

QUESTIONS FOR LICENSE EXAM

JULY 2024

1. Sepsis Six recommendations do not include:
 - (A) Slow fluid administration
 - (B) Lactate measurement
 - (C) Blood culture collection
 - (D) Narrow-spectrum intravenous antibiotic administration
 - (E) Oxygen administration to maintain SpO₂>94%

2. Which of the following cephalosporines are active against *Pseudomonas aeruginosa*?
 - (A) Ceftaroline
 - (B) Ceftazidime
 - (C) Ceftriaxone
 - (D) Cefepime
 - (E) Ceftobiprole

3. Which of the following groups are not at high risk to develop sepsis:
 - (A) Pregnant women
 - (B) People who abuse alcohol or intravenous drugs
 - (C) People who did not previously have sepsis
 - (D) The very young (neonates) and older people < 65 years of age
 - (E) People with immunosuppressive medical conditions

4. The quick SOFA (qSOFA) score includes:
 - (A) Respiratory rate ≥ 22 breaths/min
 - (B) Heart rate ≥ 80 beats/min
 - (C) Systolic blood pressure ≤ 100 mmHg
 - (D) Leukocytosis or leukopenia
 - (E) Fever or hypothermia

5. Select the correct statements regarding aminoglycoside antibiotics:
 - (A) The main mechanism of action is the interruption of bacterial protein synthesis by inhibiting ribosomal function
 - (B) The main mechanism of action is inhibition of bacterial DNA synthesis
 - (C) Gentamicin and Teicoplanin are included in this class
 - (D) Gentamicin and Tobramycin are included in this class
 - (E) They are active against *Pseudomonas* spp.

6. *The end-stage organ failure is not characterized by:
 - (A) Serum lactate < 2 mmol/L
 - (B) INR > 1.5
 - (C) APTT > 60 sec
 - (D) Serum creatinine > 170 μ mol/L
 - (E) Platelets < 100 x 10⁹/L

7. A patient with septic shock:

- (A) Requires vasopressor support to maintain a mean arterial pressure lower than 65 mmHg
 - (B) Requires vasopressor support to maintain a mean arterial pressure of 65 mmHg or more
 - (C) Has a low serum lactate concentration (≤ 2 mmol/L)
 - (D) Has an elevated serum lactate concentration (> 2 mmol/L)
 - (E) Serum lactate concentration is not modified
8. The most common bacteria causing sepsis in people who inject drugs include the following, except for:
- (A) *Acinetobacter baumannii*
 - (B) MRSA
 - (C) MSSA
 - (D) *Klebsiella pneumoniae*
 - (E) *Streptococcus pyogenes*
9. Which of the following do not represent quinolone-related adverse events?
- (A) Ototoxicity
 - (B) Neurotoxicity
 - (C) Photosensitive rash
 - (D) Gastrointestinal disorders
 - (E) Red man syndrome
10. *Empirical antibiotic treatment of neutropenic patients consists of:
- (A) Vancomycin
 - (B) Piperacillin/Tazobactam
 - (C) Ertapenem
 - (D) Ceftriaxone
 - (E) Ticarcillin/Clavulanic acid
11. *Type 1 respiratory failure is characterized by the which of the following:
- (A) High PaO_2 and low or normal PaCO_2
 - (B) Low PaO_2 and low or normal PaCO_2
 - (C) High PaCO_2 and low PaO_2
 - (D) Both PaO_2 and PaCO_2 are low
 - (E) Normal or low PaO_2 and low PaCO_2
12. Type 2 respiratory failure:
- (A) It is a hypoxic type of respiratory failure
 - (B) It is a ventilatory type of respiratory failure
 - (C) Its most frequent cause is Chronic Obstructive Pulmonary Disease
 - (D) The pulmonary tissue is most affected in this type of respiratory failure
 - (E) The alveolar ventilation is most affected in this type of respiratory failure
13. The following are indications for invasive mechanical ventilation:
- (A) Guillen-Barre syndrome
 - (B) Oxygen arterial blood saturation of $>95\%$
 - (C) Glasgow Coma Score < 8 points
 - (D) Complicated trauma on the lumbar spine
 - (E) Opioid overdose

14. Pulsoximetry:
- (A) It is a method by which the content of arterial oxygen can be determined
 - (B) It is a method of arterial oxygen saturation monitoring
 - (C) It is an invasive method
 - (D) It is a continuous method
 - (E) It depends on the peripheral perfusion of the patients
15. Capnography:
- (A) Analyses the carbon dioxide concentration from the patients inhaled air
 - (B) It is used for tracheal intubation confirmation
 - (C) It is useful to detecting the acute cardiorespiratory modifications
 - (D) It is a discontinuous monitoring
 - (E) It is used to monitor the efficiency of ventilation
16. *Moderate form of ARDS, according to the Berlin definition, is characterised by:
- (A) PaO_2/FiO_2 between 200-100 mmHg
 - (B) $PaO_2/FiO_2 > 300$ mmHg
 - (C) $PaO_2/FiO_2 < 100$ mmHg
 - (D) $PaO_2/FiO_2 > 400$ mmHg
 - (E) PaO_2/FiO_2 between 50-100 mmHg
17. ARDS is defined by:
- (A) Respiratory distress
 - (B) Increased pulmonary compliance
 - (C) New, patchy, bilateral pulmonary infiltrates
 - (D) Unilateral, patchy pulmonary infiltrates
 - (E) The signs and symptoms are not related to a cardiac cause
18. Non cardiogenic pulmonary edema:
- (A) Constitutes the cardinal cause of ARDS
 - (B) A reduction in vascular permeability can be observed in this pathology
 - (C) Among the cellular mediators, leucocytes have a major role
 - (D) The surfactant production is reduced
 - (E) Alveolar collapse appears
19. The differential diagnosis of ARDS comprises:
- (A) Chronic Renal Failure
 - (B) Cardiac Failure
 - (C) Chronic Obstructive Pulmonary Disease
 - (D) Pulmonary fibrosis
 - (E) Pulmonary neoplasm
20. Some of the therapeutic options for ARDS therapeutic comprise:
- (A) Mechanical ventilation
 - (B) Steroids
 - (C) Supination
 - (D) Inhaled Nitric Oxide

(E) Aerosolised prostacycline

21. *As a specific sign from clinical features, which is seen in certain anemia, bone deformities are characteristic for:
- (A) Iron deficiency anemia
 - (B) Hemolytic anemia
 - (C) Thalassemia major
 - (D) Sickle cell disease
 - (E) Vitamin B12 deficiency
22. A characteristic blood film for iron deficiency anemia is with:
- (A) Normochromia with mean corpuscular hemoglobin (MCH) >27 pg
 - (B) The red cells are microcytic, mean corpuscular volume (MCV) < 80fL
 - (C) There are frequent nucleated red blood cells
 - (D) There is poikilocytosis and anisocytosis
 - (E) Reticulocytosis
23. Aquired causes for sideroblastic anemia are:
- (A) Some drugs (e.g. thiazide diuretics)
 - (B) Benzene toxicity
 - (C) Myeloid leukemia
 - (D) Myeloproliferative disorders
 - (E) δ -ALA synthase enzyme deficit
24. An anemia with raised MCV, with macrocytosis on the peripheral blood film, with a normoblastic bone marrow is seen in:
- (A) Hyperthyroidism
 - (B) Patients on chronic dialysis
 - (C) Treatment with hydroxycarbamide
 - (D) Vitamin B12 deficiency
 - (E) Alcohol excess
25. Clinical features of pernicious anemia includes:
- (A) Lemon-yellow skin
 - (B) Sore tongue
 - (C) Dysphagia with Plummer-Vinson syndrome
 - (D) Brittle hair
 - (E) Polyneuropathy involving the peripheral nerves
26. *In rheumatoid arthritis, IgM type Rheumatoid Factors:
- (A) Does not represent a useful predictor of prognosis
 - (B) Its absence does not rule the disease out
 - (C) A persistently low titre implies more persistently active synovitis
 - (D) a persistently low titre justifies earlier use of DMARDs(Disease-modifying anti- rheumatic drugs)
 - (E) A persistently low titre implies more joint damage
27. Among the factors predicting a poor prognosis for progression in early rheumatoid arthritis are:

- (A) Morning stiffness less than 30 minutes
 - (B) Female sex
 - (C) Cigarette smoking
 - (D) Asymmetrical small joint involvement
 - (E) Less than 4 swollen joints
28. Seronegative rheumatoid arthritis:
- (A) Has a predominant symmetrical joint involvement pattern
 - (B) Initially affects less often the fingers
 - (C) Has a worse long-term prognosis
 - (D) Some cases progress to severe disability
 - (E) Initially affects more often the wrists
29. Tumour necrosis factor-alpha blockers used in rheumatoid arthritis are:
- (A) Adalimumab
 - (B) Infliximab
 - (C) Rituximab
 - (D) Tocilizumab
 - (E) Golimumab
30. Haematological manifestations that occur in rheumatoid arthritis are:
- (A) Usually normochromic anaemia
 - (B) Low platelet count in active disease
 - (C) Pancytopenia in patients with Felty syndrome
 - (D) Often haemolytic anaemia(Coombs-positive)
 - (E) Usually normocytic anaemia
31. Anti-citrullinated peptide antibodies (ACPAs) are:
- (A) Not specific for rheumatoid arthritis
 - (B) Usually present with rheumatoid factor (RF) in rheumatoid arthritis
 - (C) Predictors of persistent synovitis
 - (D) Predictors of early rheumatoid arthritis
 - (E) Predictors of transient inflammatory arthritis
32. Factors predicting a poor prognosis in rheumatoid arthritis are:
- (A) Female sex
 - (B) Cigarette smoking
 - (C) Anti-citrullinated peptide antibodies
 - (D) Subnutrition
 - (E) Alcohol
33. *Differential diagnosis of early rheumatoid arthritis is:
- (A) Polymyalgia rheumatica
 - (B) Lyme disease
 - (C) Vasculitis
 - (D) Gout
 - (E) Cat scratch disease

34. *The chronic, persistent form of rheumatoid arthritis is:
- (A) An acute monoarthritis
 - (B) Unusual
 - (C) Lasts 24-48 hours
 - (D) Self remitting
 - (E) Is the most typical form
35. Initial investigations of rheumatoid arthritis include:
- (A) ESR, CRP
 - (B) Blood count
 - (C) Complement
 - (D) Anti-citrullinated peptide antibodies (ACPAs)
 - (E) Musculoskeletal ultrasound
36. The 2011 ACR/EULAR definitions for disease remission in rheumatoid arthritis clinical trials are:
- (A) Tender joint count (excluding feet and ankles) ≤ 1
 - (B) Swollen joint count (including feet and ankles) ≤ 1
 - (C) C-Reactive protein ≤ 1
 - (D) Patient global assessment ≤ 1 (on a 10 cm visual analogue scale)
 - (E) Tender joint count (including feet and ankles) ≤ 1
37. Targeted synthetic DMARDs are:
- (A) Tofacitinib
 - (B) Baricitinib
 - (C) Tocilizumab
 - (D) Certolizumab
 - (E) Sarilumab
38. A poor prognosis in rheumatoid arthritis is indicated by:
- (A) High ESR, CRP
 - (B) High titers of anti-citrullinated peptide antibodies (ACPAs)
 - (C) High titers of rheumatoid factor (RF)
 - (D) An explosive onset of rheumatoid arthritis
 - (E) An insidious onset of rheumatoid arthritis
39. The knee in rheumatoid arthritis:
- (A) Respond well to aspiration and steroid injection in massive synovitis and joint effusion
 - (B) Can be secondary affected by osteoarthritis (OA)
 - (C) Is not affected
 - (D) Depending on the pattern of involvement can develop a varus or valgus deformity
 - (E) Are not at risk for total knee replacement
40. Felty's syndrome is characterized by:
- (A) Splenomegaly
 - (B) Neutropenia
 - (C) Amyloidosis

- (D) Pleural disease
- (E) Interstitial lung disease

41. The most common clinical features of systemic lupus erythematosus (SLE) are:

- (A) Cerebral disease
- (B) Renal disease
- (C) Arthralgia
- (D) Rashes
- (E) Psoriasis

42. Drug that induce SLE are:

- (A) Hydralazine
- (B) Isoniazid
- (C) Procainamide
- (D) Penicillamine
- (E) Azathioprine

43. *The following are rare manifestations in systemic lupus erythematosus (SLE):

- (A) Arthritis in small joints
- (B) Pericarditis
- (C) Fever
- (D) Aseptic necrosis of hip
- (E) Pleuresy

44. Drugs considered safe in pregnant patients with systemic lupus erythematosus (SLE) are:

- (A) Mycophenolate
- (B) Azathioprine
- (C) Hydroxychloroquine
- (D) High dose of oral corticosteroids
- (E) Rituximab

45. Autoantibodies in systemic lupus erythematosus (SLE) are:

- (A) Anti-citrullinated peptide antibodies
- (B) Rheumatoid factor
- (C) Anti-dsDNA antibodies
- (D) Anti-Ro antibodies
- (E) Anti-centromeric antibodies

46. In a patient with hypothyroidism you could expect the following signs or symptoms:

- (A) Tachycardia
- (B) Cold intolerance
- (C) Constipation
- (D) Excessive sweating
- (E) Dry skin

47. *Which of the following statements regarding the management of a hypothyroid patient with Hashimoto thyroiditis are true:

- (A) The first line of treatment is carbimazole
 - (B) Replacement therapy with levothyroxine should be titrated based on antibodies serum levels
 - (C) The treatment aim is keeping the TSH suppressed.
 - (D) The dosage of levothyroxine should be titrated to normalize TSH and fT4
 - (E) Cardiac patients should begin treatment with the highest dose of levothyroxine
48. In which of the following conditions would you expect a suppressed TSH value (< 0.05 mIU/ml):
- (A) Basedow Graves disease
 - (B) Iodine deficiency
 - (C) Amiodarone induced thyrotoxicosis
 - (D) Toxic multinodular goiter
 - (E) Solitary toxic adenoma
49. Laboratory abnormalities that could be present in a patient with hypothyroidism:
- (A) Anaemia
 - (B) Hypercholesterolaemia
 - (C) Hyponatraemia
 - (D) High fT4 values
 - (E) High TSH values
50. The treatment of hyperthyroidism due to Graves disease can involve:
- (A) Radioactive iodine
 - (B) Levothyroxine
 - (C) Carbimazole
 - (D) Surgery
 - (E) Propylthiouracil
51. The following types of carcinomas derive from the thyroid epithelium:
- (A) Papillary carcinoma
 - (B) Medullary thyroid carcinoma
 - (C) Follicular carcinoma
 - (D) Thyroid lymphomas
 - (E) Anaplastic carcinoma
52. The management of a patient with papillary thyroid carcinoma includes:
- (A) Total or near-total thyroidectomy
 - (B) Treatment with low doses of levothyroxine after surgery
 - (C) Radioactive iodine for most patients
 - (D) Lobectomy for most patients
 - (E) Treatment with TSH suppressive doses of levothyroxine after surgery
53. The following statements about medullary thyroid carcinoma are true:
- (A) It derives from the thyroid follicular epithelium
 - (B) The origin is in the calcitonin producing c cells
 - (C) Treatment involves radioactive iodine

- (D) Total thyroidectomy and wide lymph node clearance are indicated
- (E) It can be associated with the men 2 syndrome.

54. The prognosis of thyroid carcinoma:

- (A) Is poor in all differentiated carcinomas
- (B) Is good even in case of large primary tumor size and invasion of the capsule
- (C) Is very poor in anaplastic carcinoma
- (D) Is better in medullary carcinomas than in papillary and follicular carcinomas
- (E) Is good in young people with papillary thyroid carcinoma

55. *The most frequent type of thyroid carcinoma is:

- (A) Medullary
- (B) Follicular
- (C) Papillary
- (D) Anaplastic
- (E) Lymphoma

56. Diabetes mellitus is a complex metabolic disorder characterized by:

- (A) Chronic hyperglycaemia
- (B) Relative insulin deficiency
- (C) Insulin resistance
- (D) Hypoglycaemia
- (E) Hyperuricemia

57. Which of the following are macrovascular complications of diabetes mellitus?

- (A) Peripheral vascular disease
- (B) Myocardial infarction
- (C) Stroke
- (D) Diabetic retinopathy
- (E) Diabetic nephropathy

58. *A diagnosis of diabetes in a man or woman at the age of 55 years:

- (A) Reduces life expectancy by 5-6 years
- (B) Is optimizing life expectancy
- (C) Reduces the cardiovascular risk
- (D) Is increasing the quality of life
- (E) Reduces life expectancy by 10 years

59. The statements regarding insulin include all of the following except:

- (A) Is involved in the regulation of cellular energy supply
- (B) Is involved in the regulation of macronutrient balance derived from food
- (C) It is composed of 51-amino acids
- (D) It is formed by the B and C chains
- (E) It is synthesized in the α cells of the pancreatic islets

60. Which of the following statements are true?

- (A) About 50% of secreted insulin is degraded in the liver

- (B) About 50% of secreted insulin is broken by the kidneys
 - (C) The C-peptide is a useful index of the rate of insulin secretion
 - (D) Insulin exerts its actions through binding to a receptor
 - (E) After secretion, insulin is carried to the kidneys, its prime target organ
61. Which of the following are false regarding insulin receptor?
- (A) Comprises a dimer with 4 subunits
 - (B) Comprises a dimer with 3 subunits
 - (C) Comprises a dimer with two α -subunits and two β -subunits
 - (D) Insulin is binding to the β -subunits
 - (E) The insulin-receptor complex causes the activation of tyrosine kinase
62. Which of the following statements are true?
- (A) In the fasting state, insulin's main action is to regulate glucose release by the liver
 - (B) In the postprandial state, insulin promotes glucose uptake by fat and muscle
 - (C) Glucagon secretion is increasing in the postprandial state
 - (D) The counter-regulatory hormones of insulin reduce hepatic glucose production
 - (E) The counter-regulatory hormones of insulin increase glucose utilization in fat and muscle
63. Which of the following are true regarding type 1 diabetes?
- (A) Accounts for 5-10% of all cases of diabetes
 - (B) Type 1A is the immune-mediated form
 - (C) Type 1B is the non-immune-mediated form
 - (D) The vast majority of those affected have type 1B
 - (E) LADA occurs in later life
64. Type 1 diabetes belongs to a family of immune-mediated organ-specific diseases, which include:
- (A) Autoimmune thyroid disease
 - (B) Coeliac disease
 - (C) Addison's disease
 - (D) Aplastic anaemia
 - (E) Iron deficiency anaemia
65. The following are counter-regulatory hormones of insulin:
- (A) Norepinephrine
 - (B) Cortisol
 - (C) Glucagon
 - (D) Growth hormone
 - (E) Serotonin
66. *The following are secondary forms of diabetes, excepting:
- (A) Diabetes secondary to genetic defects
 - (B) Diabetes secondary to infection
 - (C) Diabetes secondary to pregnancy
 - (D) Diabetes secondary to exocrine pancreatic disease
 - (E) Diabetes secondary to drugs and chemicals

67. Diabetes secondary to endocrine diseases include:
- (A) Hypothyroidism
 - (B) Turner syndrome
 - (C) Pheochromocytoma
 - (D) Glucagonoma
 - (E) Cushing's syndrome
68. Which drugs can induce secondary diabetes?
- (A) Glucocorticoids
 - (B) Thiazide diuretics
 - (C) Antipsychotics
 - (D) β -adrenergic receptor blockers
 - (E) Proton pump inhibitors
69. Uncommon forms of immune-mediated diabetes:
- (A) Stiff-man syndrome
 - (B) Anti-insulin receptor antibodies
 - (C) Prader-Willi syndrome
 - (D) Huntington's chorea
 - (E) Laurence-Moon-Biedl syndrome
70. *The islet antigens include all of the following except:
- (A) Glucagon
 - (B) Glutamic acid decarboxylase (GAD)
 - (C) Tyrosine phosphatase (IA-2)
 - (D) The cation transporter ZnT8
 - (E) Tetraspanin 7
71. Type 1 diabetes mellitus:
- (A) Is characterized by severe insulin deficiency
 - (B) Accounts for 70% of all cases of diabetes
 - (C) Involves the triggering of an autoimmune destruction of the insulin producing cells
 - (D) Is not associated with autoimmune diseases
 - (E) Affects only children
72. The following are the WHO diagnostic criteria for diabetes:
- (A) Fasting plasma glucose >126 mg/dL (7 mmol/L)
 - (B) Random plasma glucose >140 mg/dL (7.8 mmol/L)
 - (C) HbA1c $>6.5\%$
 - (D) HbA1c $>7.5\%$
 - (E) Fasting plasma glucose >106 mg/dL
73. Type 1 diabetes mellitus is characterized by:
- (A) Younger age at onset
 - (B) Autoimmune pathogenesis
 - (C) The absence of ketonuria

- (D) Weight-gain
- (E) C-peptide persists

74. Type 2 diabetes mellitus is characterized by:

- (A) Autoimmune pathogenesis
- (B) C-peptide persists
- (C) No weight loss
- (D) HLA-DR3/HLA-DR4
- (E) Older age at onset

75. Monogenic diabetes mellitus:

- (A) Is diagnosed under the age of 30
- (B) Previously was called 'maturity-onset diabetes of the young' (MODY)
- (C) Is caused by a single gene mutation
- (D) Occurs in adults over the age of 50
- (E) Predominantly affects the α -cell function

76. Which of the following statements are true:

- (A) The incretin effect describes the phenomenon whereby the insulin response to oral glucose is greater than the response to intravenous glucose
- (B) The incretin effect is mediated by two hormones: GLP-1 and GIP
- (C) The major action of incretin hormones is to reduce glucose-induced β -cell insulin secretion
- (D) The incretin hormones accelerate gastric emptying
- (E) The incretin effect is increased in type 2 diabetes

77. Sodium-glucose transporter 2 (SGLT2):

- (A) Is a sodium-dependent glucose transport protein
- (B) Is located in the distal renal tubules
- (C) Causes glucose reabsorption from the renal filtrate
- (D) Prevents urinary glucose loss
- (E) Determines glycosuria

78. The following classic symptoms represent the acute presentation of diabetes mellitus:

- (A) Weight loss
- (B) Oliguria
- (C) Thirst and polydipsia
- (D) Lower limb edema
- (E) Polyuria

79. Possible physical examination finding in patients with diabetes:

- (A) Weight loss
- (B) Dehydration
- (C) Smell of ketones on the breath
- (D) Acanthosis nigricans
- (E) Weight gain

80. *The following are types of diabetes, except one:

- (A) Type 1 diabetes
- (B) Diabetes insipidus
- (C) Type 2 diabetes
- (D) Secondary diabetes
- (E) Gestational diabetes

81. *The complications of diabetes mellitus are the following, except one:

- (A) Retinopathy
- (B) Neuropathy
- (C) Erectile dysfunction
- (D) Duodenal ulcer
- (E) Peripheral vascular disease

82. The following are the WHO diagnostic criteria for impaired glucose tolerance:

- (A) Fasting plasma glucose 7.8-11 mmol/L
- (B) Fasting plasma glucose <6 mmol/L
- (C) Plasma glucose 2 h after 75 glucose ingestion 7.8-11 mmol/L
- (D) Plasma glucose 2 h after 75 glucose ingestion 140-200 mg/dL
- (E) Fasting plasma glucose >7 mmol/L

83. Prevention of type 2 diabetes includes:

- (A) Lifestyle interventions
- (B) Reducing body weight
- (C) Several drugs, including metformin and orlistat
- (D) Reducing dietary fibre intake
- (E) Increasing dietary saturated fat intake

84. *The aims of diabetes care and management are the following, except one:

- (A) Prevention of diabetes emergencies
- (B) Treatment of hyperglycaemic symptoms
- (C) Minimization of long-term complications
- (D) Avoidance of iatrogenic hypoglycaemia
- (E) Maintaining the high cholesterol levels

85. Factors to consider for stringent glycaemic control for people with diabetes are the following:

- (A) No hypoglycaemia
- (B) Short disease duration
- (C) No cardiovascular disease
- (D) History of severe hypoglycaemia
- (E) Multiple comorbidities

86. Diet in people with diabetes:

- (A) Plays a key role in the management and clinical care of all patients
- (B) A Mediterranean-style diet should be encouraged
- (C) Low glycaemic index foods are encouraged
- (D) People with type 2 diabetes should be supported to lose weight by reducing caloric intake
- (E) Patients should be encouraged to consume more red and processed meat

87. Soluble human insulin:
- (A) Is absorbed quickly
 - (B) Is reaching a peak 20-30 minutes after subcutaneous injection
 - (C) Its action doesn't persist after meals
 - (D) Absorption is delayed because it forms stable hexamers
 - (E) Should be injected 20-30 minutes prior to a meal
88. Short-acting insulins:
- (A) Should be injected 20-30 minutes prior to a meal
 - (B) Is reaching a peak 20-30 minutes after subcutaneous injection
 - (C) Are predisposing to hypoglycaemia
 - (D) The insulin analogues enter and disappear from the circulation more slowly than soluble insulin
 - (E) Insulin detemir and insulin degludec are short-acting insulins
89. The following statements are true about insulin, except:
- (A) Lispro, aspart, and glulisine are short-acting insulin analogues
 - (B) Long-acting analogues are associated with a higher risk of hypoglycaemia
 - (C) Insulin resistance is common in people with acanthosis nigricans
 - (D) Insulin is always indicated in people with type 2 diabetes
 - (E) People with severe insulin resistance require massive insulin doses
90. The basal-bolus regimen:
- (A) Is the treatment of choice for people with type 1 diabetes
 - (B) Is more flexible than other regimens
 - (C) This regimen most closely mimics normal insulin physiology
 - (D) Involves the administration of premixed insulin
 - (E) Involves the administration of only long-acting insulin
91. Which of the following statements are true concerning insulin therapy?
- (A) The absorption of subcutaneous insulin from one injection to the next is variable
 - (B) Lipohypertrophy don't interfere with insulin absorption
 - (C) Causes weight loss
 - (D) Insulins are short-acting, intermediate and longer-acting
 - (E) Bolus insulin doses shouldn't be adjusted to the carbohydrate content of the meal
92. *Which of the following is false regarding hypoglycaemia?
- (A) A clinically significant hypoglycaemia defines a glucose concentration below 54 mg/dL
 - (B) The alert value of hypoglycaemia is 70 mg/dL and it requires treatment
 - (C) It's more common in people with type 2 diabetes
 - (D) Alcohol excess may precipitate hypoglycaemic episodes
 - (E) Unusual exertion may precipitate hypoglycaemic episodes
93. Which of the following statement is true regarding metformin?
- (A) Reduces hepatic glucose output
 - (B) Increases insulin secretion

- (C) Is the first-line pharmacological agent in type 2 diabetes
 - (D) Can't be given in combination with insulin
 - (E) Has gastrointestinal side-effects
94. Which of the following antihyperglycaemic drugs are increasing urinary glucose excretion?
- (A) Gliclazide
 - (B) Acarbose
 - (C) Dapagliflozin
 - (D) Saxagliptin
 - (E) Canagliflozin
95. GLP-1 receptor agonists:
- (A) Enhance the incretin effect by activating the GLP-1 receptor
 - (B) Decrease insulin secretion
 - (C) Increase appetite
 - (D) Increase glucagon secretion
 - (E) Examples: exenatide, liraglutide, dulaglutide
96. Dipeptidyl peptidase-4 inhibitors:
- (A) Do not promote weight gain
 - (B) Have a low risk of hypoglycaemia
 - (C) Can be used safely in people with renal impairment
 - (D) Decrease the incidence of myocardial infarction
 - (E) Are recommended only in combination with insulin
97. Sodium-glucose transporter 2 inhibitors (SGLT2i):
- (A) Can be used in combination with all other antidiabetes drugs
 - (B) Have cardiovascular benefits
 - (C) Are facilitating weight loss
 - (D) Don't increase the risk of hypoglycaemia
 - (E) Have severe gastrointestinal adverse effects
98. *The following are the routes of administration for insulin, except:
- (A) Intravenous
 - (B) Subcutaneous
 - (C) Intra-arterial
 - (D) Insulin pumps
 - (E) Intermittent injection
99. Glycated haemoglobin:
- (A) Is a long term measure of glycaemic control
 - (B) Is a measure of an individual's average blood glucose concentration over the previous 6-8 weeks
 - (C) Standardized range 4-6%
 - (D) The result is not influenced by the lifespan of the red cell
 - (E) Is a reliable marker of glycaemia in pregnancy
100. Diabetic ketoacidosis:

- (A) Has a mortality rate of approximately 1%
 - (B) Results from marked insulin deficiency
 - (C) It mostly occurs in people with type 2 diabetes
 - (D) It is seen in case of interruption of insulin therapy
 - (E) Presents low glycaemic levels
101. *The diagnosis of diabetic ketoacidosis includes the following, except one:
- (A) Hyperglycaemia >200 mg/dL or known diabetes mellitus
 - (B) Ketonaemia ≥ 3 mmol/L or significant ketonuria
 - (C) Bicarbonate below 15 mmol/L
 - (D) Venous pH <7.3
 - (E) Hyperkalaemia
102. *Clinical features of diabetic ketoacidosis include the following, except one:
- (A) Nausea, vomiting
 - (B) Smell of ketones on the breath
 - (C) Hypoventilation
 - (D) Hyperventilation
 - (E) Abdominal pain
103. *The management of diabetic ketoacidosis includes the following, except one:
- (A) Replacement of the fluid losses
 - (B) Replacement of the electrolyte losses
 - (C) Restoration of the acid-base balance
 - (D) Insulin replacement
 - (E) Administration of oral antidiabetes drugs
104. Hyperosmolar hyperglycaemic state is characterized by:
- (A) Impaired consciousness
 - (B) Occurs at young people
 - (C) Is characteristic of type 1 diabetes
 - (D) Severe hyperglycaemia
 - (E) The presence of ketosis
105. Lactic acidosis is characterized by:
- (A) Severe metabolic acidosis
 - (B) Large anion gap
 - (C) Without significant hyperglycaemia
 - (D) Without significant ketosis
 - (E) Not influenced by the treatment with metformin
106. Which statements about diabetic retinopathy are true?
- (A) Its prevalence increases with the duration of diabetes
 - (B) Affects around one-third of all people with diabetes
 - (C) Repeated injections of anti-VEGF drugs can control proliferative diabetic retinopathy
 - (D) The corticosteroid, triamcinolone, reduces macular oedema in the short term
 - (E) Repeated injections of anti-VEGF drugs can't control sight-threatening maculopathy

107. Which of the following statements are true regarding the diabetic foot?
- (A) Diabetes is the most common cause of non-traumatic lower limb amputation
 - (B) Is responsible for nearly 50% of all diabetes-related hospital admissions
 - (C) Is a rare complication of diabetes
 - (D) Can't be prevented by a good glycemic control
 - (E) Tactile and painful sensations are not affected
108. Manifestations of autonomic neuropathy are:
- (A) Gastroparesis
 - (B) Postural hypotension
 - (C) Incomplete emptying and urinary stasis
 - (D) Sinus bradycardia at rest
 - (E) Autonomic diarrhoea characteristically occurs in the morning
109. Peripheral ischaemia in the diabetic foot can be distinguished from neuropathy by:
- (A) Trophic changes
 - (B) Pulselessness
 - (C) Warm foot
 - (D) Painlessness
 - (E) Clawing of the toes
110. Which of the following statements are true regarding the non-alcoholic fatty liver disease?
- (A) Is characterized by intrahepatic fibrotic tissue accumulation
 - (B) Is associated with inflammation and fibrosis
 - (C) The prevalence is increased in people with type 2 diabetes
 - (D) Is not associated with central obesity
 - (E) Is associated with insulin resistance
111. Treatment of diabetic nephropathy includes:
- (A) ACE inhibitors/angiotensin II receptor blockers
 - (B) Avoiding the use of SGLT2 inhibitors
 - (C) Use of metformin
 - (D) Management of cardiovascular risk factors
 - (E) Good glycaemic control
112. Which of the following statements are true?
- (A) The mortality in lactic acidosis is in excess of 50%
 - (B) The mortality in hyperosmolar hyperglycaemic state ranges as high as 15-20%
 - (C) The mortality in diabetic ketoacidosis is approximately 1%
 - (D) Type 1 diabetes accounts for 90% of all cases of diabetes
 - (E) Type 2 diabetes accounts for 10% of all cases of diabetes
113. *The following sites are recommended for subcutaneous insulin injection, excepting:
- (A) The upper side of the thigh
 - (B) The front side of the thigh
 - (C) Buttocks
 - (D) The abdominal wall

- (E) The lower part of the arms
114. Indications for bariatric surgery are:
- (A) Severe obesity
 - (B) BMI <35 kg/m²
 - (C) BMI >40 kg/m²
 - (D) BMI >35 kg/m² and co-morbidities
 - (E) Overweight
115. Short-acting insulin analogues are:
- (A) Lispro
 - (B) Aspart
 - (C) Glargine
 - (D) Glulizine
 - (E) Degludec
116. *The following are clinical characteristics of the transient ischemic stroke (TIA) in the anterior circulation:
- (A) Ataxia
 - (B) Unilateral amaurosis fugax
 - (C) Bilateral vision loss
 - (D) Swallowing impairment and dysarthria
 - (E) Quadriparesis
117. The ischemic stroke is mainly caused by the following pathological processes:
- (A) Arterial disease and large vessel atherosclerosis
 - (B) Small vessel disease
 - (C) Thrombosis at the site of a ruptured mural atherosclerotic plaque
 - (D) Cardioembolic mechanism
 - (E) An arterial-venous malformation rupture
118. The following statements regarding carotid and vertebral artery dissections are true:
- (A) They are specific in older patients
 - (B) They cause ischemic stroke by a cardioembolic mechanism
 - (C) Frequently cause pain in the cervical region and face
 - (D) Horner syndrome and lower cranial nerve signs may appear
 - (E) May be the consequence of a trivial cervical trauma
119. The following are features for brainstem infarction:
- (A) Quadriparesis
 - (B) Amaurosis
 - (C) Aphasia secondary to cortical involvement
 - (D) Facial hypoesthesia secondary to the Vth nerve involvement
 - (E) Loss of consciousness, coma, secondary to the reticular formation involvement
120. The following therapeutic strategies are indicated for the acute, immediate treatment of ischemic stroke:

- (A) Rapid intravenous thrombolytic therapy (maximum 4.5 hours after the onset) in the absence of contraindications
- (B) Intravenous thrombolysis is contraindicated if the systolic arterial blood pressure is > 185mmHg and diastolic blood pressure is > 110mmHg
- (C) Aspirin (300mg/day) can be administered only 24 hours after thrombolysis or immediately if a brain haemorrhage has been ruled out by the cerebral CT scan, if thrombolysis cannot be administered
- (D) Low molecular weighted heparin treatment has to be administered immediately in the majority of the patients
- (E) High blood pressure treatment is not necessary unless the diastolic values are below 100mmHg

121. *Delirium is:

- (A) Deep state of coma
- (B) Confusion state, lack of attention, altered behaviour, cognition and orientation
- (C) Stupor state
- (D) Obnubilation state
- (E) Glasgow Coma Score < 8 points

122. The following can be causes of coma:

- (A) Occipital lobe lesions
- (B) Multiple Sclerosis
- (C) Diffuse cerebral lesions
- (D) Parkinson disease
- (E) Direct mass effect on the brainstem

123. Bilateral myosis in a comatose patient may be suggestive of:

- (A) Oculomotor nerve lesion
- (B) Opioid intoxication
- (C) Subfalcine herniation
- (D) Pontine lesion
- (E) Cerebral death

124. The following statements are correct regarding coma:

- (A) The coma assessment is not objectified by the use of a scale because coma implies a diffuse brain involvement.
- (B) Brainstem lesions can lead to coma
- (C) The clinical examination of the eyes has no clinical importance to use in order to grade the severity of the coma
- (D) One of the most frequent causes of coma are represented by metabolic disorders
- (E) Locked-in syndrome can mimic coma

125. The following are characteristics of the “locked-in” syndrome:

- (A) Complete paralysis, except for vertical eye movements
- (B) The patients have extensive cortical lesions
- (C) The patients have an intact cerebral cortex
- (D) The patients are fully aware of what is happening around them
- (E) The patients can verbally communicate

126. *The following statements regarding intraparenchymal haemorrhages are true:
- (A) Are responsible for more than 80% of strokes
 - (B) Usually carry a better prognosis compared to ischemic strokes, having a significantly decreased mortality rate compared with them
 - (C) A voluminous hematoma can present as a space occupying lesion, causing intracranial hypertension
 - (D) The clinical evaluation of the patient can help in differentiating between an ischemic and a haemorrhagic stroke
 - (E) The specific treatment for cerebral haemorrhage secondary to high blood pressure is intravenous vitamin K
127. The causes and associated pathologies for the subarachnoid haemorrhage are the following:
- (A) Saccular aneurism
 - (B) Atrial Fibrillation
 - (C) Arteriovenous malformation
 - (D) Mycotic aneurisms, endocarditis
 - (E) Coagulation disorders
128. The following statements are true regarding the etiology of the cerebral hemorrhages:
- (A) Alcohol is not a risk factor because it induces vasodilation
 - (B) Cocaine excess can produce hemorrhage due to the vasopressor effect
 - (C) Cerebral amyloid angiopathy is responsible for recurrent hemorrhages
 - (D) Excessive use of anticoagulation drugs can be a secondary cause for SAH
 - (E) The basal ganglia are one of the brain regions which are rarely affected by hemorrhages, due to a scarce vascularisation
129. A male patient, age 41, with no prior history of any disease, presents with acute-onset atrocious headache. The native cerebral CT scan performed in the ER reveals a subarachnoid haemorrhage at the site of the sylvian fissure and interhemispheric fissure. The following statements referring to case management are true:
- (A) A cerebral angio-CT scan or arteriography is mandatory in order to identify a ruptured aneurism
 - (B) Lumbar puncture is mandatory
 - (C) Early Nimodipine treatment, administered for up to 3 weeks reduces the mortality
 - (D) Arterial spasm represents a good prognostic factor
 - (E) If the arteriography shows a non-thrombosed aneurism, either surgical or endovascular approach is recommended
130. The following statements regarding extradural hemorrhage are true:
- (A) Extradural hemorrhage is slowly progressive, sometimes over the course of weeks or even months
 - (B) Typically secondary to head trauma
 - (C) The diagnosis is typically established by cerebral CT scan
 - (D) It's secondary to middle cerebral artery rupture
 - (E) Requires emergency neurosurgical intervention

131. *The clinical picture of meningitis does not involve the following clinical sign:
- (A) Headache
 - (B) Neck Stiffness
 - (C) Fever
 - (D) Photophobia
 - (E) Cortical blindness
132. The following are clinical features that can appear in meningococcal meningitis:
- (A) Petechial or blotchy, red rashes
 - (B) Meningeal syndrome with neck stiffness, headache
 - (C) Involuntary movements such as hemiballismus
 - (D) Focal signs such as hemiparesis
 - (E) Spasmodic torticollis
133. The cerebrospinal fluid aspect in tuberculous meningitis has the following characteristics:
- (A) Purulent aspect
 - (B) High red blood cell number after being centrifuged
 - (C) Low glucose level (low glycorrhachia)
 - (D) Pleiocytosis with monocytosis
 - (E) Normal protein concentration
134. In order to set the diagnosis for a viral encephalitis, the following are needed:
- (A) The onset clinical symptoms frequently involve behavioral or personality changes
 - (B) The lumbar puncture will reveal lymphocytosis
 - (C) Extracerebral arteries echo-doppler
 - (D) Vascular risk factors screening
 - (E) Brain MRI with cortical inflammation and edema
135. The following statements are true regarding the autoimmune encephalitis:
- (A) The clinical evolution presents over the course of weeks or months
 - (B) Immunotherapy is contraindicated
 - (C) The clinical picture involves memory impairment, seizures and confusion
 - (D) Progressive multifocal leukoencephalopathy is an autoimmune encephalitis
 - (E) The paraneoplastic aetiology is frequent
136. In chronic asthma may be found special characteristic:
- (A) Mucus impaction of the airways
 - (B) Reversible diffuse airflow limitation
 - (C) Respiratory rate above 25 breaths / min
 - (D) Airway wall remodeling
 - (E) A PEFR of 33 - 50% of predicted normal or best
137. *Diagnostic investigations in asthma:
- (A) Patients with asthma have increased numbers of mast cell in the peripheral blood ($> 0.4 \times 10^3 / \text{mgL}$)
 - (B) The carbon monoxide (CO) transfer test has normal values in asthma

- (C) Allergen inhalation challenge has to be performed in all forms of asthma for etiological evaluation
 - (D) The diurnal variation of FEV1 (over 15%) confirms the presence of reversibility and the need for corticosteroid treatment
 - (E) Chest x-ray confirms the diagnosis of asthma by showing a hyperinflation
138. Drug treatment in asthma:
- (A) Beta2-adrenergic receptor agonists are not recommended in asthma because they stimulate beta receptors in the myocardium
 - (B) Inhaled corticosteroids are recommended in patients with regular persistent symptoms as chronic treatment
 - (C) In children, all inhaled corticosteroids are contraindicated because they can delay growth
 - (D) Ipratropium is a short-acting anticholinergic that is recommended in acute severe exacerbations of asthma
 - (E) Benralizumab or mepolizumab are monoclonal antibodies that have an effect against interleukin-5 (IL5) or its receptor and they are effective in eosinophilic asthma
139. Factors involved in development of asthma and stimuli that can precipitate attacks of asthma:
- (A) Atopic people may develop asthma or allergic rhinitis (hay fever)
 - (B) Early childhood exposure to allergens has a major influence on IgE production
 - (C) Maternal smoking does not influence IgE production (only intrinsic, irritative asthma)
 - (D) Non-atopic people may develop asthma after a longer exposure to antibiotics, proteolytic enzymes, and animal allergens
 - (E) Smoking increases the risk of developing some forms of occupational asthma
140. Very severe life-threatening attacks may include:
- (A) Respiratory rate between 20 and 25 breaths / minute
 - (B) Cyanosis and bradycardia
 - (C) Hypercapnic CO₂ (> 6Kpa)
 - (D) pH low below 7.45
 - (E) Severe hypoxemia below 80 mmHg (<12kPa)
141. Treatment of severe COPD includes:
- (A) Smoking cessation
 - (B) Antipertussis vaccination as a method of prophylaxis of infectious exacerbations
 - (C) Daily low dose systemic corticosteroids, long time for sustained anti-inflammatory effect
 - (D) Long-term oxygen therapy at home only during the day (during night it is not necessary because during sleep the oxygen requirement decreases) for a saturation over 90%, 15 hours/day
 - (E) Long-term oxygen therapy at home (2 l/min) in conditions of persistent hypoxemia, for a SaO₂ over 90% (15 - 19 h/day)
142. *The severity criteria for COPD are:
- (A) FEV1 between 50 and 70% of the predicted
 - (B) FEV1 below 80%
 - (C) Presence of bilateral wheezing
 - (D) the presence of hypercapnia
 - (E) The presence of hippocratic fingers

143. Pulmonary function tests:
- (A) PEFR is elevated on spirometry as a sign of obstruction with a low Tiffneau Index
 - (B) The airflow limitation is partly reversible (FEV1 increase by less than 15%)
 - (C) CO gaz transfer factor (DLCO) is low when significant emphysema is present
 - (D) Spirometry shows a diffuse restrictive ventilatory dysfunction of the small airways
 - (E) There may be secondary polycythaemia secondary as a result of persistent hypoxaemia
144. Exacerbation of COPD
- (A) Venturi fixed percentage mask allows the administration of controlled oxygen concentrations up to 90%
 - (B) The target range for maintaining oxygen saturations in type II respiratory failure is 88 - 92%
 - (C) Oxygen saturation must be maintained above 95%
 - (D) Oxygen saturation must be maintained above 90%
 - (E) Noninvasive ventilation will be considered in respiratory acidosis
145. Long – terme continuous domiciliary oxygen therapy recommendations in COPD:
- (A) COPD with PaO₂ <7.3kPa when breathing in ambient air during a period of clinical stability
 - (B) COPD with PaO₂ between 7.3 - 8kPa in the presence of secondary polycythemia or nocturnal hypoxemia
 - (C) It is preferable to use small oxygen cylinders to be filled at a fixed station
 - (D) COPD with PaO₂ between 7.3 - 8kPa in the presence of peripheral edema
 - (E) COPD with PaO₂ between 7.3 - 8kPa in the presence of signs of pulmonary hypertension
146. *Risk factors for community-acquired pneumonia are, except:
- (A) Age <16 or >65 years
 - (B) Lifestyle: cigarette smoking, excess alcohol, intravenous drug use
 - (C) Iatrogenic: immunosuppressant therapy (including prolonged corticosteroids)
 - (D) Low albumin <35g/L
 - (E) Other respiratory conditions: cystic fibrosis, bronchiectasis, chronic obstructive pulmonary disease, obstructing lesion (endoluminal cancer, inhaled foreign body)
147. General complications of pneumonia are:
- (A) Pleural effusion
 - (B) Respiratory failure
 - (C) Lung abscess
 - (D) Sepsis-multisystem failure
 - (E) Organizing pneumonia
148. First line treatment of Pneumocystis pneumonia are:
- (A) High-dose co-trimoxazol
 - (B) Co-amoxiclav is used for mild to moderate disease
 - (C) With adjunctive corticosteroids in patients with HIV infection
 - (D) Surgical drainage is sometimes necessary
 - (E) It is vital to identify any underlying problem, as aspiration will recur without appropriate corrective measures
149. Causes of slow resolving pneumonia are:

- (A) Underlying neoplastic lesion or other lung disease
 - (B) Vaccination against influenza
 - (C) Incorrect or incomplete antimicrobial treatment
 - (D) Nutritional supplementation
 - (E) Physiotherapy
150. CURB-65 score evaluation in community acquired pneumonia consist in:
- (A) Respiratory rate>30 breaths/min
 - (B) Chest X-ray:more than one lobe involved
 - (C) Blood culture:positive
 - (D) Confusion present (abbreviated mental test score<8/10)
 - (E) (plasma) Urea level>7mmol/L
151. *Factors implicated in the reactivation of latent tuberculosis are, except:
- (A) HIV co-infection
 - (B) Diabetes mellitus
 - (C) End-stage chronic kidney disease
 - (D) Ageing
 - (E) Mono- or multidrug resistance
152. Nucleic acid amplification and polymerase chain reaction in the microbiological diagnosis of tuberculosis consist in:
- (A) It works by using the polymerase chain reaction (PCR) to replicate and then identify mycobacterium DNA
 - (B) Is useful in differentiating between M.tuberculosis complex and non-tuberculous mycobacteria
 - (C) The rapid identification of presence of mycobacterium by stains is essential and should be performed within 24 hours
 - (D) It requires fluorescence microscopy and highlights bacilli as yellow-orange on a green background
 - (E) The identification of mycobacterial DNA is useful in facilitating rapid commencement of treatment and also rapid identification of drug resistance
153. Factors associated with an increased risk of drug resistant tuberculosis are:
- (A) Oral contraception
 - (B) History of prior drug treatment of TB (particularly if unsupervised and self-administere
 - (C) Healthcare workers exposed to cases of resistant TB
 - (D) Usual treatment and duration in fully sensitive tuberculosis
 - (E) Failure to respond to empirical TB therapy despite documented adherence
154. Diagnostical investigations in pulmonary, pleural and laryngeal tuberculosis are:
- (A) Aspiration of pleural fluid and pleural biopsy
 - (B) Lumbar puncture if no contraindication
 - (C) Mediastinal nodal sampling (endobronchial ultrasound transbronchial needle aspiration,mediastinoscopy/mediastinotomy)
 - (D) Gastric aspirates-can be useful in pediatrics disease
 - (E) Bronchoalveolar lavage fluid if cough unproductive and induced sputum not possible

155. *Mycobacterium bovis* infection is characterized by:
- (A) Immunosuppression is also a risk factor
 - (B) Diagnosis is established by pleural aspiration done under ultrasound guidance
 - (C) Pyrazinamide resistance is common
 - (D) The tuberculin test is positive
 - (E) Occur in soil and water, and are not usually pathogenic due to their lack of virulence
156. *The environmental factors involved in the occurrence of lung cancer are, except:
- (A) Occupational exposure to arsen, chrom nichel
 - (B) Pre-existing lung disease
 - (C) Radon exposure, asbestos
 - (D) Polycyclic aromatic hydrocarbons exposure
 - (E) Petroleum products and oil exposure
157. Squamous cell carcinoma is characterized by:
- (A) Occasionally cavitates with central necrosis
 - (B) Originates from mucus-secreting glandular cells
 - (C) Causes obstructing lesions of bronchus with post-obstructive infection
 - (D) Often secretes polypeptide hormones
 - (E) Often arises centrally and metastasizes early
158. Non-metastatic extrapulmonary manifestations of bronchial carcinoma are:
- (A) Hypercalcemia (usually squamous cell carcinoma)
 - (B) Clubbing (30%)
 - (C) Malignant pleural effusion
 - (D) Metastases to the adrenals
 - (E) Trombotic thrombocytopenic purpura
159. Investigations to obtain histology and cytology in lung cancer are:
- (A) Medical or video-assisted thoracoscopy
 - (B) Endobronchial ultrasound
 - (C) Mediastinoscopy
 - (D) Fiberoptic bronchoscopy
 - (E) Neodymium-Yag(Nd-Yag) laser
160. The differential diagnosis for a solitary pulmonary nodule are:
- (A) Rheumatoid nodules
 - (B) Pulmonary metastases
 - (C) Hydatid cyst
 - (D) Mesothelioma
 - (E) Tracheal tumors
161. Identify the factors that interplay in thrombosis appearance and form the Virchow's triad:
- (A) Changes in blood flow (stasis or turbulence)
 - (B) Vessel wall dysfunction
 - (C) Hypercoagulability induced by changes in blood components
 - (D) Alteration of blood components that induce hypocoagulability
 - (E) Turbulence produced by atheromatous plaques located at the venous confluence

162. Identify the risk factors for venous thromboembolism (VTE):
- (A) Body mass index <30 kg/m²
 - (B) Heparin-induced thrombocytopenia
 - (C) Immobilization (bed rest >3 days)
 - (D) Myeloproliferative neoplasms
 - (E) Nephrotic syndrome
163. In the differential diagnosis of venous thromboembolism (VTE) consider the following correct answers:
- (A) Exacerbation of chronic obstructive pulmonary disease
 - (B) Acute coronary syndrome
 - (C) Pericardial tamponade
 - (D) Hydrothorax
 - (E) Musculo-tendinous trauma, myositis, tendonitis
164. *Well's score for deep vein thrombosis takes into considerations the following clinical manifestations except:
- (A) Haemoptysis
 - (B) Collateral superficial veins (non-varicose)
 - (C) Pitting oedema confined to the symptomatic leg
 - (D) Localized tenderness along the distribution of the deep venous system
 - (E) Alternative diagnosis at least as likely as DVT
165. *Imaging for pulmonary embolism:
- (A) Mismatched defects are diagnosed during ventilation–perfusion (V'/Q') isotope lung scanning
 - (B) Computed tomographic pulmonary angiography (CTPA) is a sensitive method, but cannot provide an alternative diagnosis when pulmonary embolism is excluded
 - (C) Uses ultrasound of deep veins
 - (D) Identify increased D-dimers
 - (E) It's highly sensitive for distal deep vein thrombosis identification (70%)
166. Which of the following statements regarding low-molecular weight heparins (LMWH) are true?
- (A) In patients with cancer-associated thrombosis, LMWH are as effective as warfarin
 - (B) Reduce the relative risk of recurrent thrombosis by 80–90%
 - (C) Half-time is 4 hours
 - (D) Target (via antithrombin) factor Xa = factor IIa
 - (E) Activated partial thromboplastin time (APTT) is used as monitoring test
167. Identify the correct statements regarding direct oral anticoagulants (DOAC):
- (A) Are represented by three factor Xa inhibitors (apixaban, rivaroxaban, dabigatran)
 - (B) Directly inhibit their target substrates
 - (C) Can be used during breast-feeding, because DOAC's do not cross the placenta
 - (D) There is no interactions with dietary factors or alcohol
 - (E) Their half-time is 9 to 15 hours

168. Patients with newly diagnosed unprovoked venous thromboembolism should undergo, along with physical examination, the following general tests:
- (A) Full blood count
 - (B) Thromboelastography
 - (C) Abdominal computed tomography scan
 - (D) Chest X-ray
 - (E) Renal and liver function tests
169. Identify the correct answers in the case of the antiphospholipid syndrome (APS):
- (A) Is associated with an increased risk of recurrent episodes in patients with venous thromboembolism (VTE)
 - (B) Must be considered in pregnancy-related morbidity
 - (C) Cannot influence decisions on the duration of anticoagulation after an episode of VTE
 - (D) It is associated with a mutation in the 3' translated region of the prothrombin gene
 - (E) Typically, the activated thromboplastin time (APTT) is normal
170. Risk assessment tool for venous thromboembolism (VTE) includes the following parameters:
- (A) Uncontrolled systolic hypertension ($\geq 230/120$ mmHg)
 - (B) Postpartum more than 9 weeks
 - (C) Significantly reduced mobility for ≥ 72 hours
 - (D) Simultaneous coexistence of one or more significant medical co-morbidities (i.e. heart disease and acute infectious disease)
 - (E) Confirmed von Willebrand's disease
171. *In reversible causes of cardiac arrest, the following are the "4 T's" with the exception of:
- (A) Thromboembolism
 - (B) Tamponade
 - (C) Trauma
 - (D) Toxins
 - (E) Tension Pneumothorax
172. Advanced life support methods include:
- (A) ECG monitoring
 - (B) Endotracheal intubation
 - (C) Mouth to mouth breathing
 - (D) Administration of an external electric shock in asystole
 - (E) Identification and treatment of reversible causes of cardiorespiratory arrest
173. Shockable rhythms for cardiac arrest include:
- (A) Atrial fibrillation with hemodynamic compromise
 - (B) Ventricular fibrillation
 - (C) Pulse ventricular tachycardia
 - (D) Pulseless ventricular tachycardia
 - (E) Asystole
174. The following are true regarding the cardio-pulmonary resuscitation protocol for cardiac arrest due to non-shockable rhythm:

- (A) Initiation of external cardiac massage with a chest compression ratio: ventilations of 20: 2
 - (B) Applying an external electric shock
 - (C) Initiation of external cardiac massage with a chest compression to ventilations ratio of 30:2
 - (D) Administration of 1 mg of adrenaline intravenously
 - (E) Intravenous administration of Dobutamine
175. Reversible causes of cardiac arrest include the following:
- (A) Acute myocardial infarction
 - (B) Free ventricular wall rupture
 - (C) Pulmonary thromboembolism
 - (D) Hypovolemia
 - (E) Hypervolemia
176. *Grade I atrioventricular block is characterized by:
- (A) Shortening the PR interval <0.2 sec
 - (B) Prolongation of the PR interval > 0.2 sec
 - (C) Lack of P-wave conduction at the ventricular level
 - (D) Extension of the PR interval until the appearance of the blocked P wave
 - (E) Every second P wave is conducted at the ventricular level
177. *Which is the scoring system that determines the indication for anticoagulant treatment in atrial fibrillation?
- (A) HAS BLED score
 - (B) GRACE score
 - (C) PESI score
 - (D) CHA2DS2VASc score
 - (E) Wells score
178. Mechanisms of cardiac arrhythmias include:
- (A) Accelerated automaticity
 - (B) Myocardial re-entry circuits
 - (C) Triggered Activity by the presence of an accessory fascicle
 - (D) Triggered activity by pacing, hydro electrolytic disorders, acidosis, hypoxia
 - (E) Hyperkalemia as a risk factor for tachyarrhythmias
179. Regarding the grade III atrioventricular block, the following are true:
- (A) May cause Adam Stokes syncope
 - (B) Constant elongation of the PR interval occurs over 0.2 seconds
 - (C) Presence of a spontaneous escape rhythm located at the level of the His bundle or at the level of the His-Purkinje system
 - (D) Requires pacemaker implantation
 - (E) It is caused only by infectious and autoimmune diseases
180. Atrial flutter is characterized by:
- (A) Occurs due to a macro re-entry circuit at the right atrial level, around the tricuspid annulus
 - (B) Where F with typical "sawtooth-like" ECG appearance

- (C) Frequency of F waves of 600 / min
 - (D) Frequency of F waves of 300 / min with variable atrioventricular block
 - (E) Where f with ECG aspect typical of fine oscillations of the isoelectric line
181. Acquired long QT syndrome is caused by:
- (A) Lange-Nielsen syndrome
 - (B) Hydro electrolytic disorders (hypokalemia, hypomagnesaemia, hypocalcemia)
 - (C) Antiarrhythmic medication (quinidine, amiodarone)
 - (D) Psychiatric medication (tricyclic antidepressants, antipsychotics)
 - (E) Romano-Ward syndrome
182. Long-term management of cardiac tachyarrhythmias includes the following:
- (A) Anticoagulant treatment
 - (B) Antiarrhythmic treatment
 - (C) Ablation therapy
 - (D) Therapy with intracardiac devices (intracardiac defibrillator)
 - (E) Anxiolytic treatment
183. What are the ECG criteria that advocate for the diagnosis of ventricular tachycardia in the differential diagnosis of branch block supraventricular tachycardia?
- (A) Very wide QRS complex > 0.14 sec
 - (B) Narrow QRS complex
 - (C) Atrioventricular dissociation
 - (D) Concordance of QRS complexes (polarity of identical QRS complex) in all thoracic leads (V1-V6)
 - (E) QRS complex < 0.14 sec
184. Treatment of sustained ventricular tachycardia includes:
- (A) In case of hemodynamic instability, emergency direct electrical cardioversion is administered
 - (B) In case of hemodynamic instability, antiarrhythmic medication is administered (beta-blockers, amiodarone).
 - (C) In case of hemodynamic stability, antiarrhythmic medication is administered (beta-blockers, amiodarone).
 - (D) In the survivors of a ventricular tachycardia that does not present an identifiable reversible cause, the implantation of an intracardiac defibrillator is indicated
 - (E) Requires identification and treatment of possible reversible causes (myocardial infarction, hydro electrolytic disorders)
185. Regarding the anticoagulant treatment of atrial fibrillation, the following are true:
- (A) For warfarin/acenocumarol treatment, INR monitoring is indicated, with dose adjustment to obtain a value between 4-5
 - (B) Treatment with direct oral anticoagulants (eg rivaroxaban, apixaban) requires INR monitoring and dose adjustment to obtain a value between 2-3
 - (C) For warfarin/acenocumarol treatment, INR monitoring is indicated, with dose adjustment to obtain a value between 2-3
 - (D) Treatment with direct oral anticoagulants (eg rivaroxaban, apixaban) does not require INR monitoring

- (E) In patients who have a contraindication or intolerance to anticoagulant therapy (eg increased risk of bleeding), an occlusion device may be implanted percutaneously in the left atrial ear
186. Renin-angiotensin system activation in heart failure causes:
- (A) Na and water retention that causes increased afterload
 - (B) Vasodilation
 - (C) Increased afterload by vasoconstriction
 - (D) Increased myocardial contractility
 - (E) Decreased cardiac output by increasing preload
187. A patient with heart failure with reduced ejection fraction New York Heart Association class II has:
- (A) Left ventricular ejection fraction <40%
 - (B) Symptoms of heart failure at rest
 - (C) Signs of heart failure
 - (D) NT-proBNP <100 pg / ml
 - (E) Marked limitation of physical activity
188. The following statements are true about the treatment with angiotensin converting enzyme inhibitors in heart failure:
- (A) Relieves symptoms and reduces mortality
 - (B) Is not recommended for patients in NYHA functional class I.
 - (C) May cause hypokalemia
 - (D) It is contraindicated in patients with renal artery stenosis
 - (E) It can be started with candesartan 4 mg / day
189. The following statements about furosemide in heart failure are true:
- (A) It is a thiazide diuretic
 - (B) It is indicated for all patients with chronic heart failure
 - (C) Low doses produce vasodilation, increasing pressure in the right atrium
 - (D) Requires monitoring of sodium, potassium and creatinine
 - (E) It is part of the initial therapy in case of acute heart failure
190. *In heart failure with preserved ejection fraction:
- (A) The left ventricle has an ejection fraction <50%
 - (B) There is diastolic dysfunction of the left ventricle
 - (C) Beta-blocker treatment decreases morbidity and mortality
 - (D) There are no signs of heart failure, just symptoms
 - (E) It does not involve a decrease in cardiac output
191. Changeable risk factors for atherosclerotic coronary disease are:
- (A) Positive family history
 - (B) Cigarette smoking
 - (C) Diabetes mellitus
 - (D) Hypercholesterolemia
 - (E) Male sex

192. The following are true about the treatment of stable angina pectoris:
- (A) Stenoses that demonstrate a functional flow reserve > 0.8 can be treated with medication
 - (B) Isosorbide mononitrate is used in the treatment of anginal episodes
 - (C) Bisoprolol increases myocardial oxygen consumption
 - (D) Coronary artery bypass grafting is preferred to percutaneous coronary intervention in patients with double-vessel disease not involving the left main stem
 - (E) Includes drugs that reduce the risk of major cardiovascular events
193. *Myocardial infarction type 1 occurs due to:
- (A) Coronary obstruction by rupture of the atheroma plaque and formation of the intracoronary thrombus
 - (B) Coronary spasm
 - (C) Coronary embolism
 - (D) Severe anemia
 - (E) Hypotension
194. Very high-risk patients with myocardial infarction without ST-segment elevation:
- (A) Require coronary angiography within 24 hours
 - (B) Are those who present with cardiogenic shock
 - (C) Require emergency coronary angiography
 - (D) Include patients who respond to drug treatment and no longer have angina
 - (E) Include patients with malignant ventricular arrhythmias
195. In acute myocardial infarction with ST-segment elevation, thrombolysis:
- (A) It is indicated when primary PCI cannot be performed within the first 120 minutes of diagnosis
 - (B) It is not contraindicated in patients with a history stroke of unknown origin
 - (C) It is contraindicated in patients with gastrointestinal bleeding within the last month
 - (D) It is associated with antiplatelet treatment with ticagrelor
 - (E) dual antiplatelet therapy is not given to patients undergoing thrombolysis
196. Mitral regurgitation in the course of acute myocardial infarction with ST-segment elevation (STEMI):
- (A) May be due to dilation of the left ventricle
 - (B) It can occur in anterior myocardial infarction due to dysfunction of a papillary muscle
 - (C) It can be caused by rupture of papillary muscles, with slow onset of symptoms
 - (D) May be the cause of cardiogenic shock
 - (E) Cannot be ameliorated by revascularization
197. *Post myocardial infarction treatment includes:
- (A) A single antiplatelet agent, aspirin 75 mg / day
 - (B) Beta-blocker to lower the heart rate
 - (C) Angiotensin conversion enzyme inhibitor, preferably initiated at discharge
 - (D) Statin, targeting total cholesterol < 1.8 mmol / l
 - (E) Aldosterone antagonist, in all patients

198. The following statements about primary percutaneous intervention (PCI) in the treatment of ST-segment elevation myocardial infarction (STEMI) are true:
- (A) The preferred access is the femoral artery
 - (B) Bare metal stents are preferred
 - (C) Routine thrombus aspiration is recommended
 - (D) Dual antiplatelet therapy is required (aspirin and ticagrelor / prasugrel)
 - (E) Intra-procedural anticoagulant treatment may be unfractionated heparin or enoxaparin
199. Anti-anginal drugs in stable angina pectoris consists of:
- (A) Aspirin
 - (B) Diltiazem
 - (C) Ivabradine
 - (D) Bisoprolol
 - (E) Atorvastatin
200. ECG changes in acute ST-segment elevation myocardial infarction suggest:
- (A) Anterior MI if there is J point elevation of > 0.2 mV in leads V1-V3
 - (B) Inferior MI when there is ST elevation in leads I, aVL, V5, V6
 - (C) Posterior MI when there is ST depression in leads V1-V3
 - (D) Posterior MI when there is ST elevation in leads V1-V3
 - (E) Inferior MI when there is ST elevation in leads II, III, aVF
201. *Paraclinic findings in severe mitral stenosis are:
- (A) Tall and sharp P waves in lead II
 - (B) On transthoracic echocardiography, a mean mitral gradient of 5-10 mmHg
 - (C) On transthoracic echocardiography, a mitral valve area of 1,6 cm²
 - (D) Left ventricular dilation
 - (E) Atrial fibrillation
202. Treatment for mitral stenosis consists of:
- (A) Trans-septal balloon valvotomy in patients with moderate mitral stenosis
 - (B) Closed valvotomy in patients with moderate mitral regurgitation
 - (C) Mitral valve replacement in case of severe mitral stenosis with left atrial thrombus
 - (D) Trans-septal balloon valvotomy in patients with severe mitral stenosis, with symptoms and no contraindications
 - (E) Open valvotomy, that increases the risk for traumatic mitral regurgitation
203. Auscultation in mitral regurgitation can reveal:
- (A) Pansystolic murmur, with a maximum intensity at the apex
 - (B) Soft S1
 - (C) Mid-diastolic rumble at the apex
 - (D) Systolic, low-pitched, ejection murmur, radiating to carotids
 - (E) Early diastolic murmur at the left sternal edge
204. *An asymptomatic patients, with a transaortic maximum velocity (measured at echocardiography) of 4.2 m/s, should undergo:
- (A) Surgical replacement if the left ventricular ejection fraction is 40%

- (B) Surgical replacement if blood pressure increases during exercise
 - (C) Periodic follow-up, as the patient is asymptomatic
 - (D) Percutaneous valve replacement if left ventricular ejection fraction is > 50%
 - (E) Periodic follow-up, as the patient has moderate aortic stenosis
205. Among the causes of acute aortic regurgitation are:
- (A) Bicuspid aortic valve
 - (B) Aortic dissection
 - (C) Ruptured Valsalva sinus aneurysm
 - (D) Marfan syndrome
 - (E) Infectious endocarditis
206. Aortic valve surgery in patients with severe aortic regurgitation is recommended in the following cases:
- (A) Chronic severe aortic regurgitation in patients in NYHA functional class II-IV
 - (B) Asymptomatic patients with ejection fraction > 50%, in the absence of left ventricular dilation
 - (C) Patients requiring surgical myocardial revascularization by aorto-coronary bypass
 - (D) Chronic severe aortic regurgitation in asymptomatic patients with LV ejection fraction > 50%
 - (E) Never in the absence of symptoms
207. The following statements about tricuspid stenosis are true:
- (A) It causes dyspnea through pulmonary congestion
 - (B) It causes hepatomegaly by systemic venous congestion
 - (C) Mid-diastolic rumble occurs at the left sternal edge
 - (D) On the electrocardiogram there are bifid P waves in lead II
 - (E) Medical treatment consists of diuretic therapy
208. Functional tricuspid regurgitation:
- (A) Occurs in the chronic pulmonary heart
 - (B) Occurs in Ebstein's disease
 - (C) It is not influenced by drug treatment
 - (D) May occur in myocardial infarction
 - (E) It usually disappears after drug treatment
209. The following are true about valve prostheses:
- (A) Mechanical valves are more durable than biological ones
 - (B) Mechanical valves require lifelong anticoagulation and any anticoagulant can be used
 - (C) Biological valves require anticoagulant treatment for 3 months
 - (D) Aspirin may be administered for low thrombogenic mechanical valves
 - (E) Anticoagulant treatment in patients with mechanical prosthesis may not be discontinued under any circumstances
210. Which of the following might appear in mitral regurgitation:
- (A) Left atrium dilation
 - (B) Right atrium dilation

- (C) Dyspnoea and orthopnea by increased pressure in the pulmonary veins
 - (D) Fatigue due to decreased cardiac output
 - (E) Increased stroke volume
211. Major criteria in infective endocarditis is/are:
- (A) Echocardiographic evidence of an abscess
 - (B) New valvular regurgitation
 - (C) Major arterial emboli
 - (D) Fever
 - (E) Echocardiographic evidence of a new partial dehiscence of a prosthetic valve
212. Clinical exam in infected endocarditis could reveal the following signs:
- (A) Westermark's sign
 - (B) Osler Nodes
 - (C) Hampton's hump
 - (D) Janeway lesions
 - (E) Roth spots
213. In the case of the persistence of fever after 48 hours from the initiation of appropriate antibiotic therapy for infective endocarditis, the following should be considered:
- (A) Perivalvular extension of infection
 - (B) Pulmonary embolism
 - (C) Hospital-acquired infection
 - (D) Drug-reaction
 - (E) The change of the antibiotic dosage
214. Groups of patients considered exposed to the highest risk of developing infective endocarditis (IE) in are:
- (A) Patients with prosthetic valves
 - (B) Patients with previous episode of IE
 - (C) Patients with uncorrected cyanotic congenital heart disease
 - (D) Patients with corrected cyanotic congenital heart disease, after 6 months post surgery
 - (E) Patients with cardiac transplant and valvular heart disease
215. *Minor diagnostic criteria for infective endocarditis could be considered:
- (A) Fever
 - (B) A positive test for Q fever
 - (C) An oscillating intracardiac mass on one valve or supporting structure in echocardiography
 - (D) A persistent positive culture more than 12 hours
 - (E) Histological confirmation of the intracardiac abscess
216. Choose the correct statement(s), concerning the hypertrophic cardiomyopathy:
- (A) Auscultation is usually characterised by an ejection diastolic murmur due to left ventricular outflow obstruction
 - (B) Includes inherited conditions producing myocardial hypertrophy in the absence of an alternative cause

- (C) Is characterized by myocardial hypertrophy, frequently involving the interventricular septum
 - (D) Sudden death may occur at any age, but the highest rates occur in elder patients
 - (E) The majority of cases are familial autosomal dominant, with mutation of genes encoding sarcomeric proteins
217. *The gold standard for the diagnosis of myocarditis is considered:
- (A) Coronary angiography
 - (B) Echocardiography
 - (C) Endomyocardial biopsy
 - (D) Cardiac magnetic resonance (CMR)
 - (E) Computer tomography (CT)
218. Task Force Criteria used for the clinical diagnosis of arrhythmogenic right ventricular cardiomyopathy include:
- (A) Fibro-fatty replacement of myocytes on tissue biopsy
 - (B) Repolarization and conduction abnormalities on ECG or signal- averaged ECG
 - (C) Ventricular tachycardia or frequent ventricular extrasystoles on Holter monitoring
 - (D) Family history of ACM in a first- or second-degree relative
 - (E) Sudden death at ages >55 years due to ACM
219. Regarding peripartum cardiomyopathy, we could state that:
- (A) Affects women within 5 months of delivery
 - (B) It presents as a hypertrophic cardiomyopathy
 - (C) Is associated with pre-eclampsia
 - (D) It is more common in obese patients
 - (E) All cases will recover to normal function within 6 months from the onset
220. In dilated cardiomyopathy, the therapeutical options include:
- (A) Conventional treatment of the heart failure
 - (B) Implantable cardioverter-defibrillators (ICDs) in patients with NYHA I/II grading
 - (C) Cardiac resynchronization therapy in patients with NYHA III/IV grade
 - (D) Cardiac transplantation
 - (E) Cardiac resynchronization therapy in patients with NYHA I/II grade
221. *In clinical practice, the most frequent etiology of acute pericarditis is/are:
- (A) Malignant
 - (B) Tuberculosis
 - (C) Idiopathic
 - (D) Autoimmune
 - (E) Post-traumatic
222. The treatment of tuberculous pericarditis includes:
- (A) Just antitubercular medications
 - (B) Antitubercular medications associated with prednisolone
 - (C) Antitubercular medications associated with non-steroidal anti-inflammatory drugs (NSAIDs)

- (D) Pericardial aspiration
 - (E) Pericardial fenestration
223. Which investigation would you proceed in order to diagnose a constrictive pericarditis:
- (A) Chest X-ray
 - (B) ECG
 - (C) Echocardiography
 - (D) Computer tomography (CT)
 - (E) Cardiac angiography
224. Specific ECG features encountered in acute pericarditis could be:
- (A) Concave elevation of ST segment
 - (B) Sinus tachycardia
 - (C) Low-voltage QRS complexes with generalized T wave flattening or inversion
 - (D) Depression of PR segment
 - (E) Alternation of QRS amplitude or axis between beats
225. Symptoms and/or signs of pericardial effusion could be:
- (A) Accentuated apex beat
 - (B) A friction rub, in late stages, with large volumes collected in the pericardial space
 - (C) Ewart's sign
 - (D) Kussmaul's sign, in early stages
 - (E) Soft and distant heart sounds
226. Raised blood pressure:
- (A) Affects one-third of adults
 - (B) Is outstripped only by infectious diseases as a risk factor for death, worldwide
 - (C) Is a risk factor for end-stage renal disease
 - (D) Is a disease associated with ageing
 - (E) Is more common in black African
227. The following rules must be respected when measuring blood pressure (BP):
- (A) Seated position
 - (B) The back supported, the legs crossed
 - (C) The arm supported
 - (D) The BP bladder should encircle below 80% of the upper arm circumference
 - (E) After 5 minutes` uninterrupted rest
228. In masked hypertension:
- (A) Blood pressure (BP) measured out-of-office is normal
 - (B) BP measured at the office is increased
 - (C) Cardiovascular risk is intermediate
 - (D) Home BP measurement is useful for identification
 - (E) Ambulatory BP measurement does not allow identification
229. For isolated systolic hypertension are true:
- (A) It is characterized by widening pulse pressure
 - (B) It is associated with reduced vascular damage
 - (C) Can be caused by aortic stenosis

- (D) Drug treatment differs from that for combined hypertension
 - (E) Reduction of diastolic blood pressure below 60 mmHg should be avoided
230. The mechanisms by which angiotensin II (Ang II) contributes to hypertension are:
- (A) Increasing heart rate
 - (B) Increasing contractility
 - (C) Increasing venous tone
 - (D) Increasing systemic vascular resistance, as a local factor
 - (E) Increasing systemic vascular resistance, as a circulating factor
231. *Primary hyperaldosteronism, a cause of secondary hypertension, is characterized by:
- (A) Raised Renin:aldosterone ratio
 - (B) Low potassium (K)
 - (C) Abdominal bruit
 - (D) Secondary amenorrhoea
 - (E) Mallapati score 3 or 4
232. The phenotype of moderate retinopathy in hypertension includes:
- (A) Microaneurysms
 - (B) Cotton-wool spots
 - (C) Papilloedema
 - (D) Hard exudates
 - (E) Flame-shaped haemorrhages
233. Left ventricular hypertrophy in hypertension is characterized by:
- (A) It is always symptomatic
 - (B) The electrocardiogram (ECG) has a diagnostic sensitivity of over 50%
 - (C) It is caused by decreased preload
 - (D) It is a compensatory phenomenon to reduce parietal stress
 - (E) Transthoracic echocardiography is more specific than ECG
234. *Thiazide-like diuretics:
- (A) Induce vasodilation
 - (B) May cause hypoglycaemia
 - (C) Are represented by Doxazosin
 - (D) Are contraindicated in asthma
 - (E) Are recommended for use in pregnancy
235. Hypertensive encephalopathy is characterized by:
- (A) Can manifest manifest in visual disturbances
 - (B) Often features moderate-severe retinopathy
 - (C) The investigation of choice is elevated serum troponin
 - (D) Immediate reduction of systolic blood pressure (SBP) to 100-120 mmHg is recommended
 - (E) The first line therapies are i.v. labetalol, nicardipine
236. Regarding Gastro-oesophageal reflux disease (GORD), the following are true:
- (A) Heartburn is the main symptom
 - (B) The correlation between heartburn and esophagitis is high
 - (C) Regurgitation is favored by orthostatism
 - (D) The differential diagnosis between cardiac ischaemic pain and esophageal pain can be difficult

- (E) In case of dysphagia, additional investigations are recommended
237. In the exploration of patients with GORD, upper GI endoscopy is indicated in the following cases:
- (A) Typical symptoms, patients under 45 years
 - (B) In patients with alarm signs
 - (C) In case of dysphagia
 - (D) It is indicated in all patients
 - (E) It is indicated only in elderly patients
238. The classic clinical features of gastroesophageal reflux pain:
- (A) Radiates to the base of the neck or upper left limb
 - (B) Burning character, aggravated by bending, stooping or lying down
 - (C) It gets worse with exercise
 - (D) Constrictive "claw character" or crushing
 - (E) It improves with the ingestion of antacids
239. The Los Angeles classification involves:
- (A) Grade A = mucosal breaks confined to the mucosal folds, each no longer than 5 mm
 - (B) Grade D = mucosal breaks, engaging less than 75% of the circumference of the esophagus
 - (C) Grade C = mucosa breaks that are continuous between the tops of mucosal folds and are circumferential
 - (D) Grade A = mucosal breaks confined to the mucosal folds, but no longer than 3 mm.
 - (E) Grade B = at least one mucosal break longer than 5 mm confined to the mucosal fold but not continuous between two folds
240. Barrett's oesophagus is a condition in which:
- (A) Part of the normal oesophageal squamous epithelium is replaced by metaplastic columnar mucosa
 - (B) Is a complication of GORD
 - (C) Is not associated with hiatus hernia
 - (D) Screening is recommended
 - (E) Is common in obese middle-aged men
241. The alarm symptoms within the ulcer disease are represented by:
- (A) Persistent vomiting
 - (B) Anorexia
 - (C) Polyphagia
 - (D) Meteorism
 - (E) Iron deficiency anemia
242. Non-invasive methods of investigating H. pylori infection are:
- (A) ¹³C-urea breath test
 - (B) Biopsy urease test
 - (C) Serological tests
 - (D) Histopathological examination of biopsies
 - (E) Stool antigen test

243. In the investigation of the patient suspected of peptic ulcer disease, endoscopy is indicated:
- (A) In patients under 55 years of age
 - (B) In patients with hematemesis
 - (C) In all patients over 45 years of age
 - (D) In patients with iron deficiency anemia
 - (E) In all symptomatic patients
244. In investigating a patient with a gastric ulcer:
- (A) It is necessary to biopsy gastric ulcers
 - (B) Requires follow up endoscopically
 - (C) Biopsy is contraindicated
 - (D) Only non-invasive assessment methods are used
 - (E) Endoscopy is indicated only in case of melaena
245. The following drugs are used in the therapeutic regimens of *H. pylori*:
- (A) Amoxicillin
 - (B) Metronidazole
 - (C) Bismuth
 - (D) Alginate
 - (E) Metoclopramide
246. The mechanisms by which the intestinal microbiota could be related to the aetiology of inflammatory diseases include:
- (A) Intestinal dysbiosis
 - (B) Impaired mucosal barrier function
 - (C) Efficient chemical barrier
 - (D) Bacterial antigens
 - (E) The microbiota is not involved
247. *Usually Crohn's disease has a particular tendency to affect:
- (A) The terminal ileum and the ascending colon
 - (B) Colon
 - (C) Sigmoid
 - (D) The duodenum
 - (E) The rectum
248. The characteristic macroscopic changes in Crohn's disease are:
- (A) Deep ulcers
 - (B) Friability of the mucosa
 - (C) Erythematous mucosa
 - (D) Aphthoid ulceration
 - (E) The mucosa bleeds slightly
249. *The major symptom in ulcerative colitis (UC) is:
- (A) Lumbar pain
 - (B) Dysuria
 - (C) Diarrhoea with blood and mucus

- (D) Anorexia
 - (E) Asthenia
250. *Regarding ulcerative colitis are true:
- (A) p-ANCA can be positive
 - (B) Complete colonoscopy must be performed in severe attacks
 - (C) ASCAs are positive
 - (D) No serological tests are used for diagnosis
 - (E) It can affect any segment of the digestive tract
251. The prodromal stage of acute viral hepatitis is characterized by the following laboratory changes:
- (A) Fever
 - (B) The serum bilirubin is usually normal
 - (C) GGT and serum ALP may rise over many thousands
 - (D) AST and ALT may rise sometimes over many thousands
 - (E) High values of serum bilirubin
252. Significance of viral markers in hepatitis B is:
- (A) HBsAg: acute or chronic infection
 - (B) Anti-HBc IgM Antibodies: past exposure to hepatitis B
 - (C) Anti-HBs Antibodies: immunity to HBV
 - (D) Anti-HBc IgG Antibodies: acute hepatitis B
 - (E) HBV DNA: viral replication
253. The following antiviral agents are used for the treatment of chronic viral hepatitis B:
- (A) Ribavirin
 - (B) Interferon
 - (C) Sofosbuvir
 - (D) Entecavir
 - (E) Tenofovir
254. *Factors associated with rapid progression of HCV fibrosis include:
- (A) Alcohol consumption
 - (B) Co-infection with HIV
 - (C) Obesity
 - (D) Diabetes
 - (E) All of the above
255. Choose the correct statements about viral hepatitis E:
- (A) The infection progresses to chronic liver disease
 - (B) HEV RNA can be detected in the serum or stools by PCR
 - (C) Hepatitis E virus is an RNA virus (Hepeviridae family)
 - (D) It causes disease that is clinically similar to hepatitis A
 - (E) Diagnosis is based on the presence of IgG and IgM anti-HEV antibodies
256. The following factors are poor prognostic indicators in cirrhosis:

- (A) Raised liver function tests
 - (B) Hyperbilirubinemia
 - (C) Hypoalbuminemia (low albumin < 28 g/L)
 - (D) Low serum sodium (<125 mmol/L)
 - (E) Raised creatinine >130 μ mol/L (>1,5 mg/dL)
257. The Child-Pugh score used in cirrhosis takes into account the following criteria:
- (A) Liver function tests
 - (B) Bilirubin
 - (C) Albumin
 - (D) Presence of variceal bleeding
 - (E) Prothrombin time
258. The management of acute variceal bleeding in a cirrhotic patient is:
- (A) Endoscopic treatment: sclerotherapy
 - (B) Terlipressin 2 mg 6-hourly, with subsequent dose reduction
 - (C) Balloon tamponade: the usual balloon tube is Sengstaken-Blakemore
 - (D) Banding of esophageal varices is rarely performed
 - (E) Reduction in acid secretion: ranitidine, PPIs
259. *The diagnosis of spontaneous bacterial peritonitis is based on the following changes in ascites fluid:
- (A) Presence of malignant cells
 - (B) A neutrophil count >250/mm³
 - (C) A high serum-ascites albumin gradient of > 11 g/L
 - (D) A low serum-ascites albumin gradient of <11 g/L
 - (E) High level of amylase
260. Recommendations for the treatment of hepatic encephalopathy include:
- (A) Emptying the intestine of nitrogenous substances by administering purgatives and enemas
 - (B) Hypercaloric nutrition
 - (C) Antibiotics: Rifaximin
 - (D) Supplementation of diuretic therapy
 - (E) Elimination of possible precipitating causes
261. Choose the correct statements about primary biliary cholangitis:
- (A) Young men represent 90% of patients with primary biliary cholangitis
 - (B) Serum anti-mitochondrial antibodies (AMA) are found in almost all patients
 - (C) The etiology of primary biliary cholangitis is viral
 - (D) Pruritus is often the earliest symptom
 - (E) Laboratory investigations indicate hypergammaglobulinemia by increasing serum IgG
262. The treatment of primary biliary cholangitis consists of:
- (A) Steroids are the main treatment
 - (B) Ursodeoxycholic acid brings benefits in the asymptomatic phase
 - (C) Pruritus can be relieved by colestyramine

- (D) Phlebotomy has been shown to be useful in the treatment of symptomatic forms
 - (E) Liver transplantation should be offered when the serum bilirubin is persistently above 100 $\mu\text{mol/L}$
263. *Diagnosis of primary sclerosing cholangitis is based on the following criteria:
- (A) Hypergammaglobulinemia, by increasing serum IgG
 - (B) The presence of anti-nuclear (ANA) and anti-mitochondrial (AMA) antibodies
 - (C) The cholangiogram shows irregularity of calibre of both intra and extrahepatic ducts
 - (D) The presence of granulomas on liver biopsy
 - (E) The damage and loss of small bile ducts on liver biopsy
264. The following investigations are suggestive for the diagnosis of hereditary haemochromatosis:
- (A) High levels of liver function tests
 - (B) Serum ferritin is elevated ($>500 \mu\text{g/L}$)
 - (C) Serum iron is elevated ($>30 \mu\text{mol/L}$), with a reduction of TIBC and a transferrin saturation of $>45\%$
 - (D) Liver iron overload in liver biopsy
 - (E) Inflammation of the intrahepatic biliary radicles, having the appearance of “onion skin” on liver biopsy
265. The characteristic clinical features of Wilson disease are:
- (A) Kayser-Fleischer ring, caused by copper deposition in the cornea
 - (B) Bronze skin pigmentation
 - (C) Tremor
 - (D) Involuntary movements
 - (E) Dementia
266. Which of the following regarding a patient with dialysis disequilibrium is not correct:
- (A) A patient in whom dialysis fails to significantly decrease urea
 - (B) A patient with marked uremia in whom only peritoneal dialysis can be performed in the absence of hemodialysis
 - (C) A patient in whom the urea value was extremely high before the first hemodialysis and in whom the correction was made too quickly
 - (D) A patient with depression because dialysis initiation
 - (E) A patient in whom short hemodialysis sessions who failed to correct the edema
267. Which of the following are true for calciphylaxis:
- (A) Is characterised by the proliferation of dermal fibrocytes with excessive collagen and calcium deposition
 - (B) It presents with non-healing ulcers, panniculitis and dermal necrosis
 - (C) Risk factors include hyperparathyroidism and warfarin treatments
 - (D) Has good prognosis in 100% cases
 - (E) Is generated by the deposition of nitrogen residual products resulted from protein catabolism
268. *Which of the following are true about renal anemia treatment?
- (A) The target of the therapy is a haemoglobin higher than 120 g/l

- (B) The target of the therapy is a haemoglobin between 100 and 120 g/l
 - (C) Lack of response to high doses of erythropoietin (over 300 U/kg) requires doubling the dose
 - (D) Hypertension is a very rare secondary effect in patients treated with epoetin
 - (E) Functional iron deficiency is the situation in which iron cannot participate in erythropoiesis due to lack of transferrin
269. The prognosis of chronic kidney disease correlates with:
- (A) Hypertension control
 - (B) Diuresis control
 - (C) Proteinuria
 - (D) The degree of scarring of renal interstitium
 - (E) Concomitant presence of diabetes mellitus
270. *A male patient, 39 years old, has an estimated glomerular filtration rate of 38 ml/min/1.73 m² and an albumin/creatinin ratio of 26 mg/mmol from six months. Which is the stage of chronic kidney disease:
- (A) G3BA3
 - (B) G3aA1
 - (C) G3bA2
 - (D) G4A2
 - (E) G4A3
271. Which of the following affirmations about chronic kidney disease are true:
- (A) Inefficient hemodialysis can be a cause for uremic pericarditis
 - (B) Insulin requirements decrease in a diabetic patient as chronic kidney disease worsens
 - (C) Anticoagulation is indicated in all cases with uremic pericarditis
 - (D) Uremic pruritus is ameliorated by dialysis
 - (E) The optimal glomerular filtration rate for starting dialysis is about 10 ml/min
272. Which of the following statements about renal transplantation are true:
- (A) Cellular rejection may respond to high-dose intravenous corticosteroids
 - (B) Recurrent renal disease is rare in segmental and focal glomerulosclerosis and diabetes nephropathy
 - (C) Cardiovascular disease is a rare cause of mortality after renal transplantation
 - (D) Antibody-mediated rejection is treated with plasmapheresis
 - (E) Polyoma virus infection needs lowering immunosuppression dose in the hope of spontaneous viral clearance
273. Which of the following statements about peritoneal dialysis are true?
- (A) Sclerosing peritonitis is a complication of peritoneal dialysis that is treated with calcineurin inhibitors
 - (B) Peritonitis bacteriană la un pacient cu dializă peritoneală este sugerată de un lichid peritoneal cu peste 100 leucocite/mm³
 - (C) Bacterial peritonitis is suggested by a peritoneal fluid with more than 100 leukocytes / mm³
 - (D) Bacterial peritonitis may be caused by a catheter exit-site infection
 - (E) Loss of residual renal function may be a cause of dialysis inadequacy

274. Which of the following combinations immunosuppressive drug – adverse effect are correct:
- (A) Calcineurin inhibitor – nephrotoxicity
 - (B) Corticosteroids – poor wound healing
 - (C) Corticosteroids – acute interstitial nephritis
 - (D) Mycophenolate mofetil – diarrhoea
 - (E) Corticosteroids – leukopenia
275. Which of the following must be avoided in chronic kidney disease:
- (A) Penicillins
 - (B) Tetracyclines
 - (C) Nonsteroidal antiinflammatory drugs
 - (D) Gentamicin
 - (E) Spironolactone
276. Which of the following statements regarding the epidemiology of HIV infection are true?
- (A) Blood-sucking insects (mosquitoes) constitute an important vector for the transmission of HIV infection in Africa
 - (B) Higher levels of multimorbidity occur in people with HIV at a younger age than in those who are HIV-negative
 - (C) The risk of vertical transmission of HIV, in the absence of any prophylactic interventions, is 1%
 - (D) People in whom HIV testing is recommended include injectable drug users and persons diagnosed with sexually transmitted infections
 - (E) Globally, heterosexual intercourse accounts for the majority of HIV infections
277. AIDS-defining conditions include:
- (A) Mycobacterium tuberculosis infection, any site
 - (B) Herpes Zoster
 - (C) Wasting syndrome, due to HIV
 - (D) Oral candidiasis
 - (E) Burkitt lymphoma
278. *Which stage of HIV infection, according to the Centers for Disease Control (CDC) classification, corresponds to an HIV-positive patient diagnosed with primary lymphoma of brain, who has an absolute CD4 count of 105/mm³?
- (A) B2
 - (B) B3
 - (C) C2
 - (D) C3
 - (E) A3
279. Choose the correct statements regarding anti-retroviral therapy (ART):
- (A) It should be offered to all HIV-positive patients, regardless of the CD4 count
 - (B) Nucleoside / nucleotide reverse transcriptase inhibitors include tenofovir and emtricitabine
 - (C) Anti-retroviral therapy is recommended until the HIV RNA viral load becomes undetectable, after that ART should be discontinued and the patient monitored regularly
 - (D) It has potential drug interactions, even with herbal, complementary agents

- (E) Lipodystrophy and metabolic syndrome are possible side-effects of ART
280. Chose the correct statements referring to the opportunistic infections associated with HIV:
- (A) Opportunistic fungal infections include cryptosporidiosis and leishmaniasis
 - (B) Cytomegalovirus (CMV) retinitis may lead to loss of visual acuity
 - (C) Human papillomavirus (HPV) is associated with progressive multifocal leucoencephalopathy (PML)
 - (D) The most frequent clinical manifestation of cryptococcosis is cutaneous
 - (E) Reactivation of a previously acquired infection with *Toxoplasma gondii* may lead to encephalitis and cerebral abscess, as well as chorioretinitis
281. *Select the correct statement regarding HIV / hepatitis viruses co-infection:
- (A) Anti-hepatitis A vaccination is prohibited in HIV-infected patients
 - (B) Raltegravir and dolutegravir are effective drugs used for HIV therapy, as well as for treating hepatitis B
 - (C) In case of HIV / hepatitis C virus co-infection, both infections progress more rapidly
 - (D) Anti-hepatitis B vaccination is not recommended in HIV-infected patients
 - (E) Babies born to HIV-infected mothers are the main risk category for co-infection with hepatitis B and C viruses
282. Anti-HIV antibodies:
- (A) Are detected, on average, 2 days after the initial infection
 - (B) Persist for life in an HIV-infected patient
 - (C) Are present at birth in all babies born to HIV-positive women
 - (D) Disappear under antiretroviral treatment (ART), once the HIV-RNA viral load becomes undetectable
 - (E) Have protective function against HIV infection
283. Regarding the changing face of the HIV epidemic at present time, which of the following statements are correct?
- (A) In countries where anti-retroviral therapy (ART) is consistently accessible, AIDS-defining illnesses have given way to non-communicable conditions
 - (B) Chronic health conditions accumulate in HIV-infected patients at the same age as in HIV-negative persons
 - (C) Leading comorbidities in people with HIV include cardio-vascular, renal, neurologic and psychiatric conditions
 - (D) Effective ART increased the number of HIV-infected persons with long-term, sustained viral suppression
 - (E) In sub-Saharan Africa, HIV infection is more common in men than in young women
284. Which of the following statements regarding the pathogenesis of HIV infection are correct?
- (A) Permanent infection is usually established in the regional lymph nodes
 - (B) Cell-mediated immunodeficiency predisposes the host to infections with capsulated bacteria
 - (C) Host-cell receptor is represented by the CD8 molecule
 - (D) HIV surface protein (gp 120) is involved in HIV entry into cells
 - (E) At the time of the initial exposure, HIV is transported by dendritic cells from skin surface to regional lymph nodes

285. Chose the correct statements regarding the interrelationship between HIV and the host immune system:
- (A) Escape mutations within the virus population do not compromise the antiviral effect of natural killer (NK) cells
 - (B) HIV replication is linked to the process of CD4 T lymphocytes destruction and depletion
 - (C) HIV is associated with immune activation, a long-term inflammatory state
 - (D) Chronic inflammation associated with HIV infection and other co-pathogens (such as cytomegalovirus) and the translocations of microbial products from the gut leads to raised levels of inflammatory cytokines and coagulation system activation
 - (E) Effective anti-retroviral therapy (ART) reduces the inflammatory response
286. Chose the correct statements regarding the clinical latency period of untreated HIV infection:
- (A) HIV does not replicate
 - (B) Some patients may continue with a normal CD4 count over many years
 - (C) Older people are predisposed to a slower progression of disease
 - (D) A subgroup of patients with asymptomatic infection have persistent generalized lymphadenopathy
 - (E) The lymphnodes are painful
287. Select the correct statements regarding the neurological disease of patients with symptomatic HIV infection:
- (A) Infection of the nervous tissue occurs late, during the advanced stages of HIV infection
 - (B) AIDS-dementia complex (ADC) has varying degrees of severity
 - (C) Sensory polyneuropathy is characterized by intense pain in the feet
 - (D) The spinal cord is not affected
 - (E) Anti-retroviral medication (ARVs) which penetrate the central nervous system (CNS) may have neuroprotective role
288. The following statements regarding opportunistic infections associated with HIV immunodeficiency are true:
- (A) Opportunistic infections are diseases caused by organisms that are not usually considered pathogenic
 - (B) Opportunistic infections can be caused by known pathogens with unusual presentations
 - (C) Patients with CD4 counts over 200/mm³ are at high risk for opportunistic infections
 - (D) Impaired macrophage function predisposes to infections with Mycobacterium and Salmonella
 - (E) HIV-infected patients may already carry microorganisms responsible for opportunistic infections
289. *Chose the correct statement regarding the immune reconstitution inflammatory syndrome (IRIS)
- (A) IRIS is not associated with anti-retroviral therapy (ART)
 - (B) IRIS is characterized by mounting an inflammatory response to pathogens, with exacerbation of pre-existing symptoms or new clinical signs, due to the recovery of the patients' immune system
 - (C) It may appear in any person at the time of anti-retroviral therapy (ART) initiation, regardless of his degree of immunosuppression
 - (D) In order to avoid the onset of IRIS in case of Cryptococcus meningitis, antimycotic treatment should be administered after the initiation of ART

- (E) In *Mycobacterium tuberculosis* infection, in order to avoid IRIS, specific anti-tuberculous treatment should be initiated at the same time as ART
290. *Which is the correct attitude towards women who become pregnant on anti-retroviral treatment (ART)?
- (A) ART should be immediately discontinued
 - (B) ART should continue
 - (C) Regardless of the effectiveness of the anti-retroviral regimen, vaginal delivery is not recommended, even in the absence of labour complications
 - (D) HIV-infected mothers may breastfeed safely
 - (E) Anti-retroviral treatment of the pregnant HIV-infected woman does not influence the risk of vertical transmission of HIV
291. In case of transfusion of a unit of erythrocyte mass in a patient with an average weight of 70 kg, we can expect the following increases:
- (A) Hemoglobin concentration with 1 g / dL
 - (B) Hemoglobin concentration with 2g / dL
 - (C) Hematocrit with 3%
 - (D) Hematocrit with 2%
 - (E) Hematocrit with 1% and hemoglobin concentration of 3 g / dL
292. The following immunological reactions may occur during transfusions:
- (A) Febrile reactions
 - (B) Anaphylactic shock
 - (C) Urticaria
 - (D) Noncardiogenic pulmonary edema
 - (E) Hypothermia
293. *The lethal triad of metabolic complications in transfusion therapy includes:
- (A) Acidosis, hypothermia, and coagulopathy
 - (B) Alkalosis, hypothermia, and coagulopathy
 - (C) Acidosis, hyperkalemia, and hypothermia
 - (D) Acidosis, hypokalemia, and coagulopathy
 - (E) Alkalosis, hypothermia, and coagulopathy
294. The following laboratory tests may be useful in diagnosing disseminated intravascular coagulation:
- (A) Prolonged activated partial thromboplastin time (aPTT)
 - (B) Prolonged prothrombin time
 - (C) Thrombocytosis
 - (D) Low prothrombin time
 - (E) The presence of fibrin and fibrinogen split products and positive D-dimers
295. The management of major transfusion reactions includes:
- (A) Antihistamines
 - (B) Volume expanders
 - (C) Pressors

- (D) Immediate cessation of transfusion
 - (E) The transfusion should not be stopped
296. Deep surgical wound infections are characterized by:
- (A) Involves the skin and subcutaneous tissues
 - (B) They are extended into muscles and fascia
 - (C) Their treatment requires reopening of the wounds and surgical debridement of necrotic tissue
 - (D) Represents the most common type of surgical wound infections
 - (E) Treatment includes oral antibiotics
297. *Intra-abdominal infections are characterized by:
- (A) Simple antibiotic therapy is sufficient
 - (B) Represents a deep infection of surgical wounds
 - (C) It is clinically manifested by diffuse peritonitis with sepsis and intra-abdominal abscess
 - (D) The method of choice for the treatment of an intra-abdominal abscess is represented by exploratory laparotomy and evacuation
 - (E) After adequate control of the primary source, the duration of antibiotic therapy should exceed 7 days after the cessation of fever and leukocytosis
298. A breast abscess is characterized by:
- (A) Palpable formation
 - (B) Represents a soft tissue infection
 - (C) Severe sensitivity
 - (D) Edema and erythema
 - (E) Represents a soft tissue infection, usually of streptococcal origin
299. Acute peritonitis is characterized by:
- (A) Acute abdominal pain accompanied by fever and leukocytosis
 - (B) Appendicular perforation frequently causes localized peritonitis
 - (C) Colonic perforation with diffuse peritonitis creates the most virulent type of peritonitis
 - (D) An upright chest roentgenogram commonly shows pneumoperitoneum beneath a hemidiaphragm
 - (E) Acute appendicitis causes generalized peritoneal irritation
300. The Charcot triad, characteristic of angiocolitis, includes:
- (A) Fulminant fever
 - (B) Right upper quadrant abdominal pain;
 - (C) Jaundice
 - (D) Hypotension
 - (E) Altered mental status
301. Class III hemorrhage classification is characterized by:
- (A) Lost blood volume of 30-40%
 - (B) Normal blood pressure
 - (C) Heart rate greater than 120 beats/minute
 - (D) Respiratory rate of 30-40 breaths/minute

- (E) Mental status is characterized by mild anxiety
302. The components of the triad confirming the tension pneumothorax are:
- (A) Absent breath sounds
 - (B) Muffled heart sounds
 - (C) Shock
 - (D) Metabolic acidosis
 - (E) Respiratory alkalosis
303. The signs of a basilar skull fracture are the following:
- (A) Periorbital ecchymosis
 - (B) Battle's sign or perimastoid ecchymosis
 - (C) Hemotympanum
 - (D) Leakage of cerebrospinal fluid from the nose or ears
 - (E) Leakage of cerebrospinal fluid through the oral cavity
304. The following traumatic conditions are life-threatening:
- (A) Cardiac tamponade
 - (B) Massive hemothorax
 - (C) Tension pneumothorax
 - (D) Simple pneumothorax
 - (E) Blunt aortic injuries
305. *Grade IV liver injury is characterized by:
- (A) Ruptured intraparenchymal hematoma with active bleeding
 - (B) Parenchymal disruption involving more than 3 segments of the same lobe
 - (C) Hepatic avulsion
 - (D) Capsular tear with active bleeding
 - (E) Intraparenchymal hematoma larger than 10 cm or expanding
306. Grade II splenic lesion is characterized by:
- (A) Subcapsular hematoma, non-expansive, comprising 10-50% of the surface area
 - (B) Nonexpanding intraparenchymal hematoma, less than 5 cm in diameter
 - (C) Hilar vascular lesion, which devascularizes the spleen
 - (D) Capsular tear, without bleeding, less than 1 cm in diameter
 - (E) Ruptured intraparenchymal hematoma with active bleeding
307. Early signs of compartment syndrome include:
- (A) Deiminished pulse
 - (B) Pain
 - (C) Diminished sensation
 - (D) Paresthesia
 - (E) Cutaneous hyperaesthesia
308. The "hard signs" of acute vascular injury include:
- (A) Pulsatile bleeding
 - (B) Expansive hematoma

- (C) Pale, cool and pulseless extremity
 - (D) Nonexpanding hematoma
 - (E) Diminished pulses
309. The components of neurogenic shock are the following:
- (A) Tetraplegia
 - (B) Hypotension
 - (C) Bradycardia
 - (D) Tachycardia
 - (E) Warm extremities
310. The Beck triad suggestive of cardiac tamponade consists of:
- (A) Hypotension
 - (B) Bradycardia
 - (C) Jugular venous distension
 - (D) Muffled heart sounds
 - (E) Tachypnea
311. Which of the following statements regarding the IInd degree burns are true:
- (A) All layers of the skin are involved
 - (B) It is covered with dry, avascular, relatively insensate coagulum
 - (C) Involves only the epidermis
 - (D) The exact depth of the IInd degree burns is often difficult to judge
 - (E) It extends into but not through the dermis
312. Inhalation injury in burned patients can present in the following forms:
- (A) Carbon monoxide poisoning
 - (B) Carbon dioxide poisoning
 - (C) Upper airway injury
 - (D) Organophosphorus intoxication
 - (E) Lower airway injuries
313. Which of the following are the most used surgical techniques of early burned skin excision:
- (A) Fascial excision
 - (B) Longitudinal excision
 - (C) Transversal excision
 - (D) Tangential excision
 - (E) Punctiform excision
314. *The most efficient method in the battle against burn wound infection is:
- (A) Silver nitrate solution as a topic antimicrobial against Staphylococcus and Streptococcus species
 - (B) Systemic administration of vancomycin
 - (C) Early burn excision and skin grafting
 - (D) Silver sulfadiazine topic application
 - (E) Associated systemic antibiotics

315. Which of the following steps are included in the initial assessment of burn patients treatment:
- (A) Resuscitation
 - (B) Stop of the burning process
 - (C) Wound coverage
 - (D) Secondary survey
 - (E) Burn center referral
316. Which of the following statements regarding esophageal squamous cell carcinoma are true:
- (A) It has a higher incidence in males
 - (B) It is seen mainly in the mid- to proximal part of the esophagus
 - (C) It is frequently associated with Barrett's esophagus
 - (D) It has a strong association with tobacco and alcohol consumption
 - (E) Its incidence in Western world has increased 4-fold over the last two decades
317. CT scan is useful in esophageal cancer diagnosis because:
- (A) It can define the extent of the tumor
 - (B) It can define the depth of the tumor invasion
 - (C) It can define the abnormal-appearing lymph nodes
 - (D) It permits the histologic confirmation of esophageal cancer
 - (E) It can rule out the trachea-bronchial involvement
318. *Which of the following substitute is the most frequently used conduit in esophagectomies:
- (A) The jejunum
 - (B) The right colon
 - (C) The left colon
 - (D) The stomach
 - (E) The ileum
319. Which of the following statements regarding the left colon esophageal substitute in esophagectomies are true:
- (A) It is used in a isoperistaltic fashion
 - (B) Comparing with the stomach it has the advantage of a longer and more relaxed reach to the cervical esophagus
 - (C) Comparing with the stomach it has the advantage of a less demanding technique with less anastomoses
 - (D) It is more resistant to acid reflux
 - (E) It obliges the surgeon to use the retrosternum route to reach the cervical esophagus
320. Concerns with using the transhiatal approach for esophageal resection includes:
- (A) A limited resection of large tumors
 - (B) Increased risk for cervical anastomotic failure
 - (C) Avoidance of a thoracotomy incision
 - (D) Greater potential for local tumor spillage
 - (E) Greater stretch of the stomach to reach the neck
321. Stents placement as a palliative management for patients with terminal esophageal cancer may have the following complications:

- (A) Esophageal perforation
 - (B) Regurgitation and aspiration pneumonia
 - (C) Stent migration
 - (D) Peptic ulcer
 - (E) Food impaction
322. *The “gold standard” for identifying a hiatal hernia is:
- (A) CT scan
 - (B) Esophageal endoscopy ultrasonography
 - (C) Contrast upper GI
 - (D) Plain chest radiography
 - (E) Upper digestive endoscopy
323. Which of the following are considered key operative steps in hiatal hernia surgical treatment:
- (A) Fundoplication
 - (B) Fundus resection
 - (C) Complete reduction of the hernia sac
 - (D) Mobilization of the thoracic esophagus
 - (E) Closure of the diaphragmatic defect
324. Which of the following statements are related with foreign body ingestion:
- (A) Is most commonly seen in mentally ill adults
 - (B) The majority of impaction occurs at the level of the cricopharyngeus muscle or at the level of a peptic stricture in the distal esophagus
 - (C) Barium study is the elective examination for diagnosis
 - (D) The patient is best treated with gentle endoscopic extraction
 - (E) Esophageal perforation is the most serious complication after endoscopic extraction of the foreign body
325. Which of the following statements regarding ingestion of caustic materials are true:
- (A) Ingestion of the caustic materials is a medical emergency
 - (B) Ingestion of alkaline products results in less severe, superficial esophageal injuries
 - (C) Flexible endoscopy should be performed early
 - (D) Airway maintenance is the first priority of the treatment
 - (E) The stomach is the preferred substitute in the surgical treatment of caustic strictures
326. Which of the following statements regarding the intestinal type of gastric cancer are true:
- (A) It is a poorly differentiated cancer with signet ring cells
 - (B) It occurs more often in younger patients
 - (C) It spreads hematogenously
 - (D) It is associated with Helicobacter pylori infection
 - (E) It has a better prognosis
327. Linitis plastica is a term used to describe:
- (A) An ulcerated - polypoid gastric cancer with a good prognosis
 - (B) A gastric cancer that diffusely infiltrates the wall of portions or all the stomach
 - (C) A gastric cancer with a poor prognosis

- (D) A gastric cancer loco-regionally spreaded
 - (E) An incipient gastric cancer
328. Which of the following symptoms/signs are related with a disseminated (distant spread) gastric cancer:
- (A) An enlarged left supraclavicular lymph node
 - (B) Unexplained weight loss
 - (C) Palpable epigastric mass
 - (D) Palpable umbilical nodule
 - (E) Hematemesis and melena
329. *The sudden onset of symptoms such as anxiety, diaphoresis, tachycardia, palpitations, weakness, fatigue within 3 hours after a meal in a patient previously submitted to a gastrectomy (one year ago) suggests:
- (A) Blind loop syndrome
 - (B) Marginal ulcer disease
 - (C) Afferent loop obstruction
 - (D) Late dumping syndrome
 - (E) Gastric atony
330. Which of the following statements concerning marginal ulcer disease are true:
- (A) It develops on the gastric side of gastrojejunostomy anastomosis
 - (B) The etiology is usually ischemia
 - (C) Surgery is the first line treatment
 - (D) It develops on the jejunal side of gastrojejunostomy anastomosis
 - (E) The first line treatment includes PPI (proton-pump inhibitors)
331. The following statements are characteristic of intestinal occlusions from strictures:
- (A) They are often incomplete
 - (B) They have insidious onset
 - (C) They are often complete
 - (D) Crohn's disease is the most common benign cause
 - (E) Intestinal strictures are only of benign cause
332. The signs and symptoms of small bowel obstruction with a closed loop are as follows:
- (A) The pain is progressive, intermittent to constant
 - (B) Abdominal distension is often absent
 - (C) Intermittent vomiting, fecal appearance
 - (D) Sensitivity to epigastric accentuated palpation
 - (E) Intermittent, intense, colic abdominal pain
333. The extrinsic causes of intestinal obstruction are represented by:
- (A) Volvulus of the intestine
 - (B) Phytobezoars
 - (C) Superior mesenteric artery syndrome
 - (D) Radiation enteritis
 - (E) Malignant strictures

334. The indicators of a higher risk of intestinal strangulation are the following:
- (A) Fever
 - (B) Leukocytosis
 - (C) Tachycardia
 - (D) Localized abdominal tenderness
 - (E) Hypotension
335. *In the obstruction of the colon:
- (A) The pain is intermittent
 - (B) The pain is continuous
 - (C) Vomiting is bilious
 - (D) Abdominal distension is absent
 - (E) The pain is intermittent to constant
336. In patients with acute mesenteric ischemia:
- (A) The pain is rapid in onset and severe
 - (B) Persistent metabolic acidosis is encountered
 - (C) Persistent metabolic alkalosis is encountered
 - (D) Laboratory studies are specific
 - (E) Elevated white blood cell count, increased lactic acid and metabolic acidosis are essential in diagnosing acute mesenteric ischemia
337. The primary goal of treatment of the acute mesenteric ischemia is to:
- (A) Rapid restoration of blood flow to the gut
 - (B) Immediate embolectomy
 - (C) Resect the necrotic intestine
 - (D) Prompt anticoagulation with intravenous heparin
 - (E) Minimize any reperfusion injury
338. The specific clinical signs of acute appendicitis are as follows:
- (A) The Murphy sign
 - (B) The psoas sign
 - (C) The obturator sign
 - (D) The wave sign
 - (E) The Courvoisier-Terrier sign
339. *Regarding the acute appendicitis, the following statements are true:
- (A) Appendicectomy is the main treatment
 - (B) Non-operative management of acute appendicitis is outlawed
 - (C) The surgery is stopped if the cecal appendix does not show changes
 - (D) Localized abscess can only be treated by laparoscopic evacuation
 - (E) Surgery does not require preoperative training
340. Regarding the treatment of intestinal obstructions, the following statements are true:
- (A) Early postoperative occlusion requires an extra measure of patience
 - (B) In patients with Crohn's disease, extensive resections are indicated

- (C) Irreducible hernias should be postponed
 - (D) Spontaneous intussusception, in children, requires immediate surgery
 - (E) Patients with complete occlusions require prompt surgery
341. Large-bowel obstruction in adults is most often caused by:
- (A) Diverticular disease
 - (B) Fecaloma
 - (C) Rectal cancer
 - (D) Volvulus of the colon
 - (E) Adhesions
342. Emergency laparotomy is undertaken for acute large-bowel obstruction when:
- (A) The cecal distension is beyond 12 cm in diameter
 - (B) There are no signs of peritonitis
 - (C) There are signs of generalized sepsis
 - (D) There is evidence of peritonitis
 - (E) There is severe abdominal tenderness
343. * The imaging aspect suggestive for the colonic volvulus in the contrast enema is:
- (A) "Coffee Bean"
 - (B) "Inner bent tube"
 - (C) "Bird's beak"
 - (D) "Hourglass"
 - (E) "Apple stalk"
344. *If a colonic obstruction is clinically suspected, the exploration of choice is:
- (A) Colonoscopy
 - (B) Abdominal radiography
 - (C) CT scanning
 - (D) MRI scanning
 - (E) Contrast enema
345. Initial therapy for large bowel occlusion includes:
- (A) Laparotomy with colic resection where necessary
 - (B) Volume resuscitation
 - (C) Electrolyte repletion
 - (D) Prophylactic antibiotic therapy
 - (E) Timely surgical consultation
346. Which of the statements about the sigmoid volvulus are true?
- (A) It occurs frequently in young patients
 - (B) It occurs frequently in patients with dementia
 - (C) It occurs frequently in patients with constipation
 - (D) The initial treatment is endoscopic detorsion
 - (E) Cecal resection is the most consistently effective means of preventing recurrence
347. Which of the statements regarding the cecal volvulus are true?

- (A) Acute presentation is more acute than in the sigmoid volvulus
 - (B) On plain abdominal radiography, the small bowel is distended, whereas the distal colon is decompressed
 - (C) Cecal volvulus produces large- and small-bowel obstruction
 - (D) Endoscopic detorsion is recommended as an initial treatment
 - (E) Cecal resection is the most consistently effective means of preventing recurrence
348. Evidence for the malignant potential of adenomas (colon polyps) includes:
- (A) High incidence of cancer associated with polyps in familial adenomatous polyposis syndrome (PAF)
 - (B) Lower incidence of cancer in patients who regularly take Aspirin
 - (C) Simultaneous occurrence of cancers and polyps in the same patient
 - (D) Carcinogens that produce both adenomas and cancers in the same experimental model
 - (E) Reduced risk of cancer associated with those whose polyps have been removed
349. Which of the following statements about colorectal cancer are true?
- (A) It is the third most common type of cancer
 - (B) The great majority of colorectal cancers occur sporadically, without a known genetic mutation
 - (C) Aspirin, when taken regularly, significantly reduces the risk of colon cancer
 - (D) Most colorectal cancers occur on the right side of the colon
 - (E) The maximum incidence of colon cancers is at the age of 70 years
350. Characteristics for right colon cancer are the followings:
- (A) Tumors are usually exophytic lesions
 - (B) It is frequently associated with iron deficiency anemia
 - (C) It is usually manifested by macroscopic rectal bleedings
 - (D) Intestinal transit disorders with flatulence and decrease in stool caliber
 - (E) Tenesmus
351. *Dosing of carcinoembryonic antigen (ACE) in colorectal cancer is useful for:
- (A) Positive diagnosis
 - (B) Differential diagnosis with other GI malignancies
 - (C) Follow-up of patients after resection to detect recurrence of the disease
 - (D) Establishing the histopathological type of the tumor
 - (E) Screening in patients in the medium-risk group
352. Rectal cancer staging assessment includes:
- (A) Chest, abdominal, and pelvic CT to rule out distant metastatic disease
 - (B) Dosage of carcinoembryonic antigen in the blood (CEA)
 - (C) MRI or endorectal ultrasound
 - (D) Colonoscopy
 - (E) Biopsy
353. The aims of neoadjuvant treatment in rectal cancer are:
- (A) To reduce the size of the tumor
 - (B) To reduce the risk of postoperative complications
 - (C) To lower the chance of local recurrence in the suture line
 - (D) To increase survival

- (E) To postpone the operation
354. Which of the following statements about neoadjuvant treatment in colorectal cancer are true?
- (A) Neoadjuvant treatment is recommended in stenotic colon cancers
 - (B) Neoadjuvant treatment is recommended in rectal cancers in which MRI shows the tumoral invasion of the rectal wall (T3 or T4) or lymph node involvement
 - (C) The duration of neoadjuvant treatment is 6 weeks
 - (D) The purpose of neoadjuvant treatment is to reduce the size of the tumor
 - (E) The recovery period between neoadjuvant treatment and surgery is 2 weeks
355. What are the operations indicated when the rectal tumor invades the anal sphincter?
- (A) Intersphincteric resection
 - (B) Low anterior resection with primary anastomosis
 - (C) Abdomino-perineal resection (APR)
 - (D) Permanent end sigmoid colostomy
 - (E) Placement of an endoscopic metal stent
356. *The most important prognostic variable for colorectal cancer is:
- (A) Histopathological type of tumor
 - (B) Tumor location
 - (C) Age of the patient
 - (D) Tumor complications
 - (E) Lymph node involvement
357. External hemorrhoids are characterized by:
- (A) They originate above the dentate line
 - (B) Bleeding is usually painless
 - (C) They are covered by richly innervated anoderm
 - (D) In advanced stages, they protrude outside the rectum
 - (E) They can be complicated by thrombosis
358. The treatment of thrombotic external hemorrhoids includes the following:
- (A) Excision under local anesthesia
 - (B) Creams and suppositories
 - (C) Non-steroidal anti-inflammatory drugs (NSAIDs)
 - (D) Sitz baths
 - (E) Donut cushions
359. The correct treatment of perianal abscesses generally consists of:
- (A) The primary treatment is surgical drainage
 - (B) The incision is made at the level of the perianal skin as far as possible from the anal verge
 - (C) Aggressive daily packing of the drainage wound
 - (D) Antibiotic therapy in all cases
 - (E) Individualized complex drainage procedures, in deep and horseshoe abscesses

360. Which of the following statements about anal fissure are true?
- (A) The most common location is at the anterior midline
 - (B) The main symptom is pain usually accompanied by bleeding
 - (C) After about 8 weeks of onset, the fissure may become chronic
 - (D) Topical administration of calcium and nitrate blockers has been associated with healing rates of 65-95%
 - (E) The surgery of choice is left internal sphincterotomy
361. Factors that predispose to the formation of gallstones are:
- (A) Nulliparity
 - (B) High-dose estrogen oral contraceptives
 - (C) Rapid weight gain
 - (D) Prolonged total parenteral nutrition
 - (E) Hemolytic diseases
362. *Hemolytic disorders and liver cirrhosis are associated with the following types of gallstones:
- (A) Cholesterol stones
 - (B) Mixed stones
 - (C) Black pigment stones
 - (D) Brown pigment stones
 - (E) Biliary sludge
363. Laboratory tests in obstructive jaundice show the following:
- (A) Increased unconjugated bilirubin
 - (B) Increased alkaline phosphatase (AF)
 - (C) Increased gamma-glutamyl transferase (GGT)
 - (D) Increased urobilinogen in urine
 - (E) Elevated INR (international normalized ratio)
364. Which of the following statements about percutaneous transhepatic cholangiography (PTC) are true?
- (A) It requires the presence of an experienced endoscopist
 - (B) It is especially useful for visualizing the proximal biliary tree
 - (C) It can be used to obtain the cytological diagnosis
 - (D) It can be used to extract stones and to place a drainage catheter
 - (E) Dilated bile ducts facilitate this procedure
365. The bacteria commonly associated with acute cholecystitis are:
- (A) Staphylococcus aureus
 - (B) Escherichia coli
 - (C) Klebsiella pneumoniae
 - (D) Streptococcus faecalis
 - (E) Pseudomonas aeruginosa
366. Which is true regarding the pain in acute pancreatitis?
- (A) It is a colicky pain type
 - (B) It radiates to back

- (C) It is alleviated by sitting position
 - (D) It is exacerbated by sitting position
 - (E) It is associated with nausea and vomiting
367. *The leading cause of mortality in acute pancreatitis is:
- (A) Formation of pancreatic pseudocysts
 - (B) Formation of acute fluid collections
 - (C) Infection of pancreatic necrosis
 - (D) Splenic vein thrombosis
 - (E) Portal vein thrombosis
368. Surgical drainage of a pancreatic pseudocyst is indicated when:
- (A) It is asymptomatic
 - (B) It has a mass effect causing obstructive symptoms
 - (C) It persists for more than 1 year
 - (D) It does not tend to grow
 - (E) It is over 5 cm in diameter
369. The surgical treatment of a communicating pancreatic pseudocyst is represented by:
- (A) External drainage
 - (B) Internal drainage into the stomach
 - (C) Internal drainage into the duodenum
 - (D) Internal drainage into a Roux intestinal loop
 - (E) Percutaneous drainage
370. The "Puestow" procedure represents:
- (A) A lateral pancreaticojejunostomy
 - (B) Cephalic duodenopancreatectomy
 - (C) An internal ductal decompression procedure
 - (D) A resection procedure
 - (E) A procedure that causes lasting relief of chronic pancreatitis pain
371. The following statements about liver hemangioma are true:
- (A) It is a malignant tumor
 - (B) It is the most common benign liver tumor
 - (C) It is 5 times more common in women
 - (D) Most patients are asymptomatic
 - (E) Occasionally, patients with large hepatic hemangiomas may experience abdominal pain
372. In liver focal nodular hyperplasia (FNH), the following statements are true:
- (A) It is a benign lesion
 - (B) It has malignant potential
 - (C) The "spoke-wheel" vascular pattern appears in the use of Doppler ultrasonography
 - (D) The most helpful imaging method in describing the lesion is CT scanning
 - (E) Its growth is altered by hormonal or oral contraceptive use
373. *Most metastatic tumors identified in the liver are of origin:

- (A) Breast
 - (B) Gastrointestinal system
 - (C) Uterus
 - (D) Ovary
 - (E) Kidney
374. In the case of patients with liver metastases from colorectal cancer, the best outcomes from liver resection are achieved when:
- (A) There are fewer and smaller lesions
 - (B) Lesions show a rapid progression
 - (C) Patients have low carcinoembryonic antigen levels
 - (D) There are no secondary extrahepatic disease
 - (E) There is more than 1-year of disease-free interval
375. Choose the correct answers for the simple liver cysts:
- (A) They are rare
 - (B) Most are small
 - (C) They communicates with the bile ducts
 - (D) They contain clear serous fluid
 - (E) When they are multiple, they are scattered throughout the liver
376. Localized otitis externa:
- (A) It is also called folliculitis of the external auditory canal
 - (B) Can be caused by local trauma
 - (C) It produces intense pain
 - (D) The pain decreases when the ear is moved
 - (E) It never needs drainage
377. *Otitis externa is not:
- (A) A diffuse inflammatory process that involves the entire external auditory canal
 - (B) Caused by trauma to the skin of the external auditory canal
 - (C) An infection that can arise after exposure to purulent middle ear discharge through a perforation
 - (D) Caused most frequently by *Candida albicans*
 - (E) Caused most frequently by *Pseudomonas*
378. Necrotizing otitis externa:
- (A) Once was called "malignant otitis externa"
 - (B) Is an osteomyelitis of the temporal bone and skull base
 - (C) Mortality is low
 - (D) Aggressive treatment with topical and systemic antibiotics over the course of several months is needed
 - (E) The infection responds well to topical treatment
379. The organisms that most commonly cause acute otitis media:
- (A) *Streptococcus pneumoniae*
 - (B) *Haemophilus influenzae*
 - (C) *Streptococcus β-haemolyticus*

- (D) E. Coli
 - (E) Only anaerobe bacteria
380. The treatment of acute otitis media:
- (A) In treatment high-dose Amoxicillin should be used first
 - (B) If a Penicillin allergy is present, Azitromycin, Clarithromycin or Erythromycin can be used
 - (C) If the infection persists after 3 days of antibiotic therapy, the antibiotic does not need to be changed
 - (D) If oral antibiotic treatment fails, parenteral Ceftriaxone can be used
 - (E) Tympanocentesis is indicated frequently
381. Risk factors for otitis media with effusion in children:
- (A) Male gender
 - (B) Recent upper respiratory tract infection
 - (C) Cigarette smoke in the house
 - (D) Breastfeeding
 - (E) Being the only child in the family
382. The following are true for otitis media with effusion:
- (A) Watchful waiting for 3 months is recommended
 - (B) Antibiotic and antiinflammatory treatment is recommended
 - (C) Nasal decongestants are recommended
 - (D) If it does not resolve spontaneously after three months, myringotomy with placement of middle ear ventilation tube is recommended
 - (E) If a chronically inflamed, draining perforation of the tympanic membrane forms, surgical treatment is recommended
383. Acute sinusitis:
- (A) It usually develops following bacterial lower respiratory tract infections
 - (B) Is never caused by allergies
 - (C) It develops during viral upper respiratory tract infections
 - (D) Is a complication of the common cold
 - (E) Is caused by ostial closure as a result of inflammatory edema
384. Symptoms of acute sinusitis are:
- (A) Periorbital pain, facial pain, headache
 - (B) Fever
 - (C) Purulent nasal discharge
 - (D) Conductive hearing loss
 - (E) Hyposmia
385. The organisms that most frequently cause acute sinusitis are:
- (A) Streptococcus pneumoniae
 - (B) Mycobacterium tuberculosis
 - (C) Haemophilus influenzae
 - (D) Moraxella catarrhalis
 - (E) Bordetella pertussis

386. *The treatment of acute sinusitis does not include the following:
- (A) Antibiotics for 7-14 days
 - (B) Amoxicillin-clavulanate, Cefuroxime, Claritromycin
 - (C) Systemic decongestants
 - (D) Antiviral treatment
 - (E) Analgesics, warm compresses
387. The following are the symptoms of chronic sinusitis:
- (A) Facial pressure
 - (B) Nasal obstruction
 - (C) Deep, nonpulsatile pain
 - (D) Hyposmia is never present
 - (E) Superficial pulsatile pain
388. *Treatment of chronic sinusitis does not include:
- (A) Steroid nasal sprays
 - (B) Increased fluid intake
 - (C) Expectorants
 - (D) Antibiotic treatment for patients who already had a prolonged course of beta-lactamase-resistant antibiotic
 - (E) Smoking cessation
389. Chronic sinusitis:
- (A) It can develop anaerobic infection
 - (B) The most common localization is the region of the ostio-meatal complex
 - (C) There is no medical therapy
 - (D) Surgical treatment consists of tonsillectomy
 - (E) Surgical treatment focuses on the superior meatus
390. In chronic sinusitis:
- (A) Sinus hypoventilation interferes with local defense mechanisms
 - (B) The accumulated secretions cause chronic inflammation
 - (C) Hyperplasia of seromucinous glands can be observed
 - (D) The posterior ethmoidal cells are most frequently involved
 - (E) The blockage of the inferior meatus causes 90% of the inflammatory sinus diseases
391. A transverse fracture is produced by:
- (A) A rotatory trauma
 - (B) A twisting injury
 - (C) High energy trauma
 - (D) A low-energy injury
 - (E) A ligament avulsion
392. A spiral fracture features are:
- (A) Produced by a high energy trauma
 - (B) Produced by a low energy injury
 - (C) Produced by a rotatory trauma
 - (D) Tendency to shorten after reduction

- (E) Produce by a twisting injury
393. The two most important clinical features of the fracture are:
- (A) Pain at palpation
 - (B) If the fracture it is open or not
 - (C) Local deformity
 - (D) The neurovascular status is compromised
 - (E) Crepitus
394. A complete radiologic evaluation includes the following:
- (A) Two views of the affected bone
 - (B) Visualise only the below area
 - (C) The joint above and the joint below the injured area must be visualized
 - (D) The pelvis fractures produce viscera injuries
 - (E) Cervical spine radiographs are mandatory in all patients with facial
395. *Hard callus formation include :
- (A) Bone remodeling
 - (B) Hematoma formation
 - (C) Formation of woven or fibrous bone
 - (D) Callus remodeling and resorption
 - (E) Transformation of woven bone to lamellar bone
396. *Bone remodeling include:
- (A) Hematoma formation
 - (B) Transformation of woven bone to lamellar bone
 - (C) Transformation of woven bone to lamellar bone
 - (D) Reconstitution of the medullary cavity
 - (E) Inflammation and cellular proliferation
397. Which sentence are true in management of a fracture :
- (A) Splinting requires that the joint above fracture
 - (B) Splinting requires that the joint below fracture
 - (C) Essential to check the integrity of vascular structures distal to any fracture site
 - (D) Essential to check the integrity of neural structures distal to any fracture site
 - (E) None of that are true
398. Internal fixation devices include:
- (A) Functional braces
 - (B) Intramedullary rods
 - (C) Skeletal traction
 - (D) Plates and screws
 - (E) Pins
399. Local complications of fracture healing include:
- (A) Venous thrombosis
 - (B) Delayed union

- (C) Nonunion
- (D) Tetanus
- (E) Avascular necrosis

400. Systemic complications after fracture are:

- (A) Nonunion
- (B) Gas gangrene
- (C) Delayed union
- (D) Fat embolism
- (E) Shock

401. The following statements are true regarding surgical treatment in benign prostatic hyperplasia (BPH):

- (A) The risk of incontinence after surgery is low (1% to 2%)
- (B) Open/robotic surgical approach is usually chosen for patients with small (<100 g) prostate size
- (C) During surgery for BPH, the capsule of the prostate is removed
- (D) Treatment-related impotence occurs in < 5% of patients
- (E) More often, the transurethral route is chosen for the performance of TURP

402. Which of the following statements are false regarding digital rectal examination in benign prostatic hyperplasia (BPH):

- (A) Digital rectal examination of the prostate often shows palpable enlargement
- (B) There is no asymmetry of the prostate
- (C) BPH characteristically has a smooth contour
- (D) Hard consistency of the prostate
- (E) Marked enlargement of the prostate can occur without associated symptoms

403. The following statements are true regarding clinical presentation and evaluation in prostate cancer:

- (A) Most men with early-stage prostate cancer have disease-related symptoms
- (B) Digital rectal examination is an important method for early detection of prostate cancer
- (C) Prostate cancer is present in 20% to 25% of patients with "normal" PSA levels
- (D) PSA level may be elevated in men with BPH, prostate cancer but not in men with prostatitis
- (E) PSA is specific for prostate cancer

404. *The following statement is false regarding the treatment in the case of metastatic disease for prostate cancer:

- (A) Oral administration of estrogens is not associated with cardiovascular side effects
- (B) Radiation can be effective for isolated sites of bone metastasis
- (C) Suppression of serum testosterone can be achieved by bilateral surgical orchiectomy
- (D) LHRH analogs, effectively suppress testosterone to the castrate range within 1 month of administration
- (E) Second line antiandrogen therapies are moderately effective in castration-resistant prostate cancer

405. In patients with suspected prostate cancer:
- (A) The best imaging test is transrectal ultrasonography (TRUS)
 - (B) Transrectal ultrasonography (TRUS) is used as a screening test
 - (C) TRUS can not distinguish the zonal anatomy of the prostate
 - (D) Transrectal ultrasonography (TRUS) is used to direct prostate biopsy in men with a palpable abnormality of the prostate or an abnormal PSA reading
 - (E) More than 16 cores are obtained during prostate biopsy
406. We present the case of a 47-year-old patient, working as an engineer, from the urban area, who presented to the clinic with a hiperpigmented, inhomogeneous and asymmetrical plaque. The lesion was located on the plantar region, measured 20x30 mm in diameter and was painless. For this case it is recommended:
- (A) Incisional biopsy and histopathological examination
 - (B) Excisional biopsy and histopathological examination
 - (C) Photoprotection and dermatoscopic re-examination after 6 months
 - (D) Electrocauterization of the lesion, as fast as possible
 - (E) Additional investigations in order to identify the possible metastases (PET/CT, MRI, sentinel lymph node biopsy etc)
407. We report the case of a 65-year-old female patient, working as an agronomist, originating from the rural area, who presented to the clinic with multiple erythematous-squamous papules and patches, with a rough surface, ill-defined margins, located on the face and on the dorsal part of the hands. The lesions were asymptomatic and were not infiltrated. For this case it is recommended:
- (A) Use of SPF (sun protection factor) creams
 - (B) Topical corticosteroids ointments
 - (C) Topical corticosteroids creams
 - (D) 5-fluorouracil creams
 - (E) Cryotherapy
408. Which of the following sentences are true for basal cell carcinoma:
- (A) Clinically, it presents with pearly papules
 - (B) It is the most frequent type of skin cancer
 - (C) It often metastasizes
 - (D) The treatment can consist only in the surgical excision of the lesion
 - (E) It can also be treated with cryotherapy
409. *We present the case of a 51-year-old patient, from the rural area, who presented to the clinic with an erythematous plaque located on the lower lip. The lesion was covered with scales and was painless. It presented a central ulceration and was indurated. The patient describes that the lower lip has been dry and rough for a long period of time, and that the ulceration started to develop a year ago. Clinical examination revealed bilateral, painless submandibular lymphadenopathy. The most likely diagnosis :
- (A) Basal cell carcinoma
 - (B) Melanoma
 - (C) Actinic keratosis
 - (D) Squamous cell carcinoma
 - (E) Actinic cheilitis

410. We present the case of a 48-year-old patient who presented to the clinic with painless, erythematous-squamous patches and papules, with ill-defined margins located on sun exposed areas, such as the face and the dorsal part of the hands. Clinical examination revealed that one of the lesions was large-sized, infiltrated and presented a central ulceration. For this case it is recommended:
- (A) Cryotherapy and SPF (sun protection factor) creams for the non-infiltrated and non-ulcerated lesions
 - (B) Surgical excision of the infiltrated lesion, with the suspicion of squamous cell carcinoma developed through a malignant transformation of an actinic keratosis
 - (C) Surgical excision of the infiltrated lesion, with the suspicion of nodular melanoma developed through a malignant transformation of an actinic keratosis
 - (D) Cryotherapy and SPF (sun protection factor) creams for all the lesions
 - (E) Topical corticosteroids
411. Patent Ductus Arteriosus (PDA) is characterized by:
- (A) Failure of ductus arteriosus to close after birth
 - (B) Right-to-left shunt
 - (C) Indomethacin induces closure
 - (D) Cyanosis after birth
 - (E) ECG - right axis deviation
412. Treatment in a tetralogy of Fallot case may consist of:
- (A) Prostaglandin E
 - (B) Indomethacin
 - (C) Propranolol
 - (D) Morphine
 - (E) balloon atrial septostomy
413. *True statement about Kawasaki Disease are, except of:
- (A) Is the most common vasculitis in children
 - (B) Fever lasts >5 days
 - (C) Maculopapular rash is found
 - (D) Coronary artery aneurysms may appear
 - (E) Is most commonly seen in young children
414. Symptoms of severe cases of croup are:
- (A) Sealbark cough
 - (B) Expiratory dyspnea
 - (C) Subglottic swelling
 - (D) Stridor
 - (E) High fever
415. Choose correct statements:
- (A) Apnea may be the only manifestation of pertussis in an infant
 - (B) Pulmonary HTN may appear in Pertussis
 - (C) Thumbprint sign or vallecula sign is characteristic for Epiglottitis
 - (D) Neck radiographs may show subglottic narrowing of airway in Croup
 - (E) Bilateral atelectasis with ground-glass appearance and decreased lung volumes is found in bronchiolitis
416. Increased risk of developing asthma during childhood is linked with:

- (A) Meconium Aspiration Syndrome
 - (B) Cystic Fibrosis
 - (C) Respiratory Distress Syndrome of the Newborn
 - (D) Pertussis
 - (E) Bronchiolitis
417. False statement about Meckel diverticulum are:
- (A) Females are 2 times more common than males
 - (B) It occurs within 2 ft of ileocecal valve
 - (C) 2 types of ectopic tissue are involved (gastric, pancreatic)
 - (D) Is found in 10% of the population
 - (E) Most complications occur before 2 years of age
418. Treatment options in neonatal jaundice, according to its severity, are:
- (A) High-calorie diet
 - (B) Phototherapy
 - (C) Exchange transfusion
 - (D) Intravenous immunoglobulin
 - (E) Antibiotics
419. *Hepatic causes for neonatal jaundice are:
- (A) Glucose-6-phosphate dehydrogenase (G6PD) deficiency
 - (B) Hemorrhage
 - (C) Gilbert syndrome
 - (D) Maternal–fetal ABO incompatibility
 - (E) Breastfeeding failure
420. Characteristics for posterior urethral valves are:
- (A) Bladder outlet obstruction
 - (B) Weak urinary stream
 - (C) Urinary tract infection
 - (D) Abdominal distention
 - (E) Empty scrotal sac
421. In enuresis therapeutic options are:
- (A) Education
 - (B) Enuresis alarms
 - (C) Antibiotics
 - (D) Dietary modifications
 - (E) Desmopressin or Imipramine
422. *A 5 year boy presents to family doctor for: weight loss, nausea and vomiting, dysuria. Physical exam reveals: abdominal, HTN, fever. The most probable diagnosis is:
- (A) Urethral Displacement
 - (B) Wilms Tumor
 - (C) Testicular cancer
 - (D) Malrotation With Volvulus
 - (E) Cryptorchidism
423. Imaging in a child with posterior urethral valves may reveal:
- (A) Thick-walled bladder

- (B) Bilateral hydronephrosis
 - (C) Megaureter
 - (D) Shortness of the urethra
 - (E) Dilation of the posterior urethra during voiding
424. Characteristics for Glucose-6-phosphatase deficiency are:
- (A) Splenomegaly
 - (B) Hypoglycemia
 - (C) Seizures
 - (D) Doll-like facial appearance
 - (E) Hypotonia
425. An infant with congenital hypothyroidism may present:
- (A) Poor feeding
 - (B) Large fontanelles that remain open
 - (C) Thick tongue
 - (D) Jaundice
 - (E) Myalgias
426. Labs findings in a child with Glucose-6-phosphatase deficiency are, except of:
- (A) Elevated uric acid
 - (B) Elevated lactic acid
 - (C) Elevated lipids
 - (D) Normal glucose levels
 - (E) Elevated indirect bilirubin
427. *A 4-year-old baby boy is brought by his mother to the pediatrician's office for fatigue and dyspnea on exertion. His medical history revealed frequent infections. On examination he has short stature, café au lait spots, thumb abnormalities, normal genitalia and appropriate intellectual development. Ultrasound shows horseshoe kidney. CBC shows pancytopenia. What is the most likely diagnosis?
- (A) Rhabdomyosarcoma
 - (B) Tay-Sachs Disease
 - (C) Henoch-Schönlein Purpura
 - (D) Diamond-Blackfan Anemia
 - (E) Fanconi Anemia
428. A 3-year-old female is brought in to the ED for evaluation due to fever, diarrhea and abdominal distention and pain. She is known with Turner syndrome. Vaccines are up-to-date. Her vital signs are as follows: heart rate 100/min, blood pressure 120/75 mm Hg, respiratory rate is 24/min, saturation 98%, temperature 38.3°C. Pupils are reactive bilaterally, tympanic membranes are normal, throat is normal, no nuchal rigidity or meningeal signs, capillary refill is less than 2 seconds. Also abdominal mass, hepatomegaly, paleness and periorbital bruising were found on physical examination. What tests should you order in this patient?
- (A) CBC
 - (B) Vanillylmandelic and homovanillic acids in 24-hour urine collection
 - (C) Abdominal x-ray
 - (D) Autoantibodies to endothelial cells
 - (E) No further testing

429. A 9-month-old baby girl is brought in to the ED after an episode of generalized shaking for about 10 minutes, followed by "sleepiness". Vaccines are up-to-date. Mother states she has been feeding normally and acting appropriately, and has no medical history. Now the child is smiling, playful, and alert. She has runny nose and hyperemia of pharynx, cough, mild wheezing, crackles, but otherwise normal examination. Pupils are reactive bilaterally, tympanic membranes are normal, throat is normal, no nuchal rigidity or meningeal signs, capillary refill is less than 2 seconds. Her vital signs are as follows: heart rate 120/min, blood pressure 75/50 mm Hg, respiratory rate is 27/min, saturation 98%, temperature 39°C. What are the most likely diagnosis?
- (A) Epiglottitis
 - (B) Complex febrile seizures
 - (C) Bronchiolitis
 - (D) Botulism
 - (E) Simple febrile seizures
430. Risk factors for neural tube defects are:
- (A) Anticonvulsant use
 - (B) Poor folate intake during pregnancy
 - (C) Diabetes mellitus
 - (D) Decreased hexosaminidase A activity
 - (E) Low maternal serum folate
431. In a child with retinoblastoma suspicion the ophthalmologic examination reveals:
- (A) Poor red light reflex
 - (B) Cherry red spots on retina
 - (C) White retinal mass
 - (D) Scleral icterus
 - (E) Papilledema
432. Etiology of primary amenorrhea include:
- (A) Hypothalamic or pituitary dysfunction
 - (B) Cessation of ovarian function before 40 years old
 - (C) Anatomic abnormalities
 - (D) Chromosome abnormalities
 - (E) High serum estrogen
433. *Always the first step in the workup of any type of amenorrhea is:
- (A) Pelvic ultrasound
 - (B) Pelvic MRI
 - (C) Pelvic CT
 - (D) Beta hCG pregnancy test
 - (E) Clinical vaginal exam
434. Regarding endometriosis-associated infertility, following statements are true:
- (A) Endometriosis is the most common cause of female infertility
 - (B) Danazol is the first line treatment for endometriosis-associated infertility
 - (C) Fertility may not be achieved despite laparoscopic intervention
 - (D) Progestins are the first line treatment for endometriosis-associated infertility
 - (E) Laparoscopic ablation may successfully remove endometriotic lesions while maintaining fertility potential

435. Polycystic Ovary Syndrome (PCOS) is characterized by:
- (A) Anovulation or oligoovulation
 - (B) Androgen excess
 - (C) Low estrogen levels
 - (D) Polycystic ovaries
 - (E) Excess LH secretion
436. Regarding Polycystic Ovary Syndrome (PCOS), following statements are true:
- (A) Is the most common cause of androgen excess in women
 - (B) Patients with PCOS are at increased risk for endometrial cancer
 - (C) Hirsutism results from an increase in progesterone
 - (D) Surgery for cysts removal is the first treatment option
 - (E) PCOS is associated with GnRHa treatment during puberty
437. Toxic Shock Syndrome is:
- (A) A severe systemic reaction to *Staphylococcus aureus* exotoxin
 - (B) A severe systemic reaction to *Clostridium botulinum* exotoxin
 - (C) Associated with prolonged intravaginal tampon use
 - (D) Associated with vaginal hysterectomy
 - (E) Associated with postpartum or postabortion infection
438. Vaginitis is a vaginal infection caused by overgrowth of:
- (A) *Gardnerella vaginalis*
 - (B) *Bacteroides* species
 - (C) *E. coli*
 - (D) *Trichomonas*
 - (E) *Candida albicans*
439. *First line treatment of vaginitis with *Gardnerella vaginalis* is:
- (A) Penicillin G
 - (B) Eritromicin
 - (C) Metronidazole
 - (D) Clotrimazole
 - (E) Ampiciline
440. Antibiotic treatment of toxic shock syndrome include:
- (A) Clindamycin
 - (B) Penicillinase-resistant beta-lactam antibiotics (oxacilin)
 - (C) Vancomycin
 - (D) Clotrimazole
 - (E) Timidazole
441. Regarding vaginitis, following statements are true:
- (A) Treatment of partners is necessary for *Gardnerella vaginalis*
 - (B) Treatment of partners is not necessary for *Gardnerella vaginalis*
 - (C) Treatment of partners is necessary for *Candida albicans*
 - (D) Treatment of partners is not necessary for *Candida albicans*
 - (E) Treatment of partners is necessary for *Trichomonas vaginalis*

442. Pelvic Inflammatory Disease (PID) is characterized by:
- (A) Progressive N.gonorrhoeae or Chlamydia infection
 - (B) Involvement of ovaries, uterus, fallopian tubes or peritoneal cavity
 - (C) Association with oral contraceptive use
 - (D) Association with PCOS
 - (E) Increased WBC, lower abdominal pain, fever
443. Suspect tubo-ovarian abscess in a patient with PID who also has signs of sepsis or peritonitis requires:
- (A) Inpatient treatment
 - (B) Intravenous hydration
 - (C) Intravenous antibiotics
 - (D) Uterine aspiration
 - (E) Surgical drainage
444. Complications of PID are:
- (A) Infertility
 - (B) Increased risk of ectopic pregnancy
 - (C) Second trimester abortion
 - (D) Pelvic adhesions
 - (E) Tubo-ovarian abscess
445. *Syphilis is a disease caused by:
- (A) Bacteroides species
 - (B) Escherichia coli
 - (C) Treponema pallidum
 - (D) Human papilloma virus
 - (E) Chlamydia trachomatis
446. Human Papillomavirus is associated with:
- (A) Genital warts
 - (B) Preterm birth
 - (C) Premature rupture of membranes
 - (D) Cervical cancer
 - (E) Ovarian cancer
447. GnRH agonist for treatment of uterine fibroids:
- (A) Reduce uterine bleeding
 - (B) Is associated with malignant transformation
 - (C) Reduce fibroid size
 - (D) Is recommended as temporal therapy only
 - (E) Is associated with heavy bleeding
448. Treatment strategies for endometrial cancer include:
- (A) Total abdominal hysterectomy with bilateralsalpingo-oophorectomy
 - (B) Lymph node sampling
 - (C) Myomectomy

- (D) Adjuvant radiation therapy
 - (E) Chemotherapy
449. Cervical cancer is:
- (A) Usually asymptomatic in early stages
 - (B) Associated with postcoital vaginal bleeding
 - (C) Usually detected by pelvic ultrasound
 - (D) Associated with pelvic pain or vaginal discharge
 - (E) Invasive cancer can be seen on cervical examination
450. Risk factors for ovarian cancer are:
- (A) Family history
 - (B) Oral contraceptives
 - (C) BRCA1 or BRCA 2 gene mutations
 - (D) Obesity
 - (E) Diabetes mellitus
451. *Cervical cancer screening using Pap test should be offered to:
- (A) All women between 21-65 years
 - (B) All women between 30-65 years
 - (C) Postmenopausal women only
 - (D) Oral contraceptive users only
 - (E) Women with uterine fibroids only
452. Breast abscess is:
- (A) A local infection of breast tissue caused by Staphylococcus aureus, Streptococcus or anaerobic bacteria
 - (B) More related to breastfeeding
 - (C) More common in smokers
 - (D) Associated with BRCA 1 and BRCA 2 gene mutations
 - (E) More frequently after cesarean section
453. Monthly self-breast examinations after each menstrual period:
- (A) Are the best way to distinguish developing lesions from monthly variations in breast tissue
 - (B) Have not been shown to decrease mortality by breast cancer
 - (C) Can replace mammography
 - (D) Has similar efficacy as ultrasound examination
 - (E) Is superior to annual MRI examination
454. *The most common site of breast cancer is:
- (A) Axilla
 - (B) Upper outer quadrant
 - (C) Upper inner quadrant
 - (D) Lower outer quadrant
 - (E) Lower inner quadrant
455. Risk factors for breast cancer are:
- (A) Family history
 - (B) BRCA 1 or BRCA 2
 - (C) Hormone replacement therapy

- (D) Multiparity
 - (E) Obesity
456. Worse prognosis in breast cancer is associated with:
- (A) Large tumor size
 - (B) Positive axillary lymph nodes
 - (C) Intraductal papillomas
 - (D) Fibroadenomas
 - (E) Breast abscesses
457. Which of the following items are considered to be developmental stages during pregnancy?
- (A) Delivery
 - (B) Blastocyst enters uterine cavity
 - (C) Labour
 - (D) Implantation of embryo
 - (E) Development of cardiovascular system
458. Which of the following statements are true about Naegele's rule?
- (A) It is useful for determining the timing of the implantation
 - (B) It accurately appreciates the age of the pregnancy
 - (C) Estimated delivery date is calculated from the date of the last menstrual period, adding 7 days, adding 3 months and subtracting a year
 - (D) Estimated delivery date is calculate from the date of the last menstrual period, adding 7 days, subtracting 3 months and adding one year
 - (E) It is useful to estimate the date of the birth
459. *Which of the following systems does not undergo changes as part of the maternal physiology during pregnancy?
- (A) Cardiovascular system
 - (B) Endocrine system
 - (C) Central nervous system
 - (D) Reno-urinary system
 - (E) Gastrointestinal system
460. Which of the following gastrointestinal signs and symptoms occurs as part of normal physiological changes in pregnancy?
- (A) Abdominal bloating
 - (B) Increased salivation
 - (C) Decreased gastric motility
 - (D) Asthenia
 - (E) Nausea and vomiting
461. During pregnancy, the following physiological changes of the cardiovascular system occur:
- (A) Cardiac output increases by 40%
 - (B) Myocardial oxygen demand increases
 - (C) Systolic and diastolic blood pressure increase
 - (D) Heart sounds are diminished
 - (E) Uterus displaces the heart slightly upwards

462. *The most accurate method for estimating gestational age in the first trimester is:
- (A) Ultrasonographic measurement of crown-rump length
 - (B) Ultrasonographic measurement of femur length
 - (C) Measurement of fundal height
 - (D) Its estimation depending on the date of the last menstrual period
 - (E) Ultrasonographic measurement of biparietal diameter
463. Measurement of fundal height presents the following characteristics:
- (A) Can be used after 16 weeks
 - (B) Cannot be used to estimate gestational age
 - (C) Estimates gestational age with an accuracy of ± 5 days
 - (D) Estimates gestational age with an accuracy of ± 3 weeks
 - (E) Uterine fibroids and maternal obesity affect the accuracy of the measurement
464. The accuracy of the ultrasound estimation of gestational age in the first trimester of pregnancy presents the following characteristics:
- (A) The accuracy of the estimation is $\pm 1-2$ weeks for weeks 7-10 of pregnancy
 - (B) Cranio-caudal length is the most accurate method of determining gestational age up to the 7th week of pregnancy
 - (C) The accuracy of the estimation is $\pm 2-5$ days for weeks 7-14 of pregnancy
 - (D) The accuracy of the estimation is ± 3 weeks after 20 weeks of gestation
 - (E) Ultrasound assessment of pregnancy in the first trimester is not indicated
465. To estimate the gestational age in the second trimester of pregnancy one will use the following parameters:
- (A) Cranial circumference
 - (B) Abdominal circumference
 - (C) Femur length
 - (D) Biparietal diameter
 - (E) Crown-rump length
466. In the second trimester of pregnancy gestational age can be estimated using:
- (A) Fundal height measurement after 20 weeks of gestation
 - (B) Abdominal circumference and femur length measurement
 - (C) Biparietal diameter and cranial circumference measurement
 - (D) Measurement of crown-rump length
 - (E) Doppler velocimetry measurement
467. Ideal maternal weight gain during pregnancy is considered ideal in the following situations:
- (A) 20 lbs in women with a BMI greater than 26
 - (B) 12-18 lbs in women with a BMI less than 19.8
 - (C) 30 lbs in women with a BMI less than 19.8
 - (D) 6-11 lbs for women with a BMI greater than 26
 - (E) There are no recommendations for an ideal weight gain during pregnancy
468. During prenatal visits Leopold maneuvers are indicated:

- (A) In the first trimester of pregnancy
 - (B) To determine fetal presentation
 - (C) In the third trimester of pregnancy
 - (D) To assess fetal well-being
 - (E) In every prenatal visit
469. *Common screening laboratory analyses performed during pregnancy between weeks 24 and 28 are:
- (A) 1-h glucose challenge to screen for gestational diabetes
 - (B) Pap smear
 - (C) Blood group and Rh typing
 - (D) Amniocentesis
 - (E) Quadruple screen
470. Amniocentesis is recommended in the following situations:
- (A) Abnormal quadruple screen
 - (B) Women over 35 years of age
 - (C) In all pregnant women at a gestational age of 16-18 weeks
 - (D) In women who desire non-invasive testing
 - (E) In all anemic pregnant women
471. Chorionic villi sampling presents the following characteristics:
- (A) It is performed after 16 weeks of gestation
 - (B) Implies transabdominal needle aspiration of amniotic fluid
 - (C) Consists in the ultrasound measurement of choral villousities
 - (D) It is used for early detection of chromosomal abnormalities
 - (E) It can be performed using transabdominal or transcervical aspiration
472. Risk factors for gestational diabetes are:
- (A) A BMI of less than 19.6
 - (B) Hypotension
 - (C) Chronic treatment with NSAIDs
 - (D) Polycystic ovary syndrome (PCOS)
 - (E) Family history of diabetes mellitus (DM)
473. *Possible fetal complications of gestational diabetes are:
- (A) Macrosomia
 - (B) Fetal respiratory distress syndrome
 - (C) Delayed neurological development
 - (D) Hypoglycaemia
 - (E) Hypocalcaemia
474. Possible maternal complications of pregestational diabetes mellitus are:
- (A) Fetal cardiac defects
 - (B) Intrauterine Fetal Growth Restriction (IUGR)
 - (C) Preeclampsia
 - (D) Diabetic ketoacidosis
 - (E) Retinopathy

475. Which of the following statements define preeclampsia:
- (A) It is a consequence of hypotension
 - (B) It is a consequence of Aspirin treatment (100 mg/day) during pregnancy
 - (C) It is the consequence of gestational hypertension
 - (D) It develops after 20 weeks of gestation
 - (E) It associates proteinuria
476. Which of the following drugs are considered to be teratogenic:
- (A) Drotaverine
 - (B) Paracetamol
 - (C) Penicillins
 - (D) Fluoroquinolones
 - (E) Valproic acid
477. Which of the following signs and symptoms may appear in the case of an ectopic pregnancy?
- (A) Abdominal pain
 - (B) Vaginal bleeding
 - (C) Hyperthermia
 - (D) Hypertension
 - (E) Peritoneal irritation signs
478. *Second trimester spontaneous abortions are usually caused by:
- (A) Cervical-isthmic incontinence
 - (B) Nifedipine treatment
 - (C) Maternal hypotension
 - (D) Vaginal progesterone use
 - (E) Atosiban treatment
479. Symmetrical intrauterine growth restriction presents the following characteristics:
- (A) Occurs in 80% of cases
 - (B) Overall decrease in fetal size
 - (C) It is the consequence of congenital infections
 - (D) It is the consequence of chromosomal abnormalities
 - (E) Occurs early in pregnancy
480. Possible complications of placenta praevia are:
- (A) Ectopic pregnancy
 - (B) Prolonged pregnancy
 - (C) Severe haemorrhage
 - (D) Vasa praevia
 - (E) Maternal death
481. Treatment in case of abruptio placentae consists of:
- (A) Atosiban treatment
 - (B) Caesarean section delivery
 - (C) Nifedipine treatment

- (D) Bed rest for patients with involvement of at least 1/3 of the placental surface
 - (E) Blood transfusion
482. Do not belong to the category Other Psychotic Disorders:
- (A) Body dysmorphic disorder
 - (B) Delusional disorder
 - (C) Schizoaffective disorder
 - (D) Dissociative disorders
 - (E) Cyclothimic disorder
483. *Functional ability, generally refers to:
- (A) Circumstances related to abuse
 - (B) Circumstances related to neglect
 - (C) Ability to perform normal activities of daily living
 - (D) Relational problems between partners
 - (E) Problems related to family education
484. True about Neuroleptic Malignant Syndrome:
- (A) Trigger: antimuscarinic agents
 - (B) Course: rapidly resolving
 - (C) Mental status: restlessness, agitation
 - (D) Mental status: confusion, hallucinations
 - (E) Trigger: antiemetics
485. Have a worse prognosis in Schizophrenia:
- (A) Patients with predominantly positive symptoms
 - (B) Patients with sudden onset
 - (C) Patients with predominantly negative symptoms
 - (D) Patients with paranoid subtype
 - (E) Patients with poor support systems
486. Diagnosis in schizophrenia:
- (A) Requires impaired social function for < 6 months
 - (B) Requires impaired social function for > 6 months
 - (C) Requires presence of two or more symptoms for at least 1 month
 - (D) Requires the obligatory presence of prodromal symptoms
 - (E) Requires insight of disease to be present
487. Persistent Depressive Disorder:
- (A) Is a Major Depressive Disorder with atypical features
 - (B) Is attributable to medical conditions
 - (C) The diagnosis require the presence of cyclothimia for a period of at least 2 years
 - (D) May include: Chronic major depression
 - (E) May include: Chronic mild depression, that does not meet criteria for (MDD)
488. Subtypes of Major Depressive Disorder (MDD):
- (A) Dysthymia with anxious distress
 - (B) Major Depressive Disorder (MDD) with psychotic features
 - (C) Major Depressive Disorder (MDD) attributable to drugs use
 - (D) Premenstrual Dysphoric Disorder

- (E) Major Depressive Disorder (MDD) with seasonal pattern
489. Adverse effects of Lithium (Li):
- (A) Weight loss
 - (B) Nephrogenic Diabetes insipidus
 - (C) Type 2 diabetes
 - (D) Hypothyroidism
 - (E) Ebstein anomaly
490. The following statements about SSRI are untrue:
- (A) Without risk of serotonin syndrome
 - (B) Inhibit presynaptic serotonin reuptake
 - (C) Overdose may be fatal due to cardiac QTc interval prolongation
 - (D) First line treatment for depression, anxiety
 - (E) Require 3-4 weeks of administration before they take effect
491. *Characteristic of the hypomanic episode:
- (A) Cause significant impairment of ability to function
 - (B) Elevated mood lasting at least 1 week
 - (C) Irritable mood lasting at least 1 week
 - (D) One of the symptoms of mania
 - (E) Elevated mood lasting at least 4 days
492. *An investigator studied whether the initial blood pressure is associated with the emergency department with an increased risk of death after stroke. Blood pressure measurements of all patients who presented to the UPU with an acute ischemic stroke are recorded and patients are followed for 90 days. Which of them best describes the type of study?
- (A) Case-control study
 - (B) Randomized controlled study
 - (C) Cohort study
 - (D) Meta-analysis
 - (E) Cross-sectional study
493. In which situations can the prevalence of a disease be less than its incidence?
- (A) Rapid healing after treatment
 - (B) Low number of new cases
 - (C) Low number of patients who recover completely
 - (D) Death installed shortly after the onset of the disease
 - (E) The emergence of a new remedy that contributes to prolonging the lives of patients
494. The advantages of cross-sectional epidemiological studies include:
- (A) Are easy to make and have low costs
 - (B) Allow the assessment of health problems and the setting of priorities in intervention actions
 - (C) Allow the timing of exposure and disease to be determined
 - (D) May serve as a first step in describing epidemiological outbreaks of unknown cause
 - (E) Are useful in assessing the incidence of rare diseases
495. When establishing diagnostic tests:
- (A) Sensitivity is the probability that a screening test will be positive in patients with the disease

- (B) Confirmatory tests are used to validate the fact that a patient with a positive test is indeed the disease
- (C) The most acceptable tests of conformity with specific habits > 85%
- (D) False negative results do not occur in patients who do not have the disease and with a negative test
- (E) Statistical significance is undetectable difference between groups

496. Regarding the rights of patients, the following statements are true:

- (A) The patient should be made aware that certain diseases or conditions should be reported
- (B) Perhaps patient information should be kept private between physician and patient
- (C) Confidentiality is mandatory when the patient allows the doctor to share information with other designated persons
- (D) Prior to any procedure or therapy, the patient should be informed of the indications, risks and potential benefits of a proposed treatment.
- (E) The patient can consent to a therapeutic decision without understanding his medical condition