristics are:**
122. more aggressive than seminomas
123. primary tumors are smaller than seminomas
124. do not replace the entire parenchyma of testis
125. frequently spread through the tunica albuginea into the epididymis
126. slow-growing tumor that does not produce metastases
127. **Embryonal carcinoma characteristics are:**
128. well formed glands are present
129. often variegated
130. poorly demarcated at the margins
131. foci of hemorrhage or necrosis
132. the cells grow in alveolar patterns
133. **Spermatocytic seminomas characteristics are:**
134. soft consistency, pale gray color
135. on cut surface, the tumor is often variegated
136. contain three cell populations
137. lack lymphocytes, granulomas, syncytiotrophoblasts
138. extratesticular sites of origin
139. **Spermatocytic seminomas characteristics are:**
140. is very common
141. slow-growing germ cell tumor
142. occurs in old men
143. 1% to 2% of all testicular germ cell neoplasm
144. occurs in younger men
145. **Teratoma characteristics are:**
146. testicular tumor with various cellular or organoid components
147. contain reminiscent of normal derivatives of more than one germ layer
148. may occur only in adults
149. may occur at any age
150. pure form of teratoma is very rare in infants
151. **Teratomas characteristics are:**
152. pure teratomas are rare in adults: 2% to 3 %
153. pure forms are fairly common in infants and children
154. frequency of teratomas mixed with other germ cell tumors is 45 %
155. pure forms of teratomas are very rare in infants
156. about 65 % of teratomas are composed are pure
157. **Gross appearance of teratomas:**
158. usually small, ranging from 0,2 to 0,5 cm
159. usually large, ranging from 5 to 10 cm
160. the variegated cut surface with cysts reflects the multiplicity of tissue types found histologically
161. are composed of muscle bundles, structures reminiscent of thyroid gland
162. fibrous or myxoid stroma
163. **Identify types and characteristics of teratomas:**
164. mature
165. mixed
166. resembling various adult tissues
167. immature
168. sharing histologic features with fetal or embryonal tissue
169. **Teratoma of the testis consist of:**
170. disorganized glandular structures
171. cartilage
172. smooth muscles
173. immature stroma
174. malignant cells
175. **Choose characteristics of teratomas:**
176. in children, differentiated mature teratomas are benign
177. in postpubertal males all teratomas are regarded as malignant
178. malignant ones are capable of metastatic behavior whether the element are mature or not
179. frequently malignant non-germ cell tumors arise in teratomas
180. frequently benign germ cell tumors arise in teratomas
181. **Choose the correct statements for testicular tumors:**
182. are the most common cause of painless testicular enlargement
183. germ cells are the source of 95% of testicular tumors
184. germ cell tumors may be composed of a single histologic pattern 60% of cases
185. germ cell tumors may be composed of a single histologic pattern 40% of cases
186. mixed histologic pattern consists about 40% of cases
187. **Choose correct statements:**
188. most commonly mixed tumors is: embryonal carcinoma plus teratoma
189. one of the most commonly mixed tumor is: teratocarcinoma
190. most commonly mixed tumor is: seminoma plus choriocarcinoma
191. most commonly mixed tumor is: seminoma plus teratoma
192. the germ cell tumors with one histologic pattern are: seminoma, embryonal carcinoma, yolk sac tumors, teratoma and choriocarcinoma
193. **Choose correct statements:**
194. testicular germ cell tumors can be divided into two groups: seminomas and nonseminomas
195. testicular germ cell tumors can be divided into three groups: seminomas, teratomas and nonseminomas
196. distant spread of seminomas is frequent
197. seminomas spread mainly to paraaortic lymph nodes
198. distant spread of seminomas is rare
199. **Choose correct statements:**
200. nonseminomatous tumors tend to spread earlier
201. nonseminomatous tumors tend to spread by both lymphatics and blood vessels
202. nonseminomatous tumors tend to spread later
203. non-germ cell tumors are: leydigoma and seminoma
204. non-germ cell tumors are: sertoli cell tumor and leydigoma
205. **Leydig cell tumor characteristics are:**
206. these tumor may elaborate androgens and corticosteroids
207. in some cases androgens and estrogens
208. may arise at any age
209. most cases occurs between 20 and 60 years of age
210. tumor are hormonally silent and is present as a testicular mass
211. **Choose features for Leydig cell tumor:**
212. circumscribed nodules, usually less than 5 cm
213. circumscribed nodules, usually more than 5 cm
214. distinctive golden brown, homogeneous cut surface
215. homogeneous gray-white to yellow cut surface
216. leydig cells are large in size
217. **Choose histologic features for Leydig cell tumor:**
218. abundant granular eosinophilic cytoplasm
219. a round central nucleus
220. rod-shaped crystalloids of Reinke
221. cytoplasm frequently contains lipid droplets, vacuoles, lipofuscin
222. tumor cells are arranged in distinctive trabeculae
223. **Choose features of Sertoli cell tumor:**
224. hormonally silent and present as a testicular mass
225. small nodules with homogeneous gray-white to yellow cut surface
226. most Sertoli cell tumors are benign
227. 10 % of tumors pursue a malignant course
228. 10% of tumors in adults are invasive and develop metastases

**Syphilis**

1. **Choose features for neurosyphilis:**
2. its late tertiary phase
3. diffuse cerebral cortical neuronal loss
4. meningovascular lesions is associated with those parenchymatous
5. an agent consisting solely of protein
6. affects the basal ganglia, hippocampus, and brain stem
7. **Histologic features of neurosyphilis are:**
8. large numbers of plasma cells infiltrating the meninges
9. the leptomeninges are congested and opaque containing an exudate
10. caseous granulomatous inflammation with fibrosis
11. marked fibrosis and obliterative vasculitis
12. granulomas are not present
13. **Complications of chronic meningitis in neurosyphilis are:**
14. obliterative vasculitis (endarteritis obliterans)
15. fibrosis around the fourth ventricular foramina
16. cranial nerve fibrosis
17. general paresis
18. tabes dorsalis
19. **Meningovascular syphilis characteristics are**:
20. chronic inflammation of meninges with fibrosis and endarteritis
21. presence of gummas
22. mild lymphocytic meningeal infiltrate
23. diffuse cerebral cortical neuronal loss; chronic encephalitis; presence of spirochetes
24. degeneration of spinal cord (posterior columns) and sensory nerve root; absence of spirochetes
25. **Parenchymatous brain syphilis characteristics are**:
26. chronic inflammation of meninges with fibrosis and endarteritis.
27. presence of gummas
28. proliferation of microglial cells
29. diffuse cerebral cortical neuronal loss; chronic encephalitis; presence of spirochetes
30. degeneration of spinal cord (posterior columns) and sensory nerve root; absence of spirochetes
31. **Identify types of syphilis:**
32. primary
33. tertiary
34. secondary
35. idiopathic
36. congenital
37. **Syphilis is caused by:**
38. treponema pallidum
39. ureaplasma urealyticum
40. candida albicans
41. trichomonas vaginalis
42. Gardnerella vaginalis
43. **Primary syphilis characteristics are:**
44. incubation period: 2-6 weeks
45. incubation period :10-20 weeks
46. hard chancre
47. condylomata lata
48. maculopapular skin rash
49. **Secondary syphilis characteristics are:**
    1. incubation period: 2-6 weeks
    2. the incubation period after: 10-20 weeks
    3. hard chancre
    4. condylomata lata
    5. maculopapular skin rash
50. **Tertiary syphilis characteristics are:**
    1. gummas
    2. cardiovascular syphilis
    3. neurosyphilis
    4. hard chancre
    5. condylomata lata
51. **Tertiary syphilis characteristics are:**
    1. hard chancre
    2. soft chancre
    3. gummas
    4. involves vasa vasorum of proximal aorta
    5. involves vasa vasorum of distal aorta
52. **Choose the correct statements for congenital syphilis:**
    1. 40% of infected fetuses die in utero
    2. 40% of infected fetuses die in utero in the absence of treatment
    3. pneumonitis
    4. hepatomegaly
    5. pancreatic fibrosis
53. **Choose the correct statements for late childhood congenital syphilis:**
    1. “mulberry” molars
    2. deafness
    3. interstitial keratitis
    4. hepatomegaly
    5. blindness
54. **Manifestation of Hutchinson's triad are:**
55. blindness
56. deafness
57. interstitial keratitis
    1. hepatomegaly
58. “mulberry” molars

**Pathology of the female genital system**

1. **The dilated and hemorrhagic fallopian tube seen in this photograph is most consistent with:**
2. acute salpingitis
3. adenocarcinoma
4. ectopic pregnancy
5. it is normal
6. hydrosalpinx
7. **Which are the complications produced by the lesion in the image below:**
8. epithelial dysplasia
9. abdominal hemorrhage
10. gangrene
11. rupture of salpinx
12. embryonal malformation
13. **Which condition may produce the changes in the picture below:**
14. chronic salpingitis
15. fimbria adhesion
16. ovarian cysts
17. chronic endometritis
18. tubal endometriosis
19. **This large encapsulated myometrial tumor is most consistent with:**
20. leiomyoma
21. endometrial carcinoma
22. a former placental implantation site
23. teratoma
24. disgerminoma
25. **This cystic ovarian tumor:**
26. is malignant
27. could be the source of ectopic thyroid hormone
28. is likely producing beta HCG
29. is an example of endometriosis
30. it may occur from all germ layers
31. **The following images are of a tissue from a curettage of a woman who was thought to be pregnant but had spontaneously aborted. The circled area highlights atypical trophoblastic material. The surgical report described the tissue as looking like a cluster of grapes. Follow up of this woman must include:**
32. serial Beta HCG determinations.
33. since she has aborted, no follow up is needed.
34. a onetime serum estrogen level.
35. serial PAP smears at least monthly for the next six months.
36. chemotherapy
37. **The woman diagnosed with a hydatidiform mole continued to experience vaginal bleeding after curettage and was shown to have markedly elevated Beta HCG levels several weeks following the spontaneous abortion. Surgery was needed and the following picture is of her uterus. Given the history, the highlighted area is most consistent with:**
38. a leiomyoma
39. an invasive mole
40. adenocarcinoma of the endometrium
41. metastatic cervical cell carcinoma
42. teratoma
43. **Carcinoma of the cervix usually begins at the junction of the:**
44. ectocervix and endocervix
45. endocervix and endometrium
46. deep and superficial endocervical glands
47. vagina and cervix
48. cervix and paracervical tissue
49. **Which of the following lesions may be a consequence of the pathological process in the image:**
50. adenocarcinoma
51. keratinized squamous cell carcinoma
52. non-keratinized squamous cell carcinoma
53. fibrosarcoma
54. myoma
55. **The pathological process which best characterize these images is:**
56. secretory endometrium
57. hyperplasia of endometrium
58. adenocarcinoma of endometrium
59. products of conception
60. endometriosis
61. **Identify diagnosis based on pathological changes in images:**
62. invasive adenocarcinoma
63. adenomyosis
64. adenosarcoma
65. adenofibroma
66. endometriosis
67. **Which is the complication of the pathological process in the images:**
68. uterine bleeding
69. adenocarcinoma
70. myosarcoma
71. fibrosarcoma
72. infertility
73. **A 32-year-old woman had a firm nodule palpable on her uterus three years ago noted on a routine physical examination. The nodule has slowly increased in size and is now about twice the size it was when first discovered. She is asymptomatic. Which of the following diagnoses correspond to the presented data:**
74. adenocarcinoma
75. leiomyosarcoma
76. rhabdomyosarcoma
77. leiomyoma
78. fibrosarcoma
79. **A 36-year-old woman finds a lump in her right breast. Her physician notes a 4 cm firm, irregular, fixed mass in the upper outer quadrant of her right breast. A fine needle aspiration is performed, and the findings are consistent with infiltrating ductal carcinoma. The mass is removed, and a sentinel lymph node dissection is performed. Which of the following findings will best predict a better prognosis for the patient:**
80. the patient has concurrent ductal carcinoma in situ in the same breast
81. the sentinel lymph node is negative for tumor
82. the patient has a sister who had a similar type of breast cancer
83. the tumor has a high grade
84. the tumor is a low grade
85. **Prognostic factors in invasive breast carcinoma include all of the following, EXCEPT:**
86. tumor size
87. type of carcinoma (ductal, inflammatory, etc.)
88. location of primary tumor within breast
89. lymph node involvement by tumor
90. grade of tumor
91. **All of the following are true regarding fibroadenoma, EXCEPT:**
92. it is the most common benign tumor of the female breast
93. more common in younger women
94. may enlarge late in the menstrual cycle and during pregnancy
95. is an important risk factor for breast carcinoma
96. usually presents as a solitary, moveable mass
97. **Which of the following neoplasms is derived from all three germ layers:**
98. carcinoma
99. teratoma
100. sarcoma
101. apudoma
102. gonadoblastoma
103. **All of the following are true of endometrial carcinoma, EXCEPT:**
104. most cases occur in postmenopausal women
105. it is caused by prolonged stimulation of the endometrium by progesterone
106. it is preceded by endometrial hyperplasia in most cases
107. it can metastasize via lymphatic and/or hematogenous routes
108. the most important prognostic factor is the stage of the tumor
109. **All of the following are true of cervical squamous cell carcinoma, EXCEPT:**
110. it is preceded by squamous cell dysplasia in most cases
111. It is caused by human papillomavirus (HPV)
112. early age at first intercourse is a risk factor
113. most cases occur in women over 65 years old
114. the Pap smear is an important screening test
115. **Which of the following is true regarding ovarian neoplasms:**
116. most are malignant
117. they are symptomatic if even still small (<1 cm)
118. they may interfere with fertility
119. they are very rare
120. most arise from germ cells
121. **Which of the following endometrial lesions is associated with the highest risk of developing of endometrial carcinoma:**
122. chronic endometritis
123. complex hyperplasia with atypia
124. complex hyperplasia without atypia
125. simple hyperplasia
126. squamous metaplasia
127. **A 39 year old woman has cyclical premenstrual pain. Her breasts have a "lumpy bumpy" texture on palpation. A biopsy is performed. The histopathologic features include small cysts lined by epithelial cells with apocrine metaplasia, calcium deposits, areas of fibrosis, increased number of acini (adenosis), and foci of florid hyperplasia of ductal epithelium. Which of these changes increase the risk of breast carcinoma:**
128. adenosis
129. apocrine metaplasia
130. calcium deposits
131. cysts
132. epithelial hyperplasia   
     **23. What is a dermoid cyst:**
133. teratoma
134. dysgerminoma
135. yolk sac tumor
136. Mullerian tube tumor
137. myometrial tumor
138. **What does the pathological process in the image may contain:**
139. skin, hair
140. sweat glands, cartilage
141. muscle fibers, bone
142. mucus, blood
143. pus, fibrin
144. **What does adenomyosis mean:**
145. endometrial tissue in the myometrium
146. endometrial tissue in the cervical mucosa
147. endometrial tissue in fallopian tubes
148. endocervical tissue in the myometrium
149. exocervical tissue in the myometrium
150. **What are the risk factors for ovarian carcinoma:**
151. increased age
152. family history of carcinoma
153. early menarche
154. tubal carcinoma
155. mammary carcinoma
156. **A Papanicolaou smear is commonly used for the detection of early cellular dysplasias in tissue scrapings from the:**
157. vagina
158. uterine cervix
159. body of the uterus
160. fallopian tubes
161. ovaries
162. **Malignancy of the breast has all of the following general characteristics except:**
163. peak incidence is at menopause
164. is more common in single women with no children
165. is equally prevalent in all socio-economic groups
166. oftentimes presents as a lump that a woman finds by her own self examination
167. the first metastasis are in axillary lymph nodes
168. **It is true that most masses in the breast are benign. The most common benign tumor of the breast is:**
169. adenocarcinoma
170. lipoma
171. fibrocarcinoma
172. fibroadenoma
173. fibrolipoma
174. **The most common uterine tumor is:**
175. adenocarcinoma
176. leiomyoma (fibroid)
177. in situ carcinoma
178. sarcoma
179. fibrosarcoma
180. **Studies of carcinoma of the cervix strongly indicate sexual transmission of an oncogenic agent as the cause. This agent is:**
181. herpes virus
182. human papilloma virus (HPV)
183. trichomonas
184. chlamydia
185. cytomegalovirus
186. **Which is the cause of the pathological process represented in the image:**
187. herpes virus
188. human papilloma virus (HPV)
189. trichomonas
190. chlamydia
191. cytomegalovirus
192. **By which hormone may be caused endometrial carcinoma:**
193. estrogen
194. progesterone
195. human chorionic gonadotropin
196. luteinizing hormone
197. testosterone
198. **The hormone that is directly responsible for production of secretory changes in endometrial glands is:**
199. progesterone
200. estrogen
201. FSH (follicle stimulating hormone)
202. LH (luteinizing hormone)
203. testosterone
204. **The most common malignant tumor of the ovary is derived from the ovarian:**
205. stromal cells
206. connective tissue
207. surface (covering) epithelium
208. germ cells
209. Leydig cells
210. **A benign neoplastic grapelike mass of placental villi cells occurring in pregnancy is:**
211. dermoid cyst (cystic teratoma)
212. choriocarcinoma
213. hydatidiform mole
214. teratoma
215. dysgerminoma
216. **Malignancy of the endometrium at menopause can be caused by the lack of:**
217. progesterone
218. estrogen
219. aldosterone
220. testosterone
221. interferon
222. **In endometriosis, endometrial cells:**
223. are infected with human papilloma virus
224. are found in a location outside the endometrial cavity
225. predispose to an ectopic pregnancy
226. are detected by a "Pap" smear
227. can produce endometrioid tumors
228. **Which of the following are NOT true about uterine (endometrial) carcinoma:**
229. generally is hormone-dependent
230. peaks at menopause
231. is detected by a "Pap" smear
232. commonly is an adenocarcinoma
233. commonly is a myosarcoma
234. **Which of the following ovarian cells type do NOT produce hormones:**
     1. theca cells
     2. corpus luteal cells
     3. syncytiotrophoblastic cells
     4. ovarian surface epithelium cells
     5. ovarian stromal cells.
235. **Which of the following statement are NOT correct regarding endometrium:**
     1. it is composed of glandular epithelium and underlying stromal tissues
     2. it is designed for implantation
     3. subnuclear vacuolization is a sign of the late menstrual cycle
     4. progesterone is the major hormone responsible for secretory changes in the endometrium
     5. estrogen is the major hormone responsible for secretory changes in the endometrium
236. **Which of following statements are correct:**
     1. fallopian tubes connect uterus and ovary in a continuum
     2. ovaries is the most common site for ectopic pregnancy
     3. endometrial gland is the primary source of mucin in vaginal wall.
     4. corpus luteum is no longer present in postmenopausal ovaries
     5. endocervical gland is the primary source of mucin in vaginal wall
237. **Which of the following risk factors correlates best with the development of CIN** (**cervical intraepithelial neoplasia):**
238. oral contraception
239. HPV (human papillomavirus infection type 16) infection
240. HSV (herpes simplex virus type 2) infection
241. nulliparity
242. presence of intrauterine devices
243. **Chronic inflammation of the uterine tubes may be complicate with:**
244. ectopic pregnancy
245. sterility
246. adenomyosis
247. adenocarcinoma
248. ovarian carcinoma
249. **Which ovarian structures may give rise to cyst development:**
250. follicles
251. luteal corpus
252. surface epithelium
253. endometrial glands
254. ovarian stroma
255. **Which of the following ovarian tumor may contain thyroid structures:**
256. teratoma
257. dysgerminoma
258. leydigoma
259. fibroma
260. thecoma

**Endocrine system pathology**

1. **Which of the following conditions can occur in diabetic patients:**
2. osmotic diuresis
3. nephrotic syndrome
4. trophic big toe ulcer
5. retinal hemorrhage
6. all of the listed
7. **Which of the following lesions may be detected in diabetes mellitus:**
8. pancreatic amyloid deposits
9. renal tubular vacuolization
10. glomerulosclerosis
11. arteriolosclerosis
12. all of the listed
13. **Which one of the following is not included in the manifestation of Grave’s**

**disease:**

1. thyroiditis
2. thyroitoxicosis
3. infiltrative ophthalmopathy
4. tachycardia
5. localized infiltrative dermopathy
6. **A complex syndrome resulting from the absence or deficiency of the pituitary hormones is:**
7. hypopituitarism
8. dwarfism
9. acromegaly
10. gigantism
11. nanism
12. **A proportional overgrowth of the body's tissue due to the hypersecretion of the human growth hormone before puberty is:**
13. hypopituitarism
14. gigantism
15. acromegaly
16. dwarfism
17. hyperparathyroidism

**6. Under-secretion of thyroxine hormone in children with association of mental and physical retardation, is called:**

**a.** cretinism

**b.** dwarfism

**c.** gigantism

**d.** tetany

**e.** acromegaly

**7. Abnormal protrusion of the eyeball, is called:**

1. tetany
2. exophthalmos
3. gigantism
4. myxedema
5. enophthalmos

**8. Identify etiology of primary hyperparathyroidism:**

**a.** adenoma of parathyroid gland

**b.** chronic renal failure

**c.** hypercalcemia

**d.** hypocalcemia

**e.** paraneoplastic syndrome

1. **. Excessive releasing of adrenal cortex hormones lead to:**
2. cretinism
3. Cushing's syndrome
4. Malignant goiter
5. Addison's disease
6. Kuhn syndrome
7. **. Identify symptoms of Grave's ophthalmopathy:**
8. bulging eyeballs
9. dry, irritated eyes and puffy eyelids
10. cataracts
11. light sensitivity
12. glaucoma

**11. An ACTH stimulation test is commonly used to diagnose:**

1. Grave's disease
2. adrenal insufficiency and Addison's disease
3. cystic fibrosis
4. hashimoto's disease
5. Kohn disease

**12. Identify symptoms of Cushing's syndrome:**

1. severe fatigue and weakness
2. vitamin B12 insufficiency
3. hypertension and elevated blood glucose
4. a protruding hump between the shoulders
5. hair loss

**13. The most common benign tumor of the pituitary gland is:**

1. glioma
2. prolactinoma
3. carcinoid tumor
4. thyrotropic adenoma
5. astrocytoma

**14. Identify etiology of secondary hyperparathyroidism:**

**a.** adenoma of parathyroid gland

**b.** chronic renal failure

**c.** hypercalcemia

**d.** hypocalcemia

**e.** paraneoplastic syndrome

**15. Identify etiology of tertiary hyperparathyroidism:**

**a.** adenoma of parathyroid gland

**b.** long-term secondary hyperparathyroidism

**c.** hypercalcemia

**d.** hypocalcemia

**e.** paraneoplastic syndrome

**16. Untreated hyperthyroidism during pregnancy may result in all of the following:**

1. premature birth and miscarriage
2. low birth weight
3. autism
4. preeclampsia
5. hypotension

**17. Endocrine disorders may be triggered by:**

1. stress
2. infection
3. vegetables abuse
4. chemicals in the food chain and environment
5. cell phone use

**18 What is the most common cause of hypothyroidism worldwide:**

1. autoimmune disease
2. graves’ disease
3. iatrogenic causes
4. iodine deficiency
5. medication side effects

**19. Identify risk factors for the development of osteoporotic fractures:**

1. African-American race
2. current cigarette smoking
3. female gender
4. low body weight
5. male gender

**20. The hormones regulating blood calcium levels are:**

1. insulin and glucagon
2. glycogen and PTH
3. inhibiting hormones
4. PTH and calcitonin
5. calcitonin and ACTH

**21. A hormone that under certain circumstances is regulated by positive feedback is:**

1. calcitonin
2. histamine
3. oxytocin
4. melatonin
5. insulin

**22. The pituitary gland is attached to the hypothalamus by the:**

1. epithalamus
2. infundibulum
3. parafollicular cells
4. intermediate mass
5. corpus callosum

**23. Which of the following hormones stimulates testosterone production by the testis:**

1. TSH
2. FSH
3. ACTH
4. LH
5. GH

**24. Which of the following hormones is released in response to a nerve impulse:**

1. epinephrine
2. cortisol
3. testosterone
4. insulin
5. glucagon

**25. All of the following are hormones of the anterior hypophysis EXCEPT:**

* 1. vasopressin
  2. follicle-stimulating hormone
  3. adrenocorticotropic hormone
  4. prolactin
  5. oxytocin

**26. All of the following are hormones of the posterior hypophysis EXCEPT:**

1. vasopressin
2. follicle-stimulating hormone
3. adrenocorticotropic hormone
4. prolactin
5. oxytocin

**27. Identify the hormones which are released in response to releasing hormones:**

1. adrenalin
2. human growth hormone
3. follicle stimulating hormone
4. prolactin
5. oxytocin

**28. Which of the following hormones control the production and release of glucocorticoids:**

* 1. ADH
  2. ACTH
  3. GH
  4. FSH
  5. LH

**29. Identify mineralocorticoids characteristics:**

* 1. are produced in the adrenal cortex
  2. are steroid hormones
  3. help regulate the homeostasis of sodium and potassium
  4. are produced by adrenal medulla
  5. are produced by ovarian cortex

**30. Identify the stress hormones:**

* 1. epinephrine
  2. norepinephrine
  3. acetylcholine
  4. calcitonin
  5. testosterone

**31. The gland which can be classified as an endocrine and an exocrine gland is the:**

* 1. thyroid
  2. thymus
  3. pancreas
  4. pituitary
  5. hypothalamus

**32. The development and maintenance of the female sex characteristics is the responsibility of:**

* 1. estrogen and androgen
  2. progesterone and testosterone
  3. relaxin and inhibin
  4. progesterone and relaxin
  5. progesterone and estrogen

**33. Which hormone stimulates cells to grow and divide:**

* 1. thyroid stimulating hormone
  2. luteinizing hormone
  3. growth hormone
  4. glucocorticoids
  5. insulin

**34. Insulin is secreted by the pancreas after a meal in order to:**

* 1. decrease the concentration of blood glucose
  2. decrease the permeability of the cell membranes to glucose
  3. increase the production of glucose from glycogen
  4. increase the concentration of blood glucose
  5. increase the amount of thyroid hormones in the blood

**35. For Addison's disease is characteristic:**

1. suprarenalism
2. bronze color of the skin
3. obesity
4. hypertension
5. hypoglycemia

**36. Diabetes in young people has its own characteristics, highlight them:**

1. leads to obesity
2. leads to the exhaustion
3. evaluates benign
4. evaluates malignant
5. prone to ketoacidosis

**37. Diabetes in old people has its own characteristics, highlight them:**

1. leads to obesity
2. leads to the exhaustion
3. evaluates benign
4. evaluates malignant
5. prone to ketoacidosis

**38. Patients with diabetes mellitus die from the following reasons:**

1. diabetic coma
2. hyperosmolar coma
3. uremia
4. myocardial infarction
5. limb gangrene

**39. Patients with Graves' disease can develop:**

1. liver cirrhosis
2. obesity
3. left ventricular hypertrophy
4. exophthalmos
5. melanoderma

**40. Identify types of colloidal goiter:**

1. proliferating
2. tubular
3. trabecular
4. macrofollicular
5. microfollicular

**41. The heart in Graves' disease is characterized by:**

1. cardiosclerosis
2. hypertrophy of the left ventricle
3. stenosis of the mitral orifice
4. parietal thrombosis
5. obliteration of the pericardial cavity

**42. Diabetic macro-angiopathy outcomes are:**

1. cardiosclerosis
2. diabetic nephropathy
3. myocardial infarction
4. limb gangrene
5. diabetic polyneuritis

**43. The disorder of which gland is the cause of Simmonds disease:**

**a.** thyroid

1. pancreas
2. adrenal
3. pituitary
4. epiphysis

**44. Identify cause of Addison's disease:**

1. hyperthyroidism
2. hypothyroidism
3. adrenal hyperfunction
4. adrenal hypofunction
5. parathyroid gland hyperfunction

**45. Primary adrenal lesions include:**

1. hashimoto's disease
2. panhypopituitarism
3. Graves' disease
4. Addison's disease
5. Conn's syndrome