

Question 1:

'A 67-year-old woman comes to the physician for a follow-up examination. She had a pulmonary embolism and required treatment in the hospital for 3 weeks. She had a retroperitoneal hemorrhage; anticoagulant therapy was temporarily discontinued, and she underwent placement of an inferior vena cava (IVC) filter. She had a hematoma that was resolving on discharge from the hospital 2 weeks ago. Today, she says she has had a persistent sensation of tingling and numbness of her left thigh that she did not report in the hospital because she thought it would go away; the sensation has improved somewhat during the past week. Her only medication is warfarin. Vital signs are within normal limits. Examination of the skin shows no abnormalities. Muscle strength is normal. Sensation to light touch is decreased over a 5 x 5-cm area on the lateral aspect of the left anterior thigh. Which of the following is the most likely cause of this patient's decreased sensation?', A. 'Cerebral infarction during the hospitalization', B. 'Complication of the IVC filter placement', C. 'Compression of the lateral femoral cutaneous nerve', D. 'Hematoma of the left thigh'

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Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: C

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Answer Option 4:

Final Answer: C

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Answer Option 5:

Final Answer: C

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Answer Option 6:

Final Answer: C

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Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 2:

'A 25-year-old gravida 3 para 2 female is admitted to the hospital at 39 weeks' gestation in active labor. She had been having regular contractions every 4 minutes, but is now having only a few intermittent, weak contractions. She has received medication for pain twice in the past 6 hours. Examination shows no reason for obstructed labor. The fetal head is engaged, the membranes are intact, the fetal heart tones are normal, and the cervix is 100% effaced and 7 cm dilated. The most likely diagnosis is', A. 'Braxton Hicks contractions', B. 'lower uterine retraction ring', C. 'hypotonic uterine dysfunction', D. 'primary dysfunctional labor'

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Answer Option 1:

Final Answer: C

Answer Option 2:

Final Answer: C

Answer Option 3:

Final Answer: C

Answer Option 4:

Final Answer: C

Answer Option 5:

Final Answer: C

Answer Option 6:

Final Answer: C

Answer Option 7:

Final Answer: C

Answer Option 8:

Final Answer: C

Answer Option 9:

Final Answer: C

Question 3:

'A 5-year-old boy is brought to the physician by his mother because of a 2-day history of a low-grade fever, cough, and runny nose. His temperature is 38°C (100.4°F). Examination findings are consistent with a diagnosis of a common cold. The physician refers to a randomized, double-blind, placebo-controlled clinical trial that evaluated the effectiveness of a new drug for the treatment of the common cold. The mean time for resolution of symptoms for patients receiving the new drug was 6.4 days, compared with a mean time of 6.7 days for patients receiving the placebo ($p=0.04$). Which of the following is the most appropriate interpretation of these study results?', A. 'The findings are clinically and statistically significant', B. 'The findings are clinically insignificant but statistically significant', C. 'The findings are clinically significant but statistically insignificant', D. 'The findings are neither clinically nor statistically significant'

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Answer Option 1:

Final Answer: B

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Answer Option 2:

Final Answer: B

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Answer Option 3:

Final Answer: B

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Answer Option 4:

Final Answer: B

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Answer Option 5:

Final Answer: B

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Answer Option 6:

Final Answer: B

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Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 4:

'A 9-year-old boy is brought to the office by his parents for a well-child examination. The patient and his family immigrated to the United States 2 months ago and he has not been evaluated by a physician in 4 years. He has been generally healthy. Medical history is significant for pneumonia at age 3 years. He takes no medications. He is at the 25th percentile for height, weight, and BMI. Vital signs are temperature 37.0°C (98.6°F), pulse 82/min, respirations 20/min, and blood pressure 112/74 mm Hg. Cardiac examination discloses a grade 3/6 systolic murmur audible along the left sternal border at the third and fourth intercostal spaces. Femoral pulses are weak and brachial pulses are strong; there is a radiofemoral delay. Chest xray discloses mild cardiomegaly with left ventricular prominence. ECG shows left ventricular hypertrophy. This patient is at greatest risk for which of the following complications?', A. 'Atrial fibrillation', B. 'Cor pulmonale', C. 'Systemic hypertension', D. 'Tricuspid valve regurgitation'

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Answer Option 1:

Final Answer: B

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Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: B

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Answer Option 4:

Final Answer: C

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Answer Option 5:

Final Answer: C

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Answer Option 6:

Final Answer: B

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Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 5:

'A 25-year-old woman comes to the physician because of a 2-month history of numbness in her right hand. During this period, she has had tingling in the right ring and small fingers most of the time. She has no history of serious illness and takes no medications. She is employed as a cashier and uses a computer at home. She played as a pitcher in a softball league for 5 years until she stopped 2 years ago. Vital signs are within normal limits. Examination shows full muscle strength. Palpation of the right elbow produces a jolt of severe pain in the right ring and small fingers. Sensation to pinprick and light touch is decreased over the medial half of the right ring finger and the entire small finger. The most likely cause of these findings is entrapment of which of the following on the right?', A. 'Median nerve at the wrist', B. 'Musculocutaneous nerve at the forearm', C. 'Radial nerve at the forearm', D. 'Ulnar nerve at the elbow'

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Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: D

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Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 6:

'Six healthy subjects participate in a study of muscle metabolism during which hyperglycemia and hyperinsulinemia is induced. Muscle biopsy specimens obtained from the subjects during the resting state show significantly increased concentrations of malonyl-CoA. The increased malonyl-CoA concentration most likely directly inhibits which of the following processes in these subjects?', A. 'Fatty acid oxidation', B. 'Fatty acid synthesis', C. 'Gluconeogenesis', D. 'Glycogenolysis'

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Answer Option 1:

Final Answer: A

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Answer Option 2:

Final Answer: A

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Answer Option 3:

Final Answer: A

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Answer Option 4:

Final Answer: A

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Answer Option 5:

Final Answer: A

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Answer Option 6:

Final Answer: A

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Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: A

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Question 7:

'A 72-year-old woman with advanced ovarian cancer metastatic to the liver is brought to the physician by her son because she cries all the time and will not get out of bed. On a 10-point scale, she rates the pain as a 1 to 2. She also has hypertension and major depressive disorder. She has received chemotherapy for 2 years. Current medications also include oxycodone (10 mg twice daily), hydrochlorothiazide (25 mg/d), and fluoxetine (20 mg/d). She is 165 cm (5 ft 5 in) tall and weighs 66 kg (145 lb); BMI is 24 kg/m². Her temperature is 37°C (98.6°F), pulse is 110/min, respirations are 12/min, and blood pressure is 120/80 mm Hg. Examination shows a firm, distended abdomen with moderate tenderness over the liver. On mental status examination, she is oriented to person, place, and time. She has good eye contact but appears sad and cries easily. Which of the following is the most appropriate next step in management?', A. 'Reassurance', B. 'Assess for suicidal ideation', C. 'Begin dextroamphetamine therapy', D.

'Increase oxycodone dosage'

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Answer Option 1:

Final Answer: B

Answer Option 2:

Final Answer: B

Answer Option 3:

Final Answer: B

Answer Option 4:

Final Answer: B

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: B

Answer Option 7:

Final Answer: B

Answer Option 8:

Final Answer: B

Answer Option 9:

Final Answer: B

Question 8:

'A 65-year-old woman has a 6-month history of progressive irritability, palpitations, heat intolerance, frequent bowel movements, and a 6.8-kg (15-lb) weight loss. She has had a neck mass for more than 10 years. 131I scan shows an enlarged thyroid gland with multiple areas of increased and decreased uptake. Which of the following is the most likely diagnosis?', A. 'Defect in thyroxine (T4) biosynthesis', B. 'Graves' disease', C. 'Multinodular goiter', D. 'Riedel's thyroiditis'

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Answer Option 1:

Final Answer: B

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Answer Option 2:

Final Answer: B

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Answer Option 3:

Final Answer: B

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Answer Option 4:

Final Answer: B

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Answer Option 5:

Final Answer: B

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Answer Option 6:

Final Answer: B

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Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 9:

'A 51-year-old man comes to the office because of a 6-month history of a lump on his tongue that is interfering with his speech and eating; he also has had a 6.8-kg (15-lb) weight loss during this period. He has smoked 1 pack of cigarettes daily and has consumed six 12-oz bottles of beer on weekend nights during the past 30 years. His vital signs are within normal limits. Physical examination shows a 1.5-cm mass on the apex of the tongue. Further evaluation of the mass confirms squamous cell carcinoma. It is most appropriate to evaluate which of the following lymph nodes first for evidence of metastasis in this patient?', A. 'Inferior deep cervical', B. 'Parotid', C. 'Retropharyngeal', D. 'Submental'

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Answer Option 1:

Final Answer: A

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Answer Option 2:

Final Answer: A

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Answer Option 3:

Final Answer: A

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Answer Option 4:

Final Answer: A

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Answer Option 5:

Final Answer: A

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Answer Option 6:

Final Answer: A

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Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: A

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Question 10:

'A 42-year-old man comes to the physician for a follow-up examination 1 week after he passed a renal calculus. X-ray crystallographic analysis of the calculus showed calcium as the primary cation. Physical examination today shows no abnormalities. A 24-hour collection of urine shows increased calcium excretion. Which of the following is the most appropriate pharmacotherapy?', A. 'Carbonic anhydrase inhibitor', B. 'Na⁺ -Cl⁻ symport inhibitor', C. 'Na⁺ -K⁺ -2Cl⁻ symport inhibitor', D. 'Osmotic diuretic'

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Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: B

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Answer Option 3:

Final Answer: B

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Answer Option 4:

Final Answer: B

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Answer Option 5:

Final Answer: B

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Answer Option 6:

Final Answer: B

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Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 11:

'While you are on rounds at a local nursing facility, the nurse mentions that your patient, a 79-year-old woman, appears to be a "poor eater." She was admitted to the nursing facility 3 months ago from the hospital where she was treated for congestive heart failure. Her daughter had moved away from the area, and nursing home placement was necessary because the patient could no longer function independently. Her present medications include furosemide and digoxin. Physical examination is normal except for a weight loss of 3.5 kg (7 lb) during the past 3 months. In your conversation with the patient, she says, "No, I'm not depressed, I just don't have an appetite anymore. Nothing tastes good to me. I have a little bit of nausea most of the time." Which of the following is the most appropriate initial diagnostic study?', A. 'Chest x-ray', B. 'Complete blood count', C. 'Determination of serum albumin concentration', D. 'Determination of serum digoxin level'

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Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: C

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Answer Option 4:

Final Answer: C

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Answer Option 5:

Final Answer: C

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Answer Option 6:

Final Answer: C

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Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 12:

'A previously healthy 24-year-old woman comes to the physician because of a low-grade fever and a nonproductive cough for 7 days. She has been able to continue her daily activities. Her temperature is 37.7°C (99.9°F). A few scattered inspiratory crackles are heard in the thorax. An x-ray of the chest shows patchy infiltrates in both lungs. Which of the following is the most appropriate initial pharmacotherapy?', A. 'Amoxicillin', B. 'Cefaclor', C. 'Ciprofloxacin', D. 'Erythromycin'

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Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: C

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: A

Answer Option 7:

Final Answer: A

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: A

Question 13:

'A 15-year-old boy is brought to the emergency department by his parents because of a 2-hour history of confusion and agitation. He also has had fever, headache, stiff neck, and vomiting since he returned from summer camp 2 days ago. His parents say he does not use illicit drugs. On arrival, he is combative and there is evidence of hallucinations. His temperature is 40°C (104°F), pulse is 80/min, respirations are 17/min, and blood pressure is 100/70 mm Hg. A lumbar puncture is performed. Results of cerebrospinal fluid analysis show cysts and trophozoites. The most likely portal of pathogen entry into this patient's central nervous system is which of the following?', A. 'Facial nerve', B. 'Frontal sinus', C. 'Mastoid sinus', D. 'Olfactory nerve'

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Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: D

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Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 14:

'A 32-year-old male presents to the office with the complaint of pain in his right shoulder for the past two weeks. Physical examination reveals tenderness at the greater tubercle of the humerus and painful abduction of the right upper extremity. The cause of this patient's condition is most likely a somatic dysfunction of which of the following muscles?', A. 'anterior scalene', B. 'latissimus dorsi', C. 'pectoralis minor', D. 'supraspinatus'

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Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 15:

'A 19-year-old male presents to the office for evaluation after he was hit from behind below the right knee while playing football. Gait analysis reveals a lack of fluid motion. Standing flexion test results are negative. Cruciate and collateral knee ligaments appear intact. Foot drop on the right is noted. The most likely diagnosis is', A. 'anteriorly deviated distal femur', B. 'plantar flexed cuboid', C. 'posteriorly deviated fibular head', D. 'unilateral sacral shear'

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Answer Option 1:

Final Answer: C

Answer Option 2:

Final Answer: C

Answer Option 3:

Final Answer: C

Answer Option 4:

Final Answer: C

Answer Option 5:

Final Answer: C

Answer Option 6:

Final Answer: C

Answer Option 7:

Final Answer: C

Answer Option 8:

Final Answer: C

Answer Option 9:

Final Answer: C

Question 16:

'A 45-year-old limousine driver comes to the office for an initial appointment because he would like you to fill out and sign a legal document at the request of his attorney. The patient states that he is filing a lawsuit against the limousine company that employs him because he developed post-traumatic stress disorder following a motor vehicle collision. He appears irritable and tense as he provides his history. He relays his symptoms by reading them aloud from a written list. At this time, which of the following is the most appropriate approach toward confirming the underlying diagnosis of this patient?', A. 'Administer amobarbital and then interview the patient', B. 'Ask the patient to provide a narrative with detailed description of the incident and of his symptoms', C. 'Interview the patient under hypnosis', D. 'Interview the patient while paying close attention to his willingness to make eye contact'

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Answer Option 1:

Final Answer: B

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Answer Option 2:

Final Answer: B

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Answer Option 3:

Final Answer: B

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Answer Option 4:

Final Answer: B

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Answer Option 5:

Final Answer: B

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Answer Option 6:

Final Answer: B

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Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 17:

'A 5-year-old boy is admitted to the hospital because of a 1-week history of fever and increasingly severe abdominal discomfort. At the age of 7 months, he was treated for osteomyelitis caused by *Aspergillus fumigatus*. He has been admitted to the hospital three times during the past 4 years for severe pneumonia. He appears moderately ill. His temperature is 39°C (102.2°F). Abdominal examination shows an enlarged, tender liver. Ultrasonography of the abdomen shows an intrahepatic abscess. Culture of the abscess fluid grows *Staphylococcus aureus*. Further analysis shows failure of the neutrophils to undergo an oxidative burst when exposed to *S. aureus*. This patient has an increased susceptibility to infection as a result of which of the following abnormalities?', A. 'Failure of leukocytes to migrate between endothelial cells', B. 'Failure of leukocytes to roll along the endothelial surface', C. 'Inability of leukocytes to ingest microorganisms', D. 'Inability of leukocytes to kill intracellular microorganisms'

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Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: D

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Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 18:

'A technician wants to determine whether cytomegalovirus (CMV) DNA is present in the blood of a bone marrow transplant recipient. DNA purified from the leukocytes of the patient is reacted in a mixture containing oligonucleotides specific for CMV DNA, thermostable DNA polymerase, and nucleotides. Repetitive cycles of heating and cooling are performed, and the reaction product is detected by gel electrophoresis. The technician most likely used which of the following laboratory procedures on this patient's blood?', A. 'Northern blotting', B. 'Polymerase chain reaction', C. 'Reverse transcription', D. 'Southern blotting'

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Answer Option 1:

Final Answer: B

Answer Option 2:

Final Answer: B

Answer Option 3:

Final Answer: B

Answer Option 4:

Final Answer: B

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: B

Answer Option 7:

Final Answer: B

Answer Option 8:

Final Answer: B

Answer Option 9:

Final Answer: B

Question 19:

'A 2-year-old boy is brought to the emergency department by his babysitter because of a 30-minute history of respiratory distress. The babysitter reports that she is 15 years old and has cared for the patient on numerous occasions during the past year. The child's mother, who is a single parent, is currently out of town for business but will return later tonight. The babysitter says, "He has had a runny nose since I started babysitting yesterday, but this afternoon he awoke from a nap with a barking sound and he was breathing real heavy." She does not know the child's prior health history, nor does she know if the boy takes any medications on a regular basis. The child looks tired and sits upright on the babysitter's lap. He is obviously comfortable with his caregiver. Vital signs are temperature 38.7°C (101.7°F), pulse 110/min, respirations 28/min and labored, and blood pressure 85/50 mm Hg. Pulse oximetry on room air shows an oxygen saturation of 89%. Physical examination discloses inspiratory stridor. Neck is supple, tympanic membranes are normal, and there is a profuse nasal discharge. Examination of the pharynx discloses no abnormalities. Auscultation of the chest discloses equal air entry on both sides and no crackles. The remainder of the examination shows no abnormalities. Treatment with 40% oxygen via venturi mask and intravenous fluids is initiated. Despite continued supplemental oxygen and hydration, the child remains tachypneic and stridorous at rest. Oxygen saturation is now 93%. In addition to administering racemic epinephrine by nebulizer, which of the following is the most appropriate next step?', A. 'Intravenous aminophylline therapy', B. 'Intravenous antibiotic therapy', C. 'Intubation', D. 'Oral dexamethasone therapy'

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Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: C

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 20:

'A 16-year-old boy is brought to the physician because of a 3-day history of abdominal pain and vomiting; he also has had decreased appetite during this period. The pain was initially on the right but now has become generalized. His temperature is 38.8°C (101.8°F), pulse is 100/min, respirations are 20/min, and blood pressure is 143/83 mm Hg. Abdominal examination shows guarding with diffuse rebound tenderness. There are no palpable masses. A CT scan of the abdomen shows a perforated appendix. Examination of peritoneal fluid from this patient will most likely show which of the following organisms?',

A. 'Candida albicans', B. 'Citrobacter freundii', C. 'Escherichia coli', D. 'Staphylococcus aureus'

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Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: C

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Answer Option 4:

Final Answer: C

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Answer Option 5:

Final Answer: C

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Answer Option 6:

Final Answer: C

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Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 21:

'A 52-year-old woman comes to the emergency department because of a 1-week history of low-grade fever and increasing abdominal cramps that are exacerbated by bowel movements. She began a course of amoxicillin-clavulanate and metronidazole 2 days ago but has had no relief of her symptoms. She has had intermittent constipation for the past 12 years. She has not had nausea, vomiting, urinary symptoms, or bloody stools. She has a 3-year history of hypertension. She underwent total abdominal hysterectomy and bilateral salpingo-oophorectomy 5 years ago because of leiomyomata uteri. She is 165 cm (5 ft 5 in) tall and weighs 86 kg (190 lb); BMI is 32 kg/m². Her temperature is 38.1°C (100.6°F), pulse is 75/min, and blood pressure is 150/80 mm Hg. The lungs are clear to auscultation. Cardiac examination shows no abnormalities. The abdomen is soft, and there is tenderness to palpation of the left lower quadrant with guarding but no rebound. Bowel sounds are normal. The stool is brown, and test for occult blood is negative. Her hemoglobin concentration is 14.5 g/dL, leukocyte count is 15,000/mm³, and platelet count is 280,000/mm³; serum studies and urinalysis show no abnormalities. Which of the following is the most appropriate next step in diagnosis?', A. 'Test of the stool for Clostridium difficile toxin', B. 'Endoscopic retrograde cholangiopancreatography', C. 'Pelvic ultrasonography', D. 'CT scan of the abdomen with contrast'

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Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 22:

'A 42-year-old woman comes to the physician because of a 1-year history of vaginal bleeding for 2 to 5 days every 2 weeks. The flow varies from light to heavy with passage of clots. Menses previously occurred at regular 25- to 29-day intervals and lasted for 5 days with normal flow. She has no history of serious illness and takes no medications. She is sexually active with one male partner, and they use condoms inconsistently. Her mother died of colon cancer, and her maternal grandmother died of breast cancer. She is 163 cm (5 ft 4 in) tall and weighs 77 kg (170 lb); BMI is 29 kg/m². Her temperature is 36.6°C (97.8°F), pulse is 90/min, respirations are 12/min, and blood pressure is 100/60 mm Hg. The uterus is normal sized. The ovaries cannot be palpated. The remainder of the examination shows no abnormalities. Test of the stool for occult blood is negative. Which of the following is the most appropriate next step in diagnosis?', A. 'Progesterone challenge test', B. 'Colposcopy', C. 'Cystoscopy', D.

'Endometrial biopsy'

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Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 23:

'A 13-year-old girl is brought to the office for a health maintenance visit. She was diagnosed with Turner syndrome in infancy during a work-up for coarctation of the aorta. During today's visit, her mother reports that the girl has been talking about babies. You have been the patient's physician for the past 6 years and know she is prepubescent. It is most appropriate to counsel the patient that if she wishes to have a family she will need to do which of the following?', A. 'Adopt', B. 'Have amniocentesis if she gets pregnant', C. 'Have an operation', D. 'Receive genetic counseling'

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Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: D

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Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 24:

'A 77-year-old man is brought to the physician because of a 12-hour history of word-finding difficulty and weakness and sensory loss of the right arm and leg. He has no history of similar symptoms. He has type 2 diabetes mellitus, hypertension, and atrial fibrillation. Current medications include metformin, lisinopril, and aspirin. He is alert. His pulse is 80/min and irregular, respirations are 16/min, and blood pressure is 170/90 mm Hg. He follows commands but has nonfluent aphasia. There is moderate weakness and decreased sensation of the right upper and lower extremities. Deep tendon reflexes are 2+ bilaterally. Babinski sign is present on the right. His serum glucose concentration is 162 mg/dL. Which of the following is the most appropriate next step in diagnosis?', A. 'Carotid duplex ultrasonography', B. 'CT scan of the head', C. 'EEG', D. 'Lumbar puncture'

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Answer Option 1:

Final Answer: B

Answer Option 2:

Final Answer: B

Answer Option 3:

Final Answer: B

Answer Option 4:

Final Answer: B

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: B

Answer Option 7:

Final Answer: B

Answer Option 8:

Final Answer: B

Answer Option 9:

Final Answer: B

Question 25:

'A 16-year-old high school student, whose prenatal course you have managed, delivers a 3256-g (7-lb 3-oz) baby girl during the night with the assistance of your associate. On morning rounds you note that the delivery records report that she had mildly elevated blood pressure during labor and sustained an estimated third-stage blood loss of 500 mL. Today blood pressure is 132/84 mm Hg, she is afebrile, and deep tendon reflexes are normal. The uterine fundus is firm and at the level of the umbilicus, and her perineum is slightly edematous. Hematocrit is 33%. She is cuddling her infant and normal bonding seems to be occurring. Which of the following is the most important next step in management?', A. 'Begin oral methyldopa', B. 'Institute fundal massage', C. 'Order daily sitz baths', D. 'Provide education for well-baby care'

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Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: A

Answer Option 9:

Final Answer: D

Question 26:

'A previously healthy 17-year-old girl comes to the physician because of a 2-month history of exercise-induced cough and nasal congestion. She plays field hockey and has noticed she coughs when running up and down the field. The cough is nonproductive and resolves with rest. She has not had chest pain or palpitations. She takes no medications and does not smoke. Her sister has asthma. The patient appears well. Her pulse is 68/min, respirations are 16/min, and blood pressure is 100/75 mm Hg. Pulse oximetry on room air shows an oxygen saturation of 99%. Cardiopulmonary examination shows no abnormalities. An x-ray of the chest shows no abnormalities. Spirometry shows an FEV1:FVC ratio of 90% and an FEV1 of 90% of predicted. Which of the following is the most likely diagnosis?', A. 'Asthma', B. 'Chronic bronchitis', C. 'Gastroesophageal reflux disease', D. 'Postnasal drip syndrome'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 27:

'A 24-year-old woman comes to the physician for a follow-up examination. One week ago, she was treated in the emergency department after she accidentally spilled hot grease on her left leg while working at a fast-food restaurant. Examination of the left lower extremity shows a 7-cm, pink, soft, granular, edematous wound. The formation of this tissue was most likely caused by increased activity of which of the following?'; A. 'Glycosylation-dependent cell adhesion molecule-1', B. 'P-selectin', C. 'Stromelysin', D. 'Vascular endothelial growth factor'

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Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: D

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Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 28:

'A 23-year-old woman comes to the physician for genetic counseling prior to conception. Her brother and maternal uncle had Duchenne muscular dystrophy (DMD) and died at the ages of 28 and 17 years, respectively. Genetic analysis was not performed on either relative prior to death. Serum studies show a muscle creatine kinase concentration of 120 U/L (N=22– 198). The patient's 50-year-old mother has a serum muscle creatine kinase concentration of 300 U/L. Which of the following is the most appropriate assessment of this patient's carrier status for this disease?', A. 'The patient has a 50% risk of having a child with DMD', B. 'The patient is a carrier of the disease based on her family history of DMD', C. 'The patient is not a carrier of the DMD based on her normal creatine kinase concentration', D. 'The patient's DMD carrier status is uncertain because of random X inactivation'

=====

Answer Option 1:

Final Answer: B

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: B

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: B

Answer Option 7:

Final Answer: B

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 29:

'A 3-year-old white girl is brought to the office by her parents for a follow-up visit 48 hours after receiving a 5-TU PPD skin test. The test was done as part of a routine screening for enrollment in a homeless shelter. Physical examination shows 10 mm of induration at the puncture site; the examination is otherwise normal. The parents tell you they are shocked by this finding since both of their skin tests were nonreactive. They say they were born in this country and tell you that their daughter has always been in good health. She has not had much medical care in the past 2 years but she has been healthy. Until moving into this shelter they had been "squatters" in vacant buildings. Which of the following is the most appropriate step at this time?', A. 'Call her previous physician to obtain more history', B. 'Order a chest x-ray', C. 'Order a test for HIV antibody', D. 'Repeat the PPD skin test'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: C

Answer Option 3:

Final Answer: B

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: A

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: C

Question 30:

'A 65-year-old female is admitted to the hospital after experiencing aphasia and right-sided hemiparesis. She subsequently develops urinary incontinence. There is no evidence of urinary tract infection and no prior history of urinary pathology. The most likely diagnosis is', A. 'autonomic neurogenic bladder', B. 'motor paralytic bladder', C. 'reflex neurogenic bladder', D. 'uninhibited neurogenic bladder'

=====

Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: D

=====

Answer Option 5:

Final Answer: C

=====

Answer Option 6:

Final Answer: A

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Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: A

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Question 31:

'A 35-year-old woman comes to the office because of a 3-day history of severe right back pain. She has not had any fever, chills, or weight loss. She has no history of major medical illness. Musculoskeletal and neurologic examinations show no abnormalities. When told that her examination is normal, the patient becomes tearful and demands an MRI of her back because her mother just died from breast cancer metastatic to bone and she fears that she may also have cancer. The patient already contacted her insurance company, who told her that if she has neurologic abnormalities an MRI may be covered by her plan. The patient asks the physician to order the MRI indicating that she has neurologic findings. Which of the following is the most appropriate initial action by the physician?'. A. 'Advise the patient to change insurance companies as soon as she is able so that she can receive more comprehensive medical care', B. 'Explain that the patient does not need the MRI and that it is not appropriate to misrepresent her examination findings', C. 'Immediately inform the patient's insurance company about what the patient has asked the physician to do', D. 'Order the MRI as the patient requests'

=====

Answer Option 1:

Final Answer: B

=====

Answer Option 2:

Final Answer: B

=====

Answer Option 3:

Final Answer: B

=====

Answer Option 4:

Final Answer: B

=====

Answer Option 5:

Final Answer: B

=====

Answer Option 6:

Final Answer: B

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Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 32:

'A 32-year-old man is brought to the emergency department 30 minutes after being struck by a car while driving his motorcycle. He reports severe pelvic pain. On examination, there is bruising of the perineum and pain is elicited with motion of his pelvis. Blood is noted at the urethral meatus. There is no other penile trauma. A plain x-ray shows a fracture of the superior pubic ramus and retrograde urethrography is done to evaluate for a urethral disruption. Which of the following portions of the urethra would be at greatest risk for injury in this patient?', A. 'Intramural (pre-prostatic)', B. 'Membranous', C. 'Prostatic', D. 'Spongy'

=====

Answer Option 1:

Final Answer: B

Answer Option 2:

Final Answer: B

Answer Option 3:

Final Answer: B

Answer Option 4:

Final Answer: B

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: B

Answer Option 7:

Final Answer: B

Answer Option 8:

Final Answer: B

Answer Option 9:

Final Answer: B

Question 33:

'A 33-year-old female presents to the office with the complaint of chronic pelvic pain that began after she underwent a hysterectomy 6 months ago. Following a physical examination, a CT scan of the pelvis is ordered. After the scan is complete, the radiologist calls to report that the patient has a surgical sponge in her pelvis. In a subsequent malpractice suit, the plaintiff establishes that the sponge could not have been left unless there was negligence. The most appropriate term to represent the legal concept invoked by the patient is', A. 'collateral estoppel', B. 'proximate cause', C. 'res ipsa loquitur', D. 'respondeat superior'

=====

Answer Option 1:

Final Answer: C

Answer Option 2:

Final Answer: C

Answer Option 3:

Final Answer: C

Answer Option 4:

Final Answer: C

Answer Option 5:

Final Answer: C

Answer Option 6:

Final Answer: C

Answer Option 7:

Final Answer: C

Answer Option 8:

Final Answer: C

Answer Option 9:

Final Answer: C

Question 34:

'A 35-year-old man comes to the office for follow-up of sarcoidosis. His only new complaint is pain in his legs that increases with weight-bearing. He has been taking glucocorticoid therapy for the past 6 months. Vital signs now are temperature 37.0°C (98.6°F), pulse 78/min, respirations 14/min, and blood pressure 110/70 mm Hg. The patient is thin and is in no acute distress. Auscultation of the chest discloses scattered bilateral basilar crackles. There is mild left hip pain present with both active and passive range of motion. Dorsalis pedis pulse is intact. Neurologic examination is normal. Which of the following is the most likely cause of this patient's symptoms?', A. 'Avascular necrosis of the femoral head', B. 'Herniated nucleus pulposus', C. 'Narrowing of the hip joint', D. 'Osteoporosis'

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Answer Option 1:

Final Answer: A

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Answer Option 2:

Final Answer: A

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Answer Option 3:

Final Answer: A

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Answer Option 4:

Final Answer: A

=====

Answer Option 5:

Final Answer: A

=====

Answer Option 6:

Final Answer: A

=====

Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: A

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Question 35:

'A 67-year-old man with Parkinson disease is admitted to the hospital for treatment of pneumonia. The patient's daughter, who is visiting the patient, says he has had increased lethargy for the past day and decreased ambulation during the past 6 months. She also says that there are times during the day when his tremors increase in severity, although he continues to care for himself at home. Medical history is also remarkable for hypertension. Medications include hydrochlorothiazide, atenolol, levodopa, and carbidopa. He is 168 cm (5 ft 6 in) tall and weighs 78 kg (172 lb); BMI is 28 kg/m2 . Vital signs are temperature 38.9°C (102.0°F), pulse 60/min supine and 68/min standing, respirations 22/min, and blood pressure 100/60 mm Hg supine and 80/50 mm Hg standing. The patient appears ill and older than his stated age. He is fully oriented but lethargic. Auscultation of the chest discloses rhonchi in the right mid lung field. Abdominal examination discloses no abnormalities. Neurologic examination discloses masked facies, bradykinesia, and cogwheel rigidity; gait was not assessed on admission. Chest x-ray shows a right lower lobe infiltrate. ECG shows no abnormalities. Appropriate intravenous antibiotic therapy is initiated. Prior to discharge, which of the following is the most appropriate step?', A. 'Obtain CT scan of the chest', B. 'Obtain a swallowing evaluation', C. 'Place a percutaneous endoscopic gastrostomy (PEG) tube', D. 'Prescribe fludrocortisone'

=====

Answer Option 1:

Final Answer: B

Answer Option 2:

Final Answer: B

Answer Option 3:

Final Answer: B

Answer Option 4:

Final Answer: B

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: B

Answer Option 7:

Final Answer: B

Answer Option 8:

Final Answer: B

Answer Option 9:

Final Answer: B

Question 36:

'A 64-year-old woman comes to the physician because of a 5-month history of increasing shortness of breath, sore throat, and a cough productive of a small amount of white phlegm. Over the past week, she has had nausea related to excess coughing. Over the past year, she has had a 3.2-kg (7-lb) weight loss. She has asthma treated with theophylline and inhaled β -adrenergic agonists and corticosteroids. She has smoked one pack of cigarettes daily for 44 years and drinks one alcoholic beverage daily. She appears thin. Examination shows a 2-cm, nontender lymph node in the right supraclavicular area. Examination shows no other abnormalities. An x-ray of the chest shows a large right lower lobe density. A CT scan of the chest shows a 7.5 x 7.5 x 6-cm right lower lobe mass with some scattered calcifications. The lesion abuts the posterior chest wall without clear invasion. There are right lower peritracheal, precarinal, right hilar, and subcarinal lymph nodes. There is a 1.5-cm mass in the right adrenal gland. A biopsy specimen of the lung mass is most likely to show which of the following?', A. 'Mesothelioma', B. 'Metastatic adenocarcinoma of the breast', C. 'Multiple endocrine neoplasia', D. 'Non-small cell lung carcinoma'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 37:

'A 46-year-old woman, gravida 1, para 1, comes to the office because of a 2-week history of black discharge from her right nipple. The patient had mammography and ultrasonography of the breasts 2 months ago for evaluation of increased glandularity, palpated in the upper outer quadrant of the right breast, noted at her most recent annual examination. The studies showed likely benign findings with recommended follow-up in 6 months. Medical history is otherwise unremarkable and she takes no medications. BMI is 30 kg/m². Vital signs are normal. Palpation of the right breast discloses glandularity in the upper outer quadrant but no other masses. There is scant, black discharge from the right nipple. Which of the following is the most appropriate next step in diagnosis?', A. 'Ductography', B. 'Excisional biopsy of glandular tissue', C. 'Repeat mammography', D. 'Repeat ultrasonography of the right breast'

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Answer Option 1:

Final Answer: A

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Answer Option 2:

Final Answer: A

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Answer Option 3:

Final Answer: A

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Answer Option 4:

Final Answer: A

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Answer Option 5:

Final Answer: A

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Answer Option 6:

Final Answer: A

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Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: A

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Question 38:

'A 37-year-old woman with AIDS comes to the physician because of a 1-month history of progressive diarrhea and a 1.8- kg (4-lb) weight loss. During the past week, she has had six large watery stools daily. She is currently receiving triple antiretroviral therapy. She is employed as a flight attendant and works regularly on domestic flights throughout the USA. She also flies to Asia at least once monthly. She is 163 cm (5 ft 4 in) tall and weighs 59 kg (130 lb); BMI is 22 kg/m². Her temperature is 37°C (98.6°F), pulse is 88/min, and blood pressure is 112/64 mm Hg. The abdomen is scaphoid. The remainder of the examination shows no abnormalities. Her CD4+ T-lymphocyte count is 400/mm³ (Normal≥500). Which of the following is the most likely causal organism?', A. 'Cryptosporidium parvum', B. 'Cytomegalovirus', C. 'Mycobacterium avium-intracellulare complex', D. 'Salmonella enteritidis'

=====

Answer Option 1:

Final Answer: A

Answer Option 2:

Final Answer: C

Answer Option 3:

Final Answer: A

Answer Option 4:

Final Answer: C

Answer Option 5:

Final Answer: A

Answer Option 6:

Final Answer: A

Answer Option 7:

Final Answer: C

Answer Option 8:

Final Answer: A

Answer Option 9:

Final Answer: A

Question 39:

'A healthy 22-year-old man participates in a study of glucose metabolism. At the beginning of the study, his serum glucose concentration is within the reference range. He consumes an 800-calorie meal consisting of protein, fat, and carbohydrates. He then sleeps through the night without additional food or drink. Twelve hours later, his serum glucose concentration remains within the reference range. Which of the following mechanisms is most likely involved in maintaining this man's serum glucose concentration?', A. 'Continued gut absorption of calories from the ingested meal', B. 'Glucose release from skeletal muscle', C. 'Glycogenolysis in the liver', D. 'Increased leptin release from adipose tissues'

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Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: C

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Answer Option 4:

Final Answer: C

=====

Answer Option 5:

Final Answer: C

=====

Answer Option 6:

Final Answer: C

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Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 40:

'A previously healthy 22-year-old college student is brought to the emergency department by her parents 20 minutes after they observed her having a seizure. After the seizure, she was confused and had difficulty thinking of some words. She has had a headache, cough, and fever for 3 days treated with acetaminophen and dextromethorphan. Her temperature is 38.9°C (102°F). Neurologic examination shows diffuse hyperreflexia. On mental status examination, she is confused and has short-term memory deficits. She has difficulty naming objects and makes literal paraphasic errors. An MRI of the brain shows bitemporal hyperintensities. A lumbar puncture is done; cerebrospinal fluid analysis shows an erythrocyte count of 340/mm³, a leukocyte count of 121/mm³ (88% monocytes), and a protein concentration of 78 mg/dL. Which of the following is the most likely diagnosis?', A. 'Bacterial meningitis', B. 'Dextromethorphan intoxication', C. 'Herpes simplex encephalitis', D. 'HIV encephalopathy'

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Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: C

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Answer Option 4:

Final Answer: C

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Answer Option 5:

Final Answer: C

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Answer Option 6:

Final Answer: C

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Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 41:

'A 40-year-old woman comes to the physician because of a 6-month history of increased facial hair growth. Her last menstrual period was 4 months ago. She is 165 cm (5 ft 5 in) tall and weighs 70 kg (154 lb); BMI is 26 kg/m². Her pulse is 80/min, and blood pressure is 130/82 mm Hg. Physical examination shows temporal balding and coarse dark hair on the upper lip and chin. Pelvic examination shows clitoral enlargement. Her serum testosterone concentration is increased. Serum concentrations of androstenedione, dehydroepiandrosterone, and urinary 17-ketosteroids are within the reference ranges. Ultrasonography of the pelvis shows a 12-cm ovarian mass. Which of the following best describes this mass?', A. 'Granulosa tumor', B. 'Ovarian carcinoid', C. 'Sertoli-Leydig tumor', D. 'Teratoma'

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Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: C

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Answer Option 4:

Final Answer: C

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Answer Option 5:

Final Answer: C

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Answer Option 6:

Final Answer: C

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Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 42:

'A 77-year-old female presents to the office for evaluation of a syncopal event that occurred while she was walking. Cardiac examination reveals a grade 3/6 systolic murmur, heard best at the right upper sternal border. There is radiation of the murmur into the neck. The valvular abnormality that most likely caused this episode is', A. 'aortic insufficiency', B. 'aortic stenosis', C. 'mitral regurgitation', D. 'mitral stenosis'

=====

Answer Option 1:

Final Answer: B

Answer Option 2:

Final Answer: B

Answer Option 3:

Final Answer: B

Answer Option 4:

Final Answer: B

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: B

Answer Option 7:

Final Answer: B

Answer Option 8:

Final Answer: B

Answer Option 9:

Final Answer: B

Question 43:

Three weeks ago a 45-year-old man was admitted to the hospital because of frostbite of both feet. He was treated by rapid rewarming and protective care of the feet. All the toes on the right foot have turned black. He has become slightly febrile and progressively more confused during the past few days. Examination discloses cellulitis in the midfoot. Which of the following is the most appropriate treatment?', A. 'Amputation', B. 'Application of topical collagenase', C. 'Debridement of necrotic skin over the toes', D. 'Hyperbaric oxygen'

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Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: C

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Answer Option 4:

Final Answer: C

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Answer Option 5:

Final Answer: C

=====

Answer Option 6:

Final Answer: C

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Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 44:

'A 35-year-old man comes to the office because of 1-week history of mid low back pain that radiates down his right leg. The pain began after the patient lifted a heavy box onto his truck. He rates his current pain as an 8 on a 10-point scale. He has been unable to find a comfortable position and has been sleeping in a recliner. Medical history is unremarkable and he takes no medications. He has smoked one pack of cigarettes daily for the past 25 years, and he drinks a six-pack of beer on Friday and Saturday nights. BMI is 27 kg/m². He appears uncomfortable and stands during the physical examination. Vital signs are normal. Straight-leg raise test is positive on the right, with loss of right ankle reflex. The remainder of the physical examination discloses no abnormalities. Which of the following is the most likely explanation for this patient's symptoms?', A. 'Displacement of the nucleus pulposus', B. 'Hypertrophy of the facet joints', C. 'Osteophyte formation', D. 'Spondylolisthesis'

=====

Answer Option 1:

Final Answer: A

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Answer Option 2:

Final Answer: A

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Answer Option 3:

Final Answer: A

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Answer Option 4:

Final Answer: A

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Answer Option 5:

Final Answer: A

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Answer Option 6:

Final Answer: A

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Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: A

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Question 45:

'A 35-year-old man comes to the physician because of pain and swelling of his right arm where he scraped it on a tree branch 2 days ago. His temperature is 38.3°C (101°F). Examination of the right forearm shows edema around a fluctuant erythematous lesion at the site of trauma. The area is extremely tender to palpation. Which of the following is most likely the primary mechanism of the development of edema in this patient?', A. 'Disruption of vascular basement membranes', B. 'Increased hydrostatic pressure', C. 'Release of thromboxane', D. 'Separation of endothelial junctions'

=====

Answer Option 1:

Final Answer: A

=====

Answer Option 2:

Final Answer: A

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Answer Option 3:

Final Answer: A

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Answer Option 4:

Final Answer: A

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Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: A

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Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: B

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Question 46:

'A 22-year-old woman comes to the physician in October for a follow-up examination. She feels well. She has a 2-year history of type 1 diabetes mellitus controlled with insulin. She had a normal Pap smear 3 months ago and saw her ophthalmologist 6 months ago. Her 67-year-old grandmother has breast cancer. She is 168 cm (5 ft 6 in) tall and weighs 57 kg (125 lb); BMI is 20 kg/m². Her hemoglobin A1c is 6.2%, and fingerstick blood glucose concentration is 118 mg/dL. Which of the following health maintenance recommendations is most appropriate at this time?', A. 'Dietary modification for weight loss', B. 'Human papillomavirus testing', C. 'Mammography', D. 'Influenza virus vaccine'

=====

Answer Option 1:

Final Answer: C

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 47:

'A 42-year-old man comes to the physician for a follow-up examination. Four months ago, he underwent repair of a Dupuytren contracture. Physical examination shows decreased range of motion in the affected hand. The patient is upset that his hand has not fully healed, and he files a malpractice suit against the physician. Which of the following is the most likely precipitating factor in this patient's decision to file a malpractice suit?', A. 'The patient's perception that the physician is incompetent', B. 'The patient's perception that the physician is uncaring', C. 'The patient's socioeconomic status', D. 'The physician's amount of experience in the medical field'

=====

Answer Option 1:

Final Answer: B

Answer Option 2:

Final Answer: B

Answer Option 3:

Final Answer: B

Answer Option 4:

Final Answer: B

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: B

Answer Option 7:

Final Answer: B

Answer Option 8:

Final Answer: B

Answer Option 9:

Final Answer: B

Question 48:

'During a study of renal glomeruli, a healthy animal kidney is kept in a vascular bath preparation at a constant afferent arterial pressure of 100 mm Hg. If the efferent arteriole is constricted with a vascular clamp, which of the following Starling forces is most likely to change in the glomeruli?', A. 'Decreased filtration coefficient (Kf)', B. 'Decreased hydrostatic pressure', C. 'Decreased oncotic pressure', D. 'Increased hydrostatic pressure'

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Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 49:

'A 30-year-old woman, gravida 2, para 0, aborta 1, at 28 weeks' gestation comes to the office for a prenatal visit. She has had one previous pregnancy resulting in a spontaneous abortion at 12 weeks' gestation. Today, her vital signs are within normal limits. Physical examination shows a uterus consistent in size with a 28-week gestation. Fetal ultrasonography shows a male fetus with no abnormalities. Her blood group is O, Rh-negative. The father's blood group is B, Rh-positive. The physician recommends administration of Rho', A. 'immune globulin to the patient. This treatment is most likely to prevent which of the following in this mother?', B. 'Development of natural killer cells', C. 'Development of polycythemia', D. 'Formation of antibodies to RhD'

=====

Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

=====

Answer Option 3:

Final Answer: D

=====

Answer Option 4:

Final Answer: D

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Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 50:

'A 46-year-old man with Marfan syndrome, aortic insufficiency, and mitral regurgitation comes to the emergency department because he has had severe substernal chest pain for the past 3 hours. He describes the pain as tearing in quality and radiating to the neck. One week earlier he experienced similar but less severe chest pain and treated himself with aspirin. Which of the following is the most likely underlying cause for his worsening symptoms?', A. 'Acute bacterial endocarditis', B. 'Acute myocardial infarction', C. 'Dissection of the aorta', D. 'Esophageal reflux with spasm'

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Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: C

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Answer Option 4:

Final Answer: C

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Answer Option 5:

Final Answer: C

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Answer Option 6:

Final Answer: C

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Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 51:

'A 47-year-old man is admitted to the hospital through the emergency department because of the sudden onset of palpitations, left-sided chest pain, light-headedness, and shortness of breath that began while he was watching television 2 hours ago. Medical history is remarkable for paroxysmal atrial fibrillation. The patient is 180 cm (5 ft 11 in) tall and weighs 82 kg (180 lb); BMI is 25 kg/m². ECG obtained in the emergency department showed atrial fibrillation with narrow QRS complex. Pulse was 146/min. Physical examination was remarkable for rapid heart rate. The patient was given oxygen via nasal cannula and intravenous metoprolol 5 mg every 5 minutes for a total of 15 mg. His pulse slowed to 90/min. Two hours after admission, he is pain free but his pulse is now 160/min. Blood pressure is 122/78 mm Hg. In order to decrease the patient's pulse, which of the following should be administered intravenously?', A. 'Digoxin', B. 'Enalapril', C. 'Lidocaine', D. 'Metoprolol'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: A

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 52:

'A 73-year-old woman comes to the physician because of a 2-month history of diffuse weakness and tingling of her arms and legs. Neurologic examination shows weakness of the extensor and flexor muscles of the lower extremities. Knee and ankle deep tendon reflexes are exaggerated. Sensation to vibration and position is decreased in all extremities, but the decrease is more prominent in the lower extremities than in the upper extremities. This patient most likely has a deficiency of which of the following vitamins?', A. 'Vitamin B1 (thiamine)', B. 'Vitamin B2 (riboflavin)', C. 'Vitamin B6 (pyridoxine)', D. 'Vitamin B12 (cyanocobalamin)'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 53:

'Over 1 year, a study is conducted to assess the antileukemic activity of a new tyrosine kinase inhibitor in patients with chronic myeloid leukemia in blast crisis. All patients enrolled in the study are informed that they would be treated with the tyrosine kinase inhibitor. They are assigned to successive dose cohorts of 300 to 1000 mg/day of the drug. Six to eight patients are assigned to each dose. Treatment efficacy is determined based on the results of complete blood counts and bone marrow assessments conducted regularly throughout the study. This study is best described as which of the following?', A.

'Case-control study', B. 'Crossover study', C. 'Open-labeled clinical trial', D. 'Randomized clinical trial'

=====

Answer Option 1:

Final Answer: C

Answer Option 2:

Final Answer: C

Answer Option 3:

Final Answer: C

Answer Option 4:

Final Answer: C

Answer Option 5:

Final Answer: C

Answer Option 6:

Final Answer: C

Answer Option 7:

Final Answer: C

Answer Option 8:

Final Answer: C

Answer Option 9:

Final Answer: C

Question 54:

'A 25-year-old man comes to the emergency department because he developed chest pain and shortness of breath 1 hour ago, shortly after snorting cocaine for the first time. He rates the chest pain as a 7 on a 10-point scale and notes that the pain is radiating down his left arm. Medical history is unremarkable and the patient takes no medications or any other illicit drugs. He is 178 cm (5 ft 10 in) tall and weighs 70 kg (154 lb); BMI is 22 kg/m². The patient is diaphoretic. Vital signs are temperature 37.5°C (99.5°F), pulse 110/min, respirations 16/min, and blood pressure 200/100 mm Hg. Pulse oximetry on room air shows an oxygen saturation of 95%. Pupils are equal, round, and reactive to light and accommodation. Lungs are clear to auscultation and percussion. Auscultation of the heart discloses an audible S1 and S2. There is no edema, cyanosis, or clubbing of the digits. The patient is fully oriented. He is treated with supplemental oxygen, a 325-mg aspirin tablet, and intravenous nitroglycerin and lorazepam. Despite therapy, he continues to have chest pain and shortness of breath. ECG shows sinus tachycardia with no ST-segment or T-wave abnormalities. Which of the following is the most appropriate additional pharmacotherapy to initiate at this time?', A. 'Carvedilol', B. 'Furosemide', C. 'Metoprolol', D. 'Phentolamine'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 55:

'A phase 2, multicenter trial was conducted to determine the efficacy of a new vaccine for prevention of HIV infection. The study enrolled 4000 subjects, aged 20 to 65 years. Of these subjects, 2100 were men and 1900 were women; 2500 were white, 1000 were African American, 300 were Hispanic, and 200 were Asian/Pacific Islanders. Results of the trial showed no overall benefit of the vaccine. However, post hoc analysis disclosed a small but statistically significant vaccine protection among African American subjects. Which of the following is the most accurate rationale for questioning the validity of efficacy analysis of the HIV vaccine among the African American study subjects?', A. 'HIV infection is more prevalent among African American populations', B. 'The study was not blinded', C. 'There was a Type II error', D. 'Vaccine response among African American subjects was not the primary outcome measure'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: B

Answer Option 9:

Final Answer: D

Question 56:

'A 33-year-old male physician reports for a shift in the emergency department. A nurse alerts you that he noticed a faint odor of alcohol near the physician. When approached, the physician appears tired and more disheveled than usual. There is an odor of alcohol on his breath. He is a skilled and talented physician with no known history of substance or alcohol use disorder. He is married with three children, and his wife is pregnant with twins. The physician was recently hired and has had no actions on his license by any state medical board. Which of the following is the most appropriate next step?', A. 'Ask the physician if he is sober, and if he says yes, allow him to complete his shift', B. 'Explain to the physician that you suspect he is intoxicated and ask him to submit to a blood sample to check his blood alcohol concentration', C. 'Relieve the physician of duty and alert the hospital's patient safety officer', D. 'Tell the physician that you can cover the remainder of the shift alone, so that he can sleep in his office'

=====

Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: C

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Answer Option 4:

Final Answer: C

=====

Answer Option 5:

Final Answer: C

=====

Answer Option 6:

Final Answer: C

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Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 57:

'A 22-year-old man comes to the physician for a routine health maintenance examination. He feels well. He has had a painless left scrotal mass since childhood. Examination shows a 6-cm, soft, nontender left scrotal mass that transilluminates; there are no bowel sounds in the mass. Examination of the testis shows no abnormalities. Which of the following is the most likely cause of the mass?', A. 'Accumulation of scrotal adipose tissue', B. 'Cryptorchidism of the left testis', C. 'Dilation of the pampiniform plexus of veins around the testis', D. 'Persistence of a patent processus vaginalis'

=====

Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

=====

Answer Option 3:

Final Answer: D

=====

Answer Option 4:

Final Answer: D

=====

Answer Option 5:

Final Answer: D

=====

Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 58:

'A 3-year-old boy with chronic granulomatous disease is brought to the physician because of a 3-week history of fever and warm, red lumps under both arms. His temperature is 38°C (100.4°F). Physical examination shows enlarged, 3-cm, erythematous axillary lymph nodes bilaterally. On palpation, the nodes are tender, fluctuant, and movable. Examination of a fine-needle aspirate from one of the nodes shows gram-positive cocci in clusters. Cultures of the aspirate grow yellow, βhemolytic colonies that are catalase and coagulase positive. A polymerase chain reaction test shows mecA-positive organisms.

Which of the following is the most appropriate pharmacotherapy for this patient?', A. 'Ciprofloxacin', B. 'Penicillin G', C. 'Rifampin', D. 'Vancomycin'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 59:

'A 35-year-old man with spina bifida is admitted to the hospital for a urologic procedure. He has been functionally independent in activities of daily living and is employed doing inventory control in a local sporting goods store. He has maintained continence through periodic self-catheterization. The patient is paraplegic, has recurrent calcium oxalate kidney stones, and recent onset of incontinence secondary to detrusor and bladder neck dysfunction. Vital signs are normal. Physical examination shows a well-developed, well-nourished man in no acute distress. Aside from paraplegia, lower extremity muscle atrophy, and lower abdominal surgical scars, the physical examination discloses no abnormalities. He had an episode of anaphylaxis secondary to latex allergy during a previous operation for functional expansion of his bladder through a bowel anastomosis. Which of the following is most important to consider in the care of this patient?', A. 'Administration of injectable medications with disposable syringes', B. 'Preparation of food by outside contractors', C. 'Type of cleaning agents used to sterilize bed linens', D. 'Use of rubber urethral catheters'

=====

Answer Option 1:

Final Answer: D

=====

Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: A

=====

Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: D

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Question 60:

'A 6-month-old male Hispanic infant is brought to the office by his parents because of intermittent swelling of his right scrotum that is more pronounced when he cries. The swelling has never been red or "stuck." Vital signs are normal. A right inguinal hernia is confirmed on physical examination. In discussing repair of the hernia with the parents, it is most appropriate to inform them of which of the following?',

A. 'Herniorrhaphy can be postponed until age 2 years because many hernias close spontaneously', B. 'Herniorrhaphy can be postponed until age 12 years because oligospermia does not develop before age 12', C. 'Herniorrhaphy should be scheduled at the earliest convenient time', D. 'Herniorrhaphy should be scheduled as an emergency operation'

=====

Answer Option 1:

Final Answer: C

Answer Option 2:

Final Answer: C

Answer Option 3:

Final Answer: C

Answer Option 4:

Final Answer: C

Answer Option 5:

Final Answer: C

Answer Option 6:

Final Answer: C

Answer Option 7:

Final Answer: C

Answer Option 8:

Final Answer: C

Answer Option 9:

Final Answer: C

Question 61:

'A 67-year-old woman comes to the physician because of dizziness for 6 weeks. When she stands up suddenly, she becomes light-headed and has to steady herself for approximately 1 to 2 minutes before she is able to walk. She has hypertension and type 2 diabetes mellitus. Current medications include glyburide, a diuretic, a β -adrenergic blocking agent, and an angiotensin-converting enzyme (ACE) inhibitor. Her pulse is 55/min. Her blood pressure is 110/70 mm Hg in the right arm and 70/50 mm Hg in the left arm while supine; her blood pressure is 70/50 mm Hg in the right arm and 50/30 mm Hg in the left arm immediately after standing. Neurologic examination shows no focal findings. An ECG shows sinus bradycardia with no evidence of ischemia. Carotid duplex ultrasonography shows reverse flow in the left vertebral artery with no evidence of occlusion. Which of the following is the most appropriate next step in management?', A. 'Cardiac stress scintigraphy', B. 'Adjusting her medication regimen', C. 'Warfarin therapy', D. 'Transesophageal echocardiography'

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Answer Option 1:

Final Answer: B

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Answer Option 2:

Final Answer: B

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Answer Option 3:

Final Answer: B

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Answer Option 4:

Final Answer: B

=====

Answer Option 5:

Final Answer: B

=====

Answer Option 6:

Final Answer: B

=====

Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 62:

'A 17-year-old girl is brought to the physician by her mother because she has not had a menstrual period for 6 months. The patient is unconcerned about the lack of menses. Menarche occurred at the age of 12 years, and menses had occurred at regular 28-day intervals until they became irregular 1 year ago. She is a member of her high school gymnastics team. She appears emaciated. She is 163 cm (5 ft 4 in) tall and weighs 40 kg (88 lb); BMI is 15 kg/m². Her pulse is 54/min, and blood pressure is 80/50 mm Hg. Which of the following is the most likely cause of this patient's amenorrhea?', A. 'Hyperthyroidism', B. 'Hypogonadotropic hypogonadism', C. 'Hypothyroidism', D. 'Polycystic ovarian syndrome'

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Answer Option 1:

Final Answer: B

=====

Answer Option 2:

Final Answer: B

=====

Answer Option 3:

Final Answer: B

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Answer Option 4:

Final Answer: B

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Answer Option 5:

Final Answer: B

=====

Answer Option 6:

Final Answer: B

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Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 63:

'A 2-year-old boy is brought to the physician for a well-child examination. He was delivered at term after an uncomplicated pregnancy. His birth weight was 3500 g (7 lb 11 oz), and Apgar scores were 8 and 10 at 1 and 5 minutes, respectively. At the age of 15 months, physical examination showed no abnormalities, but he was not yet talking. Both of his parents had learning difficulties in school, and his mother stopped attending after the 10th grade. He has a maternal uncle with cognitive disabilities. He is at the 25th percentile for height, 15th percentile for weight, and 90th percentile for head circumference. He appears irritable, he resists making eye contact, and he is flapping his hands. Which of the following is the most likely cause of this patient's condition?', A. 'Frameshift mutation', B. 'Missense mutation', C. 'Nonsense mutation', D. 'Trinucleotide repeat expansion'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 64:

'A 20-year-old man has had frequent upper respiratory tract infections over the past 4 years. He has daily purulent sputum and has noted decreased exercise tolerance over the past 2 years. He and his wife have been unable to conceive because of his low sperm count. Scattered expiratory wheezing and rhonchi are heard throughout both lung fields. An x-ray of the chest shows hyperinflation. Spirometry shows a decreased FEV1:FVC ratio. Which of the following is most likely to confirm the diagnosis?', A. 'Arterial blood gas analysis', B. 'Examination of sputum for eosinophils', C. 'Sweat chloride test', D. 'Sputum cytology'

=====

Answer Option 1:

Final Answer: C

Answer Option 2:

Final Answer: C

Answer Option 3:

Final Answer: C

Answer Option 4:

Final Answer: C

Answer Option 5:

Final Answer: C

Answer Option 6:

Final Answer: C

Answer Option 7:

Final Answer: C

Answer Option 8:

Final Answer: C

Answer Option 9:

Final Answer: C

Question 65:

'A 37-year-old woman with right lower extremity edema is evaluated because of the sudden onset of shortness of breath and pleuritic chest pain. A diagnosis of pulmonary embolism is made. Which of the following signs, if present on physical examination, would be the most specific indicator of pulmonary arterial hypertension in this patient?', A. 'Increased jugular venous pressure', B. 'P2 louder than A2', C. 'Peripheral edema', D. 'Presence of an S3'

=====

Answer Option 1:

Final Answer: B

Answer Option 2:

Final Answer: B

Answer Option 3:

Final Answer: B

Answer Option 4:

Final Answer: B

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: B

Answer Option 7:

Final Answer: B

Answer Option 8:

Final Answer: B

Answer Option 9:

Final Answer: B

Question 66:

'A 32-year-old woman, gravida 3, para 2, at 41 weeks' gestation is admitted to the hospital in active labor. Pregnancy has been complicated by mild asthma treated with inhaled bronchodilators. At the beginning of the second stage of labor, the cervix is 100% effaced and 10 cm dilated; the vertex is at -1 station. The fetal heart rate is reactive with no decelerations. After 10 minutes of pushing, there is a prolonged deceleration to 60/min. The patient has the acute onset of shortness of breath, rapidly develops cyanosis, and becomes unresponsive. Her pulse and blood pressure cannot be detected. Immediate resuscitation is started. Five minutes later, there is bleeding from the nose, mouth, and intravenous sites. Which of the following is the most likely diagnosis?', A. 'Amniotic fluid embolism', B. 'Intracerebral hemorrhage', C. 'Myocardial infarction', D. 'Status asmaticus'

=====

Answer Option 1:

Final Answer: A

Answer Option 2:

Final Answer: A

Answer Option 3:

Final Answer: A

Answer Option 4:

Final Answer: A

Answer Option 5:

Final Answer: A

Answer Option 6:

Final Answer: A

Answer Option 7:

Final Answer: A

Answer Option 8:

Final Answer: A

Answer Option 9:

Final Answer: A

Question 67:

'A 52-year-old man is admitted to the hospital because of severe dyspnea and cough productive of tenacious, brownishyellow sputum for the past 3 weeks. He has a 15-year career history of sandblasting old buildings. He has smoked two packs of cigarettes daily for the past 30 years. The patient is 168 cm (5 ft 6 in) tall and weighs 59 kg (130 lb); BMI is 21 kg/m². Vital signs are temperature 36.8°C (98.2°F), pulse 94/min, and blood pressure 150/92 mm Hg. Pulse oximetry on room air shows an oxygen saturation of 70%. On physical examination he is in moderately severe distress with pursed lips and cyanotic nail beds. Chest has an increased anteroposterior diameter. Auscultation of the chest discloses scattered wheezes and rhonchi over all lung fields. Cardiac examination discloses muffled heart sounds and an S4. Fingers are clubbed. Chest x-ray shows hyperinflated lungs, flattened diaphragm, large, irregular opacities in the upper lobes, and eggshell calcifications of the hilar lymph nodes. In addition to antibiotic therapy, which of the following is the most appropriate intervention?', A. 'Azathioprine therapy', B. 'Bronchoscopy', C. 'Continuous humidified oxygen', D. 'Nocturnal continuous positive airway pressure (CPAP)'

=====

Answer Option 1:

Final Answer: C

Answer Option 2:

Final Answer: C

Answer Option 3:

Final Answer: C

Answer Option 4:

Final Answer: C

Answer Option 5:

Final Answer: C

Answer Option 6:

Final Answer: C

Answer Option 7:

Final Answer: C

Answer Option 8:

Final Answer: C

Answer Option 9:

Final Answer: C

Question 68:

'A 32-year-old woman, gravida 2, para 1, at 8 weeks' gestation comes to the physician for her first prenatal visit. She delivered her first child spontaneously at 34 weeks' gestation; pregnancy was complicated by iron deficiency anemia. She has no other history of serious illness. Her blood pressure is 100/70 mm Hg. Examination shows no abnormalities. Ultrasonography shows a dichorionic-diamniotic twin intrauterine pregnancy consistent in size with an 8-week gestation. This patient is at increased risk for which of the following complications?', A. 'Abruptio placentae', B. 'Fetal chromosome abnormality', C. 'Hyperthyroidism', D. 'Preterm labor and delivery'

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Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

=====

Answer Option 4:

Final Answer: D

=====

Answer Option 5:

Final Answer: D

=====

Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 69:

'A 46-year-old woman with active ankylosing spondylitis comes to the office for a follow-up examination. The use of various conventional nonsteroidal anti-inflammatory drugs has been ineffective.

Sulfasalazine treatment also has not resulted in improvement. The most appropriate next step in treatment is administration of a drug that inhibits which of the following?', A. 'Cytotoxic T-lymphocyte antigen 4', B. 'Epidermal growth factor', C. 'Interleukin-1 (IL-1)', D. 'Tumor necrosis factor α '

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 70:

'A 50-year-old female presents to the office with the complaints of chronic achiness, stiffness, and fatigue. Physical examination reveals multiple bilateral tender points in the trapezius, gluteal, and suboccipital muscle groups. Radiograph findings and laboratory study results are normal. The most likely diagnosis is', A. 'ankylosing spondylitis', B. 'fibromyalgia', C. 'myofascial pain syndrome', D. 'osteoarthritis'

=====

Answer Option 1:

Final Answer: B

Answer Option 2:

Final Answer: B

Answer Option 3:

Final Answer: B

Answer Option 4:

Final Answer: B

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: B

Answer Option 7:

Final Answer: B

Answer Option 8:

Final Answer: B

Answer Option 9:

Final Answer: B

Question 71:

'An 18-year-old man is brought to the emergency department 10 minutes after he sustained a stab wound to his chest. On arrival, he is unresponsive to painful stimuli. His pulse is 130/min, respirations are 8/min and shallow, and palpable systolic blood pressure is 60 mm Hg. He is intubated and mechanically ventilated, and infusion of 0.9% saline is begun. After 5 minutes, his pulse is 130/min, and blood pressure is 70/40 mm Hg. Examination shows a 2-cm wound at the left sixth intercostal space at the midclavicular line. There is jugular venous distention. Breath sounds are normal. The trachea is at the midline. Heart sounds are not audible. Which of the following is the most appropriate next step in management?', A. 'Chest x-ray', B. 'Echocardiography', C. 'Bronchoscopy', D. 'Pericardiocentesis'

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Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: D

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Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 72:

'A 55-year-old male presents to the emergency department with a 2-day history of severe epigastric pain and vomiting. Past medical history is negative for any similar episodes. He does not take any medications. He smokes cigarettes, has a 40 pack-year history, and consumes more than 8 cans of beer per day. Abdominal examination reveals epigastric tenderness. Laboratory studies reveal a serum amylase level of 467 U/L (reference range: 28-100 U/L) and a γ -glutamyltransferase level of 212 U/L (reference range: < 55 U/L). Referred pain in this patient is transmitted to the spinal cord by which of the following nerves?', A. 'anterior rami of T1-T5', B. 'anterior rami of T6-T10', C. 'anterior rami of T11-T12', D. 'posterior rami of T1-T5'

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Answer Option 1:

Final Answer: B

=====

Answer Option 2:

Final Answer: B

=====

Answer Option 3:

Final Answer: B

=====

Answer Option 4:

Final Answer: B

=====

Answer Option 5:

Final Answer: B

=====

Answer Option 6:

Final Answer: B

=====

Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 73:

'A 31-year-old woman with type 2 diabetes mellitus comes to the physician because of an oozing, foul-smelling wound on her foot for 2 days. Physical examination shows a 4-cm, necrotizing wound with a purplish black discoloration over the heel. Crepitant bullae producing profuse amounts of serous drainage are seen. A Gram stain of a tissue biopsy specimen shows gram-positive rods. The causal organism most likely produces which of the following virulence factors?', A. 'Fimbriae', B. 'Pneumolysin', C. 'Polysaccharide capsule', D. 'α-Toxin'

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Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: D

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Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 74:

'A 23-year-old woman with bone marrow failure is treated with a large dose of rabbit antithymocyte globulin. Ten days later, she develops fever, lymphadenopathy, arthralgias, and erythema on her hands and feet. Which of the following is the most likely cause of these symptoms?', A. 'Cytokine secretion by natural killer cells', B. 'Eosinophil degranulation', C. 'Immune complex deposition in tissues', D. 'Polyclonal T-lymphocyte activation'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: C

Answer Option 9:

Final Answer: C

Question 75:

'A 68-year-old man is in the hospital because he requires mechanical ventilation for an exacerbation of chronic obstructive pulmonary disease. On the second day after admission he developed a pneumothorax on the right side that required tube thoracostomy. An air leak is noted for the next 24 hours, which now has stopped. However, the patient has become restless and combative. Breath sounds are diminished in the right side of the chest and the patient now has tachycardia. Blood pressure is 130/80 mm Hg. After ordering a STAT portable x-ray of the chest, which of the following is the most appropriate step?', A. 'Administer β -blocking medications', B. 'Administer alprazolam', C. 'Remove the patient from the ventilator and ventilate him with a bag-valve mask', D. 'Reposition the chest tube'

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Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: D

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Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: C

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Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 76:

'A 45-year-old woman with systemic sclerosis (scleroderma) comes to the physician because of a 3-week history of progressive shortness of breath and nonproductive cough. Her temperature is 36.9°C (98.4°F), pulse is 82/min, respirations are 20/min, and blood pressure is 136/85 mm Hg. Crackles are heard in both lower lung fields. Pulmonary function tests show total lung capacity is 80% of predicted, and diffusing capacity for carbon monoxide, corrected for alveolar volume, is 65% of predicted. Histologic examination of a lung biopsy specimen is most likely to show which of the following findings?', A. 'Diffuse interstitial fibrosis', B. 'Intra-alveolar exudates', C. 'Multiple thromboemboli', D. 'Necrotizing vasculitis'

=====

Answer Option 1:

Final Answer: A

Answer Option 2:

Final Answer: A

Answer Option 3:

Final Answer: A

Answer Option 4:

Final Answer: A

Answer Option 5:

Final Answer: A

Answer Option 6:

Final Answer: A

Answer Option 7:

Final Answer: A

Answer Option 8:

Final Answer: A

Answer Option 9:

Final Answer: A

Question 77:

'An epidemic involving 10 individuals of all ages occurs in a migrant worker camp. None of the patients has had any form of immunization. Most cases present with fever, chills, tachypnea, sore throat, swollen glands, and severe malaise. One patient dies from respiratory complications, and another dies from myocardial involvement. A gram-positive rod is isolated from the respiratory tracts of 7 of the patients. The most likely cause of the outbreak is', A. 'Bordetella pertussis', B. 'Corynebacterium diphtheriae', C. 'Epstein-Barr virus', D. 'Haemophilus influenzae'

=====

Answer Option 1:

Final Answer: B

=====

Answer Option 2:

Final Answer: B

=====

Answer Option 3:

Final Answer: B

=====

Answer Option 4:

Final Answer: B

=====

Answer Option 5:

Final Answer: B

=====

Answer Option 6:

Final Answer: B

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Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 78:

'A 29-year-old male presents to the office with the complaints of a pounding heart, poor sleep, and a generalized feeling of restlessness. He relocated 2 months ago to take a promotion and has found himself unable to concentrate on his new duties. He worries about his ability to adapt to his increase in responsibility at work and states that he has called in sick 3 days within the past 2 weeks. The most likely diagnosis is', A. 'adjustment disorder with anxious mood', B. 'generalized anxiety disorder', C. 'major depressive disorder, single episode, moderate', D. 'obsessive-compulsive personality disorder'

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Answer Option 1:

Final Answer: B

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Answer Option 2:

Final Answer: B

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Answer Option 3:

Final Answer: B

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Answer Option 4:

Final Answer: B

=====

Answer Option 5:

Final Answer: B

=====

Answer Option 6:

Final Answer: B

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Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 79:

'A new blood test to detect prostate cancer is evaluated in 300 male volunteers. A needle biopsy of the prostate gland is done on all men with serum prostate-specific antigen concentrations greater than 5 ng/mL ($N < 4$). One hundred men undergo biopsy procedures; 90 are found to have prostate cancer, and five are found to have chronic prostatitis. Which of the following is necessary to calculate the sensitivity of this test?', A. 'Incidence of chronic prostatitis in the general population', B. 'Number of men with test results greater than 5 ng/mL and a normal biopsy specimen', C. 'Prevalence of chronic prostatitis in the general population', D. 'Prostate biopsies of men with test results equal to or below 5 ng/mL'

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Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: B

=====

Answer Option 5:

Final Answer: D

=====

Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 80:

'A 55-year-old man who is a business executive is admitted to the hospital for evaluation of abdominal pain. He is polite to the physician but berates the nurses and other staff. The patient's wife and two of his three adult children arrive for a visit. The patient says with disgust that the missing child is and always has been worthless. Which of the following is the most likely explanation for this patient's behavior?', A. 'Projection', B. 'Projective identification', C. 'Reaction formation', D. 'Splitting'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 81:

'A previously healthy 37-year-old woman comes to the physician because of a 3-month history of episodes of severe anxiety, shortness of breath, palpitations, and numbness in her hands and feet. Her vital signs are within normal limits. Physical examination shows no abnormalities. Thyroid function studies and an ECG show no abnormalities. Which of the following is the most appropriate pharmacotherapy?',

A. 'Lithium carbonate', B. 'Methylphenidate', C. 'Olanzapine', D. 'Paroxetine'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 82:

'An investigator is studying the incidence of the common cold among medical students at various time points during the school year. Results show an increased incidence of upper respiratory tract infections among these students during finals week. It is hypothesized that the stress of studying for examinations adversely affects the immune system, making the students more susceptible to infection. Which of the following laboratory findings in these students during examination week is most likely to support this hypothesis?', A. 'Decreased AM serum cortisol concentration', B. 'Decreased macrophage activity', C.

'Increased basophil count', D. 'Increased lymphocyte count'

=====

Answer Option 1:

Final Answer: B

Answer Option 2:

Final Answer: B

Answer Option 3:

Final Answer: B

Answer Option 4:

Final Answer: C

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: B

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: C

Question 83:

'A 30-year-old nulliparous female presents to the office with the complaint of mood changes. She says that for the past several months she has been anxious, hyperactive, and unable to sleep 3 to 4 days prior to the onset of menses. She further reports that on the day her menses begins she becomes acutely depressed, anorectic, irritable, and lethargic. She has no psychiatric history. Physical examination findings are normal. She and her husband have been trying to conceive for over 2 years. History reveals a tuboplasty approximately 1 year ago to correct a closed fallopian tube. The most likely diagnosis is',
A. 'adjustment disorder with depressed mood', B. 'bipolar I disorder, mixed', C. 'cyclothymic personality', D. 'generalized anxiety disorder'

=====

Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: A

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Answer Option 3:

Final Answer: B

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Answer Option 4:

Final Answer: A

=====

Answer Option 5:

Final Answer: C

=====

Answer Option 6:

Final Answer: C

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Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 84:

'A 19-year-old college student comes to the physician because of vaginal irritation and pain with urination for 5 days. Two weeks ago, she had streptococcal pharyngitis treated with amoxicillin. She has been sexually active with two partners over the past year; she uses condoms for contraception. Her last menstrual period was 1 week ago. Her temperature is 37.2°C (99°F), and blood pressure is 90/60 mm Hg. Pelvic examination shows erythema of the vulva and vagina and a thick white vaginal discharge. The pH of the discharge is 4. Which of the following is the most likely cause of these findings?', A. 'Bacterial vaginosis', B. 'Candidiasis', C. 'Chlamydia trachomatis infection', D. 'Escherichia coli infection'

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Answer Option 1:

Final Answer: B

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Answer Option 2:

Final Answer: B

=====

Answer Option 3:

Final Answer: B

=====

Answer Option 4:

Final Answer: B

=====

Answer Option 5:

Final Answer: B

=====

Answer Option 6:

Final Answer: B

=====

Answer Option 7:

Final Answer: B

=====

Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 85:

'A sexually active 23-year-old man with multiple sex partners has dysuria and a yellow urethral exudate. Gram stain of the exudate shows numerous neutrophils, many that contain intracellular gram-negative diplococci. He has had three similar episodes of urethritis over the past 2 years. Which of the following properties of the infecting organism best explains the reinfection?', A. 'Antigenic variation', B. 'Catalase', C. 'Inhibition of B-lymphocyte function', D. 'Inhibition of T-lymphocyte function'

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Answer Option 1:

Final Answer: A

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Answer Option 2:

Final Answer: A

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Answer Option 3:

Final Answer: A

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Answer Option 4:

Final Answer: A

=====

Answer Option 5:

Final Answer: A

=====

Answer Option 6:

Final Answer: A

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Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: A

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Question 86:

'A 54-year-old woman comes to the emergency department because of severe jaw pain since undergoing a painful dental procedure 1 day ago. The patient was prescribed codeine after the procedure and instructed to take the medication every 4 hours, but she has continued pain despite adherence to this analgesic regimen. Other members of her family also have experienced poor pain control with codeine.

Which of the following is the most likely explanation for this therapeutic failure?', A. 'Decreased absorption of codeine', B. 'Decreased metabolism of codeine to morphine', C. 'Deficiency of κ receptors', D.

'Increased plasma protein-binding of codeine'

=====

Answer Option 1:

Final Answer: B

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Answer Option 2:

Final Answer: B

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Answer Option 3:

Final Answer: B

=====

Answer Option 4:

Final Answer: B

=====

Answer Option 5:

Final Answer: B

=====

Answer Option 6:

Final Answer: B

=====

Answer Option 7:

Final Answer: B

=====

Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 87:

'A healthy 4-year-old girl is brought for a well-child examination. A grade 2/6 systolic ejection murmur is heard along the upper left sternal border. S2 is widely split and does not vary with respiration. A soft mid-diastolic murmur is heard along the lower left sternal border. Examination shows no other abnormalities. Which of the following is the most likely diagnosis?', A. 'Aortic stenosis', B. 'Atrial septal defect', C. 'Coarctation of the aorta', D. 'Mitral valve prolapse'

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Answer Option 1:

Final Answer: B

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Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: C

=====

Answer Option 4:

Final Answer: B

=====

Answer Option 5:

Final Answer: C

=====

Answer Option 6:

Final Answer: B

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Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 88:

'A 75-year-old woman comes to the office because she has band-like, burning pain in her right upper abdomen extending from the epigastrium around to the midline of the back. Physical examination discloses no abdominal tenderness to palpation. Findings on ultrasonography of the gallbladder are normal. Serum amylase concentration is within the reference range. Which of the following is the most likely diagnosis?', A. 'Acalculous cholecystitis', B. 'Chronic relapsing pancreatitis', C. 'Diverticulitis of the cecum', D. 'Herpes zoster'

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Answer Option 1:

Final Answer: B

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Answer Option 2:

Final Answer: B

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Answer Option 3:

Final Answer: B

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Answer Option 4:

Final Answer: B

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Answer Option 5:

Final Answer: B

=====

Answer Option 6:

Final Answer: B

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Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 89:

'A 36-year-old man comes to the office because of headaches that began 2 weeks ago. The headaches are moderately severe, are present when he awakens in the morning, and are relieved with over-the-counter analgesics. He has no prior history of headaches. He tells you he was promoted to an upper-level managerial position in his accounting firm about 8 months ago, which necessitated relocating. Physical examination now discloses no abnormalities except for blurring of the optic disc margins bilaterally. Which of the following is the most appropriate next step?', A. 'Begin a trial of a β -blocking medication', B. 'Order CT scan of the head', C. 'Order EEG', D. 'Refer him for consultation with a neurologist'

=====

Answer Option 1:

Final Answer: B

Answer Option 2:

Final Answer: B

Answer Option 3:

Final Answer: B

Answer Option 4:

Final Answer: B

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: B

Answer Option 7:

Final Answer: B

Answer Option 8:

Final Answer: B

Answer Option 9:

Final Answer: B

Question 90:

'A 15-year-old girl comes to the physician because of a 3-month history of acne. Breast and pubic hair development began at the age of 12 years. Menarche occurred at the age of 14 years. Physical examination shows scattered open and closed comedones over the cheeks and forehead. Breast and pubic hair development are Tanner stage 5. Which of the following is the most likely underlying cause of this patient's acne?', A. 'Increased estrogen stimulation of the sebaceous glands', B. 'Increased responsiveness of the sebaceous glands to follicle-stimulating hormone', C. 'Increased sympathetic stimulation to the sebaceous glands', D. 'Stimulation of the sebaceous glands by androgens'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 91:

'A 19-year-old Asian female college student comes to the university health center because of a 1-week history of nasal stuffiness, occasional clear rhinorrhea, and a mild sore throat. Two days ago, she began to feel hot, but she has not taken her temperature. Medical history is unremarkable and her only medication is an oral contraceptive. She has no history of allergies. She does not smoke cigarettes. BMI is 22 kg/m². Vital signs are temperature 38.1°C (100.6°F), pulse 88/min, respirations 16/min, and blood pressure 116/74 mm Hg. Physical examination discloses tenderness over the left maxillary sinus without purulent drainage. There is clear fluid behind the left tympanic membrane, enlarged tonsils bilaterally, and pain with tapping of the left upper incisors. Left frontal sinus does not transilluminate. Cardiopulmonary examination discloses no abnormalities. Which of the following is the most likely underlying mechanism of this patient's sinusitis?', A. 'Eustachian tube dysfunction', B. 'Mucosal edema', C. 'Nasal polyps', D. 'Oral contraceptive use'

=====

Answer Option 1:

Final Answer: B

=====

Answer Option 2:

Final Answer: B

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Answer Option 3:

Final Answer: B

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Answer Option 4:

Final Answer: B

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Answer Option 5:

Final Answer: B

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Answer Option 6:

Final Answer: B

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Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 92:

'A randomized controlled trial is conducted to assess the effectiveness of a new combination-drug antihypertensive therapy (Drug X) compared with a standard antihypertensive single-drug therapy. Study participants include 140 women (70%) and 60 men (30%) ages 30 to 60 years, with baseline blood pressure measurements of 150/95 mm Hg or higher. The investigators defined antihypertensive therapy as effective if the treatment resulted in a blood pressure measurement below 140/90 mm Hg. When designing the study, the investigators set the probability of wrongly finding that Drug X is more effective than the standard therapy as 1%; they set the probability of wrongly finding that the effectiveness of the two drugs is the same as 10%. Which of the following is the most accurate estimate of the statistical power in this study?', A. '1%', B. '10%', C. '40%', D. '90%'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: C

Answer Option 4:

Final Answer: C

Answer Option 5:

Final Answer: C

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: C

Answer Option 9:

Final Answer: D

Question 93:

'A 62-year-old man comes to the physician because of a 2-month history of progressive fatigue and ankle swelling. He had an anterior myocardial infarction 3 years ago and has had shortness of breath with mild exertion since then. Current medications include labetalol and daily aspirin. He has smoked one-half pack of cigarettes daily for 30 years. His pulse is 100/min and regular, respirations are 20/min, and blood pressure is 130/75 mm Hg. There are jugular venous pulsations 5 cm above the sternal angle. Crackles are heard at both lung bases. Cardiac examination shows an S3 gallop. There is edema from the midtibia to the ankle bilaterally. Further evaluation of this patient is most likely to show which of the following findings?', A. 'Decreased pulmonary capillary wedge pressure', B. 'Impaired contractility of the left ventricle', C. 'Prolapse of the mitral valve', D. 'Thrombosis of the superior vena cava'

=====

Answer Option 1:

Final Answer: B

Answer Option 2:

Final Answer: B

Answer Option 3:

Final Answer: B

Answer Option 4:

Final Answer: B

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: B

Answer Option 7:

Final Answer: B

Answer Option 8:

Final Answer: B

Answer Option 9:

Final Answer: B

Question 94:

'A 47-year-old woman comes to the physician because of persistent nonproductive cough for 6 weeks. She has not had fever or weight loss. She has hypertension treated with enalapril for the past 3 months. She does not smoke. There is no history of lung disease. She weighs 54 kg (120 lb) and is 163 cm (64 in) tall. Her temperature is 37°C (98.6°F), blood pressure is 130/80 mm Hg, pulse is 70/min, and respirations are 12/min. Examination and an x-ray of the chest show no abnormalities. Which of the following is the most likely mechanism of this patient's cough?', A. 'Decreased plasma renin activity', B. 'Decreased serum angiotensin II concentrations', C. 'Increased serum angiotensin I concentrations', D. 'Increased serum bradykinin concentrations'

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Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 95:

'A 6-year-old boy is brought to the emergency department 2 hours after injuring his arm when he fell out of a tree. His mother says that he is extremely active and likes to climb. During the past year, he fractured his right tibia after falling off a trampoline and sustained a concussion after falling off his bicycle. She says that his teachers reprimand him frequently for running wildly in the classroom, talking excessively, and getting out of his seat; he often forgets to turn in his homework. His parents are currently divorcing. His father has a history of illicit drug use. The patient is at the 50th percentile for height and weight. His pulse is 80/min, and blood pressure is 100/80 mm Hg. Physical examination shows a dislocated left shoulder, healing abrasions over the elbows, and ecchymoses in various stages of healing over the knees. Mental status examination shows a neutral affect. He says that he likes to run and climb trees. Which of the following is the most likely explanation for these findings?', A.

'Attention-deficit/hyperactivity disorder', B. 'Conduct disorder', C. 'Learning disorder', D. 'Seizure disorder'

=====

Answer Option 1:

Final Answer: A

Answer Option 2:

Final Answer: A

Answer Option 3:

Final Answer: A

Answer Option 4:

Final Answer: A

Answer Option 5:

Final Answer: A

Answer Option 6:

Final Answer: A

Answer Option 7:

Final Answer: A

Answer Option 8:

Final Answer: A

Answer Option 9:

Final Answer: A

Question 96:

'A 49-year-old man, who is recovering in the hospital 2 days after uncomplicated left femoral-popliteal bypass grafting for claudication, has now developed increasing pain in his left foot. Until now, the patient's postoperative course had been unremarkable and he has been treated with low-dose morphine for pain control. Medical history is remarkable for type 2 diabetes mellitus controlled with metformin and diet. Vital signs now are temperature 36.8°C (98.2°F), pulse 80/min and regular, respirations 20/min, and blood pressure 150/92 mm Hg. The surgical incision appears clean and well approximated without abnormal erythema or swelling. The left lower extremity and foot appear pale. Palpation of the left lower extremity discloses a strong femoral pulse, a weak popliteal pulse, and a cool, pulseless foot. Which of the following is the most appropriate management?', A. 'Bedside compartment pressure measurements', B. 'Doppler ultrasonography of the left lower extremity', C. 'Intra-arterial tissue plasminogen activator (tPA) therapy', D. 'Intraoperative angiography'

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Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: A

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Answer Option 4:

Final Answer: D

=====

Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: D

=====

Answer Option 7:

Final Answer: A

=====

Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: D

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Question 97:

'A 9-year-old boy is brought to the physician because of progressive weakness and a purple-red discoloration over his cheeks and upper eyelids over the past 8 weeks. His symptoms began shortly after a camping trip, and he now is unable to climb stairs, walk long distances, comb his hair, or dress himself. His mother says that she was careful to apply his sunscreen on the trip and can recall no tick bites or exposure to poisonous plants. His only medication is a topical corticosteroid for several dry, scaly patches of the skin. He appears weak and lethargic. He is at the 75th percentile for height and 25th percentile for weight; he has had no change in his weight since his last examination 9 months ago. His temperature is 37.7°C (99.8°F), blood pressure is 110/68 mm Hg, pulse is 105/min, and respirations are 28/min. Examination of the skin shows a purple-red discoloration over the cheeks and eyelids, periorbital edema, erythematous plaques and scales over the elbows and knees, and flat-topped red papules over all knuckles. There is generalized weakness and atrophy of the proximal muscles. Which of the following is the most likely diagnosis?', A. 'Dermatomyositis', B. 'Duchenne's muscular dystrophy', C. 'Eczema', D. 'Lyme disease'

=====

Answer Option 1:

Final Answer: A

Answer Option 2:

Final Answer: A

Answer Option 3:

Final Answer: A

Answer Option 4:

Final Answer: A

Answer Option 5:

Final Answer: A

Answer Option 6:

Final Answer: A

Answer Option 7:

Final Answer: A

Answer Option 8:

Final Answer: A

Answer Option 9:

Final Answer: A

Question 98:

'A sexually active 20-year-old woman has had fever, chills, malaise, and pain of the vulva for 2 days. Examination shows a vulvar pustule that has ulcerated and formed multiple satellite lesions. Nodes are palpated in the inguinal and femoral areas. A smear of fluid from the lesions establishes the diagnosis. Which of the following is the most likely causal organism?', A. 'Chlamydia trachomatis', B. 'Haemophilus ducreyi', C. 'Neisseria gonorrhoeae', D. 'Streptococcus pyogenes (group A)'

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Answer Option 1:

Final Answer: B

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Answer Option 2:

Final Answer: B

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Answer Option 3:

Final Answer: B

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Answer Option 4:

Final Answer: B

=====

Answer Option 5:

Final Answer: B

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Answer Option 6:

Final Answer: B

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Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 99:

'A 64-year-old man with non-Hodgkin lymphoma comes to the physician because of a 3-week history of progressive numbness in his hands and feet and weakness in his legs when he stands. He received his third course of chemotherapy 4 weeks ago. Physical examination shows areflexia. Which of the following drugs is the most likely cause of these adverse effects?', A. 'Doxorubicin', B. 'Fluorouracil', C. 'Methotrexate', D. 'Vincristine'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 100:

'A 52-year-old man comes to the physician with his wife because of a 1-year history of excessive daytime sleepiness. He does not think the symptoms are problematic, but his wife is concerned because he sometimes falls asleep on the sofa early in the evening when guests are present. He also once fell asleep while driving at night and drove off the road, narrowly avoiding injury. His wife says that he has always snored loudly, and over the past year, he has had episodes of choking or gasping for breath while sleeping. He is 178 cm (5 ft 10 in) tall and weighs 105 kg (231 lb); BMI is 33 kg/m². His pulse is 76/min, respirations are 14/min, and blood pressure is 150/76 mm Hg. Physical and neurologic examinations show no other abnormalities. Which of the following is most likely to confirm the diagnosis?', A. '24-Hour ambulatory ECG monitoring', B. 'Multiple sleep latency test', C. 'Polysomnography', D. 'CT scan of the head'

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Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: C

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Answer Option 4:

Final Answer: C

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Answer Option 5:

Final Answer: C

=====

Answer Option 6:

Final Answer: C

=====

Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 101:

'A 47-year-old man is brought to the emergency department 2 hours after the sudden onset of shortness of breath, severe chest pain, and sweating. He has no history of similar symptoms. He has hypertension treated with hydrochlorothiazide. He has smoked one pack of cigarettes daily for 30 years. His pulse is 110/min, respirations are 24/min, and blood pressure is 110/50 mm Hg. A grade 3/6, diastolic blowing murmur is heard over the left sternal border and radiates to the right sternal border. Femoral pulses are decreased bilaterally. An ECG shows left ventricular hypertrophy. Which of the following is the most likely diagnosis?', A. 'Acute myocardial infarction', B. 'Aortic dissection', C. 'Esophageal rupture', D. 'Mitral valve prolapse'

=====

Answer Option 1:

Final Answer: B

Answer Option 2:

Final Answer: B

Answer Option 3:

Final Answer: B

Answer Option 4:

Final Answer: B

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: B

Answer Option 7:

Final Answer: B

Answer Option 8:

Final Answer: B

Answer Option 9:

Final Answer: B

Question 102:

'A 67-year-old woman comes to the physician for her first influenza virus vaccination. She has a history of untreated hypertension. Her blood pressure is 160/100 mm Hg, and pulse is 100/min. Shortly after administration of the influenza virus vaccine, she develops shortness of breath, hives, and angioedema. Which of the following is most likely to have prevented this reaction?', A. 'Inquiry about an egg allergy', B. 'Heterophile agglutination test', C. 'Skin test with histamine reagent', D. ' β -Adrenergic blocking agent therapy'

=====

Answer Option 1:

Final Answer: A

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Answer Option 2:

Final Answer: A

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Answer Option 3:

Final Answer: A

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Answer Option 4:

Final Answer: A

=====

Answer Option 5:

Final Answer: A

=====

Answer Option 6:

Final Answer: A

=====

Answer Option 7:

Final Answer: A

=====

Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: A

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Question 103:

'A 42-year-old woman with a history of multiple sclerosis comes to the office because she had a sudden loss of vision in the right eye. She has no history of diplopia. External ocular movements are normal but fundoscopic examination shows pallor of the optic disk. This patient's condition is most likely a result of demyelination of which of the following?', A. 'Medial longitudinal fasciculus', B. 'Oculomotor nerve', C. 'Optic nerve', D. 'Trigeminal nerve'

=====

Answer Option 1:

Final Answer: C

Answer Option 2:

Final Answer: C

Answer Option 3:

Final Answer: C

Answer Option 4:

Final Answer: C

Answer Option 5:

Final Answer: C

Answer Option 6:

Final Answer: C

Answer Option 7:

Final Answer: C

Answer Option 8:

Final Answer: C

Answer Option 9:

Final Answer: C

Question 104:

'A previously healthy 17-year-old girl comes to the emergency department because of a 5-day history of progressive lower abdominal pain, fever, and malodorous vaginal discharge. Menarche was at the age of 12 years, and her last menstrual period was 2 weeks ago. She is sexually active with one male partner and uses a combination contraceptive patch. Her temperature is 37.8°C (100°F), pulse is 90/min, respirations are 22/min, and blood pressure is 110/70 mm Hg. Abdominal examination shows severe lower quadrant tenderness bilaterally. Pelvic examination shows a purulent cervical discharge, cervical motion tenderness, and bilateral adnexal tenderness. Her hemoglobin concentration is 10.5 g/dL, leukocyte count is 13,000/mm³, and platelet count is 345,000/mm³. A urine pregnancy test is negative.

Which of the following is the most appropriate pharmacotherapy?', A. 'Oral azithromycin', B. 'Vaginal clindamycin', C. 'Intravenous penicillin and vancomycin', D. 'Intramuscular ceftriaxone and oral doxycycline'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 105:

'A 26-year-old woman is brought to the emergency department because of an 8-hour history of severe back and abdominal pain and mild but persistent vaginal bleeding. Ultrasonography of the abdomen shows a 2-cm ectopic pregnancy in the ampulla. The ampulla has ruptured into the surrounding tissue. Fluid from this rupture will most likely be found in which of the following locations?', A. 'Lesser peritoneal cavity', B. 'Mesometrium', C. 'Pouch of Douglas', D. 'Uterine cavity'

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Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: A

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Answer Option 3:

Final Answer: A

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Answer Option 4:

Final Answer: A

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Answer Option 5:

Final Answer: A

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Answer Option 6:

Final Answer: A

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Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: C

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Question 106:

'A 36-year-old female advertising executive is referred to the office for evaluation of a fasting serum total cholesterol concentration of 249 mg/dL. She has a family history of early coronary artery disease (CAD) and her father died suddenly at age 46 years of myocardial infarction. She tells you that she has never had chest pain. She is not currently sexually active and has no children. She claims that her high-stress lifestyle makes it impossible for her to eat regular meals or to follow a special diet, and she usually eats fast food. She exercises two or three times a week for about 20 minutes on a treadmill. She has smoked one pack of cigarettes daily for the past 20 years. Her only medication is acetaminophen for tension headaches. She is 165 cm (5 ft 5 in) tall and weighs 76 kg (167 lb); BMI is 28 kg/m². Vital signs today are normal. Physical examination discloses no abnormalities except for mild obesity. Institution of which of the following is the most essential step in the prevention of CAD in this patient?', A. 'Biofeedback-based stress reduction program', B. 'More rigorous and consistent exercise program', C. 'Smoking cessation program', D. 'Strict low-calorie diet'

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Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: C

=====

Answer Option 4:

Final Answer: C

=====

Answer Option 5:

Final Answer: C

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Answer Option 6:

Final Answer: C

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Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 107:

'A 39-year-old woman, gravida 2, para 2, comes to the community-based health center because of a 6-month history of a copious, foul-smelling vaginal discharge. She also reports spotting that began 6 months ago and has progressed to heavy bleeding during the past 3 weeks. Medical history is significant for an abnormal Pap smear in her 20s; her most recent Pap smear was done 12 years ago during her second pregnancy, and she recalls the results as being normal. She takes no medications. The patient was married for 18 years; her husband died 4 years ago and had undergone vasectomy after the birth of their last child. The patient has not had any new sexual partners since her husband's death. BMI is 32 kg/m². Vital signs are temperature 37.2°C (99.0°F), pulse 90/min, respirations 14/min, and blood pressure 155/96 mm Hg. Speculum examination discloses normal vaginal mucosa. The cervix is friable with a 1-cm exophytic mass lateral to the cervical os at the nine o'clock position. Which of the following is the most critical factor in formulating a management plan for this patient?', A. 'Hypertension', B. 'Obesity', C. 'Patient age', D. 'Stage of disease'

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Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: D

=====

Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 108:

'A 43-year-old female presents to the office with a 2-month history of heat intolerance, weight loss, tachycardia, and diffuse goiter. Examination reveals exophthalmos, inflammation of the periorbital tissue and conjunctivae, a heart rate of 140/min, and warm, velvety skin. An MRI of the head and orbits will most likely reveal', A. 'calcification of the orbit', B. 'diffuse enlargement of the rectus muscles', C. 'dilated ventricles', D. 'lymphoma'

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Answer Option 1:

Final Answer: B

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Answer Option 2:

Final Answer: B

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Answer Option 3:

Final Answer: B

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Answer Option 4:

Final Answer: B

=====

Answer Option 5:

Final Answer: B

=====

Answer Option 6:

Final Answer: B

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Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 109:

'A 64-year-old male presents to the emergency room with a bloody nose that has been dripping out his nares for the past 2 hours. He denies any trauma, recent upper respiratory illness, or history of prior bloody nose. Past medical history is unremarkable, and he takes no medications. He has a blood pressure of 180/90 mmHg. Examination of the nasal passages reveals that the site of the bleeding is on the septal mucosa of the right naris. The most appropriate next step in management includes', A. 'anterior packing', B. 'placing an ice compress over the nose', C. 'catheter balloon tamponade', D. 'pinching the nares together for 5 minutes'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 110:

'A 55-year-old man comes to the physician because of a 2-week history of recurrent, widespread blister formation. Physical examination shows lesions that are most numerous in the flexural areas including the axillae and groin. The blisters do not break easily, and there are no oral lesions. These blisters are most likely the result of adhesion failure involving which of the following?', A. 'Basement membrane', B. 'Dermal papillae', C. 'Langerhans cells', D. 'Melanocytes'

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Answer Option 1:

Final Answer: A

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Answer Option 2:

Final Answer: A

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Answer Option 3:

Final Answer: A

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Answer Option 4:

Final Answer: A

=====

Answer Option 5:

Final Answer: A

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Answer Option 6:

Final Answer: A

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Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: A

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Question 111:

'A 4-year-old boy is brought to the physician because of temperatures to 39.4°C (102.9°F) for 8 days. Examination shows anterior cervical lymphadenopathy, nonexudative conjunctivitis bilaterally, a strawberry tongue, an erythematous truncal rash, and edema of the hands and feet. Which of the following is the most appropriate pharmacotherapy to prevent complications of this illness?', A. 'Intravenous immune globulin', B. 'Intravenous penicillin', C. 'Intravenous prednisone', D. 'Oral isoniazid'

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Answer Option 1:

Final Answer: A

=====

Answer Option 2:

Final Answer: A

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Answer Option 3:

Final Answer: A

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Answer Option 4:

Final Answer: A

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Answer Option 5:

Final Answer: A

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Answer Option 6:

Final Answer: A

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Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: A

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Question 112:

'A 40-year-old female secretary comes to the office because of a 2-month history of fatigue, and generalized aching and weakness of the proximal muscles of all four extremities. The patient initially noticed the weakness only while she was getting in and out of her car, but during the past 2 weeks, the weakness has progressed, so that she now has difficulty combing her hair. Since the symptoms began, she also has had aching of the joints in her hands that has responded partially to ibuprofen. She was adopted and family history is unknown. She has two teenaged children who are well. She appears uncomfortable. She is 170 cm (5 ft 7 in) tall and weighs 68 kg(150 lb); BMI is 24 kg/m². Vital signs are temperature 37.7°C (99.8°F), pulse 90/min, respirations 20/min, and blood pressure 110/70 mm Hg. The patient is alert and fully oriented. Physical examination discloses cracking of the skin of both hands that involves the tips and lateral sides of several fingers. The muscles of the upper arms and legs are somewhat tender to pressure. Results of serum laboratory studies show a creatine kinase concentration of 600 U/L and a lactate dehydrogenase concentration of 800 U/L. Results of complete blood count are within the reference ranges. Which of the following is the most likely diagnosis?', A. 'Fibromyalgia', B. 'Myasthenia gravis', C. 'Polymyositis', D. 'Scleroderma'

=====

Answer Option 1:

Final Answer: C

Answer Option 2:

Final Answer: C

Answer Option 3:

Final Answer: C

Answer Option 4:

Final Answer: C

Answer Option 5:

Final Answer: C

Answer Option 6:

Final Answer: C

Answer Option 7:

Final Answer: C

Answer Option 8:

Final Answer: C

Answer Option 9:

Final Answer: C

Question 113:

'A 16-year-old male is brought to the emergency department with sudden-onset swelling of the right knee. He denies any trauma. Past medical history reveals cystic fibrosis. Examination of the knee reveals fluctuance on palpation of the joint but no increased warmth; mild restriction in range of motion due to the swelling is also noted. Numerous bruises are noted in various stages of resolution. Further history reveals easy bruising and bleeding from the gums over the past month. The most likely explanation for these findings is', A. 'acquired factor VIII deficiency', B. 'diffuse intravascular coagulation secondary to infection', C. 'hypocomplementemia', D. 'malabsorption of vitamins A, D, E, and K'

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Answer Option 1:

Final Answer: A

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Answer Option 2:

Final Answer: A

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Answer Option 3:

Final Answer: A

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Answer Option 4:

Final Answer: A

=====

Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: D

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Question 114:

'A 65-year-old man who is quadriplegic as a result of multiple sclerosis is hospitalized for treatment of left lower lobe pneumonia. His temperature is 38.1°C (100.5°F), pulse is 95/min, respirations are 12/min, and blood pressure is 120/80 mm Hg. He appears malnourished. Rhonchi are heard at the left lower lobe of the lung on auscultation. Examination of the heart, lymph nodes, abdomen, and extremities shows no abnormalities. There is a 1-cm area of erythema over the sacrum with intact skin and no induration. Neurologic examination shows quadriparesis. Test of the stool for occult blood is negative. Which of the following is the most effective intervention for this patient's skin lesion?', A. 'Frequent turning', B. 'Use of wet to dry dressings', C. 'Whirlpool therapy', D. 'Broad-spectrum antibiotic therapy'

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Answer Option 1:

Final Answer: A

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Answer Option 2:

Final Answer: A

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Answer Option 3:

Final Answer: A

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Answer Option 4:

Final Answer: A

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Answer Option 5:

Final Answer: A

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Answer Option 6:

Final Answer: A

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Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: A

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Question 115:

'A 25-year-old woman who is 19 weeks pregnant comes to the office for a prenatal examination. Her father had classic hemophilia. A karyotype obtained from an amniotic fluid sample of the patient shows that the fetus is XY. Which of the following should you tell the patient regarding her infant?', A. 'The infant will neither have hemophilia nor be a carrier', B. 'The infant has a 50% risk for hemophilia', C. 'The infant has a 50% risk for being a carrier', D. 'The infant has a 75% risk for hemophilia'

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Answer Option 1:

Final Answer: B

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Answer Option 2:

Final Answer: B

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Answer Option 3:

Final Answer: B

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Answer Option 4:

Final Answer: B

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Answer Option 5:

Final Answer: B

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Answer Option 6:

Final Answer: B

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Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 116:

'A 20-year-old female presents to the emergency department with a 2-day history of nausea and vomiting. She says that today she noticed a slight amount of blood in her vomit. She is a pre-med college student and admits to being under a lot of stress as she takes final exams. She also says that she drinks a large amount of coffee daily. Vital signs are normal. Which of the following is the most appropriate initial test to order?', A. 'abdominal flat plate radiography', B. 'amylase level', C. 'complete blood count', D. 'urine pregnancy test'

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Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: C

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Answer Option 4:

Final Answer: C

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Answer Option 5:

Final Answer: C

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Answer Option 6:

Final Answer: C

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Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 117:

'A 60-year-old man had a total thyroidectomy and excision of enlarged left jugular lymph nodes for follicular carcinoma. The operation was uncomplicated. He is receiving intravenous 5% dextrose and 0.45% saline with potassium. Twelve hours after the operation he develops circumoral numbness and paresthesias in his fingertips, and he becomes very anxious. Vital signs are temperature 37.6°C (99.7°F), pulse 90/min, respirations 16/min, and blood pressure 140/90 mm Hg. Physical examination discloses a dry neck dressing and no stridor. Extremities are warm, with brisk capillary refill time. Additional physical examination is most likely to show which of the following?', A. 'Babinski sign present bilaterally', B. 'Chvostek sign', C. 'Deviation of the tongue to the left side', D. 'A drooping left shoulder'

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Answer Option 1:

Final Answer: B

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Answer Option 2:

Final Answer: B

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Answer Option 3:

Final Answer: B

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Answer Option 4:

Final Answer: B

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Answer Option 5:

Final Answer: B

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Answer Option 6:

Final Answer: B

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Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 118:

'In a cohort study of elderly women, the relative risk ratio for hip fractures among those who exercise regularly is 1.2 (95% confidence interval of 1.1 to 1.8). Which of the following is the most appropriate conclusion about the effect of regular exercise on the risk for hip fracture?', A. 'Statistically nonsignificant increase in risk', B. 'Statistically nonsignificant overall decrease in risk', C. 'Statistically significant overall decrease in risk', D. 'Statistically significant overall increase in risk'

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Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: C

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: C

Answer Option 5:

Final Answer: C

Answer Option 6:

Final Answer: C

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: C

Answer Option 9:

Final Answer: C

Question 119:

'A 33-year-old man undergoes a radical thyroidectomy for thyroid cancer. During the operation, moderate hemorrhaging requires ligation of several vessels in the left side of the neck. Postoperatively, serum studies show a calcium concentration of 7.5 mg/dL, albumin concentration of 4 g/dL, and parathyroid hormone concentration of 200 pg/mL. Damage to which of the following vessels caused the findings in this patient?', A. 'Branch of the costocervical trunk', B. 'Branch of the external carotid artery', C. 'Branch of the thyrocervical trunk', D. 'Tributary of the internal jugular vein'

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Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: C

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Answer Option 4:

Final Answer: C

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Answer Option 5:

Final Answer: C

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Answer Option 6:

Final Answer: C

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Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 120:

'A 44-year-old woman with a 10-year history of arthritis comes to the office because she has had increasing pain and stiffness in her hands, wrists, and knees during the past several months. She also has had increasing fatigue for the past month, along with a weight loss of 1.8 to 2.2 kg (4 to 5 lb). She has seen numerous physicians for her arthritis in the past and has tried various medications and devices, including copper bracelets from Mexico given to her by friends. Review of her medical records confirms that the initial diagnosis of rheumatoid arthritis is correct. She says, "I had several drop attacks during the past 3 months." She characterizes these attacks as episodes of weakness and loss of feeling in her legs for several minutes. During one of these episodes, she became incontinent. She currently takes aspirin approximately four times daily and ibuprofen occasionally. Physical examination shows facial plethora and swollen and painful metacarpophalangeal and knee joints, bilaterally. There is moderate ulnar deviation of the fingers. The remainder of the examination discloses no abnormalities. Which of the following is the most likely cause of her "drop attacks?"', A. 'Adrenal insufficiency', B. 'Anxiety', C. 'Atlanto-axial instability', D. 'Cardiac arrhythmia'

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Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: C

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Answer Option 4:

Final Answer: C

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Answer Option 5:

Final Answer: C

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Answer Option 6:

Final Answer: C

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Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 121:

Three days after hospitalization for diabetic ketoacidosis, an 87-year-old woman refuses insulin injections. She says that her medical condition has declined so much that she no longer wishes to go on living; she is nearly blind and will likely require bilateral leg amputations. She reports that she has always been an active person and does not see how her life will be of value anymore. She has no family and most of her friends are sick or deceased. On mental status examination, she is alert and cooperative. She accurately describes her medical history and understands the consequences of refusing insulin. There is no evidence of depression. She dismisses any attempts by the physician to change her mind, saying that the physician is too young to understand her situation. She says, "I know I will die, and this is what I want." Which of the following is the most appropriate next step in management?, A. 'Discharge the patient after she has signed an "against medical advice" form', B. 'Seek a court order to appoint a legal guardian', C. 'Offer insulin but allow the patient to refuse it', D. 'Admit to the psychiatric unit'

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Answer Option 1:

Final Answer: C

Answer Option 2:

Final Answer: B

Answer Option 3:

Final Answer: B

Answer Option 4:

Final Answer: B

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: C

Answer Option 7:

Final Answer: B

Answer Option 8:

Final Answer: C

Answer Option 9:

Final Answer: B

Question 122:

'An 8-year-old boy is brought to the office by his mother because of a 3-day history of fever, sore throat, and itchy eyes. He just returned from a weeklong summer camp that included hiking trips and swimming lessons in the camp-owned swimming pool. He has no history of major medical illness and receives no medications. He appears tired. His temperature is 39.4°C (102.9°F); other vital signs are within normal limits. Physical examination shows conjunctival injection and discharge and oropharyngeal erythema. The public health department reports an outbreak of similar symptoms among the other campers and camp volunteers. Which of the following is the most likely cause of this patient's symptoms?', A. 'Adenovirus', B. 'Cytomegalovirus', C. 'Epstein-Barr virus', D. 'Influenza virus'

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Answer Option 1:

Final Answer: A

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Answer Option 2:

Final Answer: A

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Answer Option 3:

Final Answer: A

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Answer Option 4:

Final Answer: A

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Answer Option 5:

Final Answer: A

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Answer Option 6:

Final Answer: A

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Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: A

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Question 123:

'A 37-year-old man comes to the emergency department because he has felt nauseated and light-headed for the past hour. Medical history is significant for esophageal varices secondary to alcohol-related cirrhosis and ascites treated with spironolactone. He drinks eight to ten alcoholic beverages daily. While you are obtaining additional history, the patient vomits a large volume of bright red blood and becomes difficult to arouse. Vital signs are temperature 36.0°C (96.8°F), pulse 110/min, respirations 12/min, and blood pressure 90/50 mm Hg. Following initiation of intravenous fluids, which of the following is the most appropriate immediate management?', A. 'Arrange for transjugular intrahepatic portal vein shunting', B. 'Begin intravenous vasopressin therapy', C. 'Do endotracheal intubation', D. 'Do upper endoscopy'

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Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: D

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Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: D

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Question 124:

'A 17-year-old boy is brought to the emergency department 30 minutes after being found with a "blank stare" and flat facial expression at a party. His pulse is 72/min, and blood pressure is 104/68 mm Hg. He is sitting upright and appears catatonic. Physical examination shows rigidity. During the examination, he becomes hostile and attempts to assault the physician. This patient most likely ingested which of the following drugs?', A. 'Diazepam', B. 'Methamphetamine', C. 'Oxycodone', D. 'PCP (phencyclidine)'

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Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: D

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Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 125:

'A 24-year-old recent college graduate comes to the office because of a 3-year history of increased frequency of urination and occasional incontinence whenever she travels. She says the urinary symptoms typically begin a few days before she is going to fly and they stop the day after she arrives at her destination. She says she is anxious about flying and even slightly "panicky." She reports having had similar but milder symptoms prior to examinations before graduating. Medical history is otherwise unremarkable. Her only medication is an oral contraceptive. Vital signs are normal. Physical examination discloses no abnormalities. Urinalysis and urine culture are normal. Which of the following is the most appropriate next step?', A. 'Recommend behavioral therapy', B. 'Recommend psychoanalytic psychotherapy', C. 'Recommend that the patient avoid any stressful activities that cause the problem', D. 'Review the patient's sexual history'

=====

Answer Option 1:

Final Answer: A

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Answer Option 2:

Final Answer: A

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Answer Option 3:

Final Answer: A

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Answer Option 4:

Final Answer: A

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Answer Option 5:

Final Answer: A

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Answer Option 6:

Final Answer: A

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Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: A

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Question 126:

'A healthy 2-year-old girl is brought to the office for a routine well-child visit. The child was weaned at 6 months of age and began to walk at 10 months of age. On physical examination, she has mild bowlegs (10-degree genu varum). Which of the following is the most appropriate management to recommend at this time?', A. 'Increased intake of vitamin D', B. 'A special exercise program', C. 'Surgical correction', D. 'No treatment is needed at this time'

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Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 127:

'A 54-year-old man comes to the physician because of episodes of fainting for 3 months. He also has had difficulty performing daily tasks because he is easily fatigued. He had a myocardial infarction 12 years ago. His pulse is 40/min, respirations are 18/min, and blood pressure is 138/85 mm Hg. Physical examination shows evidence of cannon a waves. An ECG shows a P-wave rate of 90/min, and an R-wave rate of 40/min, with no apparent relation between the two. Which of the following is the most likely diagnosis?', A. 'Right bundle branch block', B. 'Second-degree atrioventricular block, type I', C. 'Second-degree atrioventricular block, type II', D. 'Third-degree atrioventricular block'

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Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 128:

'A 22-year-old woman contacts a medical student and asks if he would like to join her for dinner. The student met the woman when he was assigned to her care during her 2-week hospitalization for treatment of major depressive disorder. He has not treated or seen the patient since she was discharged from the hospital. He is attracted to this former patient and would be interested in dating her. Which of the following is the most appropriate action by the medical student regarding this patient's invitation?'; A. 'He can date her because he was a medical student, not a physician, when he contributed to her care', B. 'He can date her because she is no longer his patient', C. 'He can date her, but only after at least 1 year has passed since he treated her', D. 'He cannot date her because she was once his psychiatric patient'

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Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: D

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Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 129:

'A 45-year-old woman has a 2-week history of increased anxiety, abdominal discomfort, irritability, and difficulty concentrating; she was robbed at knifepoint in a parking lot 3 weeks ago. She takes levothyroxine for hypothyroidism and uses an over-the-counter inhaler as needed for exercise-induced asthma. Her blood pressure is 140/80 mm Hg, and pulse is 100/min. Examination shows dry skin and hair. She is cooperative but appears anxious, glancing around quickly when a loud noise is heard outside the office. Leukocyte count is 12,000/mm³, and serum thyroid-stimulating hormone concentration is 5.0 μ U/mL. An ECG shows sinus tachycardia. Which of the following is the most likely diagnosis?', A. 'Acute stress disorder', B. 'Agoraphobia', C. 'Generalized anxiety disorder', D. 'Hypothyroidism'

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Answer Option 1:

Final Answer: A

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Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: A

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Answer Option 4:

Final Answer: A

=====

Answer Option 5:

Final Answer: C

=====

Answer Option 6:

Final Answer: A

=====

Answer Option 7:

Final Answer: A

=====

Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: A

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Question 130:

'A 29-year-old Hispanic woman, gravida 3, para 3, comes to the office because of recurrent low back pain during the past year. Rest and analgesics usually eradicate the pain within 2 weeks. However, the pain seems to recur every 2 to 3 months. Medical history is remarkable for gestational diabetes mellitus during her pregnancies. She takes no medications except for an oral contraceptive. She walks 3 miles daily for exercise and works as a sales representative for a computer software company. She is 165 cm (5 ft 5 in) tall and weighs 100 kg (220 lb); BMI is 37 kg/m². Vital signs are normal, and physical examination discloses no abnormalities. Which of the following is the most appropriate next step?', A. 'Administer an epidural injection of methylprednisolone', B. 'Order MRI of the lumbosacral spine', C. 'Order x-rays of the lumbosacral spine', D. 'Recommend beginning a weight loss program'

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Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: B

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Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 131:

'A 15-year-old girl is brought to the office by her mother because of abdominal pain and constipation for the past several weeks. Her mother says, "She is getting almost all A's in school and she is on the track team." You ask the patient about her diet and she responds, "I'm kind of a picky eater." She requests a laxative to help with her constipation. She is 158 cm (5 ft 2 in) tall and weighs 43 kg (95 lb); BMI is 18 kg/m². Pulse is 65/min. Specific additional history should be obtained regarding which of the following?', A. 'Color, caliber, and frequency of bowel movements', B. 'Exposure to sexually transmitted diseases', C. 'Family history of irritable bowel syndrome', D. 'Menstrual history'

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Answer Option 1:

Final Answer: A

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Answer Option 2:

Final Answer: A

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Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: A

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Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: A

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Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: A

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Question 132:

'A 37-year-old man with type 1 diabetes mellitus is admitted to the hospital because of inadequate control of his glucose concentrations for the past 2 months. Despite his poor control, he demands that he be discharged. He reports that he has had a 3-month history of fatigue, irritability, and feelings of hopelessness. He says that he has been noncompliant with his diabetic regimen, adding, "Sometimes I forget." He has been avoiding his family and friends because he is not in the mood to see them but admits that he is lonely. He did not get out of bed for 2 days, which prompted his wife to call an ambulance and have him admitted to the hospital. Prior to admission to the hospital, his only medication was insulin, although he often missed doses. He does not drink alcohol. He is 168 cm (5 ft 6 in) tall and weighs 100 kg (220 lb); BMI is 36 kg/m². His temperature is 37°C (98.6°F), pulse is 68/min, respirations are 18/min, and blood pressure is 150/85 mm Hg. Physical examination shows no abnormalities. On mental status examination, he is tired and has a restricted affect. There is no evidence of suicidal ideation. Cognition is intact. His fasting serum glucose concentration is 120 mg/dL. Which of the following is the most appropriate next step in management?', A. 'Adhere to the patient's wishes and discuss home-care options', B. 'Adhere to the patient's wishes on the condition that he agree to home nursing care', C. 'Schedule neuropsychological testing', D. 'Seek a court order to appoint a legal guardian'

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Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: B

Answer Option 3:

Final Answer: A

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: C

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: B

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 133:

'A 7-month-old infant, who was recently discharged from the hospital following an episode of enteritis and dehydration, has persistent watery diarrhea. His mother feeds him cow-milk formula and a variety of strained fruits and vegetables. On physical examination, his temperature is 37.4°C (99.3°F), his mucous membranes are dry, and his abdomen is slightly distended. No other abnormalities are seen. The problem is most likely related to which of the following?', A. 'Fructose intolerance', B. 'Transient lactase deficiency', C. 'Magnesium deficiency', D. 'Regional enteritis'

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Answer Option 1:

Final Answer: B

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Answer Option 2:

Final Answer: B

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Answer Option 3:

Final Answer: B

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Answer Option 4:

Final Answer: B

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Answer Option 5:

Final Answer: B

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Answer Option 6:

Final Answer: B

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Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 134:

'A 25-year-old gravida 3 para 2 female is admitted to the hospital at 39 weeks' gestation in active labor. She had been having regular contractions every 4 minutes, but is now having only a few intermittent, weak contractions. She has received medication for pain twice in the past 6 hours. Examination shows no reason for obstructed labor. The fetal head is engaged, the membranes are intact, the fetal heart tones are normal, and the cervix is 100% effaced and 7 cm dilated. The most appropriate management is to', A. 'administer an epidural anesthetic', B. 'administer tocolytic therapy', C. 'apply cervical topical corticosteroids', D. 'augment the labor with oxytocin'

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Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 135:

'A 15-year-old girl comes to the emergency department because, she says, "something has been sticking out of my bottom since I had a bowel movement this morning." She has not had previous episodes, although for more than 1 year she has had occasional difficulty passing stools. She is not in pain but is afraid to move her bowels for fear that the problem will worsen. She tells you that she moved away from home more than a year ago and that her parents contribute nothing to her support. She has a 6-month-old child and lives with a 28-year-old female cousin. She has never been married and does not work or attend school. She has no other symptoms. In order to follow the correct procedure for treating a minor, which of the following is the most appropriate step prior to evaluating this patient's rectal problem?', A. 'Accept the girl's consent as sufficient', B. 'Obtain a court order permitting evaluation', C. 'Obtain the written consent of at least two licensed physicians', D. 'Obtain written consent from at least one of her parents'

=====

Answer Option 1:

Final Answer: A

Answer Option 2:

Final Answer: A

Answer Option 3:

Final Answer: A

Answer Option 4:

Final Answer: A

Answer Option 5:

Final Answer: A

Answer Option 6:

Final Answer: A

Answer Option 7:

Final Answer: A

Answer Option 8:

Final Answer: A

Answer Option 9:

Final Answer: A

Question 136:

'A 37-year-old woman is brought to the emergency department 45 minutes after she was found unconscious on her apartment floor. Her coworkers became concerned when she did not arrive for work. On arrival, she is unable to provide a history. Her pulse is 96/min, respirations are 12/min, and blood pressure is 124/58 mm Hg. Examination shows erythema, warmth, and induration of the upper back, buttocks, and posterior thighs. Her serum creatine kinase activity is 10,300 U/L. Urine toxicology screening is positive for opiates and cocaine. Urine dipstick is strongly positive for blood. Microscopic examination of the urine shows pigmented granular casts and rare erythrocytes. This patient is at increased risk for which of the following conditions over the next 24 hours?', A. 'Acute respiratory distress syndrome', B. 'Acute tubular necrosis', C. 'Cerebral edema', D. 'Cerebral hemorrhage'

=====

Answer Option 1:

Final Answer: B

Answer Option 2:

Final Answer: B

Answer Option 3:

Final Answer: B

Answer Option 4:

Final Answer: B

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: B

Answer Option 7:

Final Answer: B

Answer Option 8:

Final Answer: B

Answer Option 9:

Final Answer: B

Question 137:

'A 34-year-old white woman comes to the emergency department because of a persistent dull headache for the past 3 days. She has been taking acetaminophen without relief. She says, "I haven't slept in 3 days and I am having trouble focusing at work." There is no history of trauma and she takes no medications. She has smoked one pack of cigarettes daily for 14 years but does not drink alcoholic beverages. Vital signs are temperature 37.5°C (99.5°F), pulse 86/min, respirations 19/min, and blood pressure 182/100 mm Hg. Examination of the head shows no abnormalities. Pupils are equal, round, and reactive to light; there is mild photophobia. Funduscopic examination is normal. A serous effusion is noted on examination of the left tympanic membrane. Neck is stiff with painful flexion; when the patient's neck is flexed forward, she reports an electric shock sensation. Mild expiratory wheezes are heard on auscultation of the chest. A midsystolic click is heard best at the left sternal border; there are no murmurs or gallops. Abdominal examination shows striae, but is otherwise noncontributory. Examination of the lower extremities shows varicosities bilaterally and 1+ edema; muscle strength is 4/5. Neurologic examination shows no other abnormalities. Which of the following physical findings is most indicative of the need for immediate further evaluation?', A. 'Abdominal striae', B. 'Expiratory wheezes', C. 'Midsystolic click', D. 'Neck stiffness'

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Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: D

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Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 138:

'A 14-year-old girl is brought to the physician after her mother learned that she began having sexual intercourse with various partners 1 month ago. She does not use condoms or other contraception. The mother is concerned about her behavior. The patient's parents separated 3 months ago. She had been an honor student and excelled in sports and leadership positions at school before the separation. Since the separation, however, she has become sullen, defiant, and rebellious. She has begun smoking cigarettes, disobeying her curfew, and being truant from school. This patient is most likely using which of the following defense mechanisms?', A. 'Acting out', B. 'Displacement', C. 'Projection', D. 'Reaction formation'

=====

Answer Option 1:

Final Answer: A

Answer Option 2:

Final Answer: A

Answer Option 3:

Final Answer: A

Answer Option 4:

Final Answer: A

Answer Option 5:

Final Answer: A

Answer Option 6:

Final Answer: A

Answer Option 7:

Final Answer: A

Answer Option 8:

Final Answer: A

Answer Option 9:

Final Answer: A

Question 139:

'A previously healthy 27-year-old man comes to the physician 4 weeks after noticing three nontender lesions on his penis. He says they have not changed in size. He is sexually active with multiple male and female partners and uses condoms inconsistently. He takes no medications. He drinks two to five beers on social occasions. He occasionally smokes marijuana. His temperature is 36.9°C (98.4°F). There is no lymphadenopathy. Examination shows three sessile, flesh-colored lesions on the shaft of the penis that are 10 mm in diameter. On application of a dilute solution of acetic acid, the lesions turn white. The remainder of the examination shows no abnormalities. Which of the following is the most appropriate next step in management?', A. 'Oral acyclovir therapy', B. 'Oral doxycycline therapy', C. 'Intramuscular penicillin therapy', D. 'Cryotherapy'

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Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 140:

'A 59-year-old man is brought to the emergency department because of a 4-day history of nausea, vomiting, and diarrhea. He also has been confused and agitated during this period. He has a history of mild hypertension. His current medication is a diuretic. His temperature is 37°C (98.6°F), pulse is 108/min, respirations are 26/min, and blood pressure is 70/47 mm Hg. Physical examination shows delayed capillary refill of the lips and nail beds and cool extremities. His oxyhemoglobin saturation in a central vein is 60% (N=70–75). These findings are most consistent with which of the following types of shock?',

A. 'Cardiogenic', B. 'Distributive', C. 'Hypovolemic', D. 'Obstructive'

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Answer Option 1:

Final Answer: C

Answer Option 2:

Final Answer: C

Answer Option 3:

Final Answer: C

Answer Option 4:

Final Answer: C

Answer Option 5:

Final Answer: C

Answer Option 6:

Final Answer: C

Answer Option 7:

Final Answer: C

Answer Option 8:

Final Answer: C

Answer Option 9:

Final Answer: C

Question 141:

'A 13-month-old child is brought to the emergency department because of urticaria, swelling of the lips, and difficulty breathing immediately after eating an egg. A potential risk for hypersensitivity reaction is posed by vaccination against which of the following illnesses?', A. 'Hepatitis', B. 'Influenza', C. 'Pertussis', D. 'Poliomyelitis'

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Answer Option 1:

Final Answer: B

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Answer Option 2:

Final Answer: B

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Answer Option 3:

Final Answer: B

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Answer Option 4:

Final Answer: B

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Answer Option 5:

Final Answer: B

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Answer Option 6:

Final Answer: B

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Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 142:

'A 27-year-old man is admitted to the hospital 45 minutes after being involved in a motor vehicle collision. Physical examination shows a sluggish response to stimuli. Neurologic examination shows no other abnormalities. A skull x-ray shows a linear, nondepressed basal skull fracture. Two weeks later, the patient develops polyuria and polydipsia. Laboratory studies show a serum glucose concentration within the reference range, increased serum osmolality, and decreased urine osmolality. Following the administration of desmopressin, urine osmolality increases. The beneficial effect of this drug is most likely due to activation of which of the following?', A. 'Adenylyl cyclase', B. 'Ca²⁺ channels', C. 'Janus kinase', D. 'Serine kinase'

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Answer Option 1:

Final Answer: A

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Answer Option 2:

Final Answer: A

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Answer Option 3:

Final Answer: A

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Answer Option 4:

Final Answer: A

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Answer Option 5:

Final Answer: A

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Answer Option 6:

Final Answer: A

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Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: A

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Question 143:

'A 35-year-old female develops nausea and vomiting after she underwent a cholecystectomy for protracted ileus. Her body mass index was 23 kg/m² before surgery, and, except for the cholecystitis, she was in good health. The patient remains unable to eat 6 days after surgery. Which of the following forms of nutritional support is most appropriate for this patient?', A. 'central hyperalimentation', B. 'feeding through a nasogastric feeding tube', C. 'oral fat-free modular diet', D. 'peripheral hyperalimentation'

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Answer Option 1:

Final Answer: B

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Answer Option 2:

Final Answer: B

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Answer Option 3:

Final Answer: B

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Answer Option 4:

Final Answer: B

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Answer Option 5:

Final Answer: B

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Answer Option 6:

Final Answer: B

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Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 144:

'A 27-year-old nurse comes to the emergency department because of nervousness, dizziness, palpitations, and excess perspiration for the past 3 hours. She has had similar episodes over the past 6 months. The symptoms improve following ingestion of orange juice or soft drinks. She says that she has had a great deal of stress. She has been drinking two alcoholic beverages daily for the past month; before this time, she seldom drank alcohol. Examination shows no abnormalities. Her serum glucose concentration is 30 mg/dL. Intravenous glucose is administered, and the patient's symptoms improve. Which of the following is the most appropriate next step in diagnosis?', A. 'Measurement of serum proinsulin and insulin antibodies', B. 'Measurement of serum cortisol and ACTH concentrations', C. 'Measurement of serum growth hormone and plasma somatomedin-C concentrations', D. 'Measurement of serum insulin and C-peptide concentrations'

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Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: D

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Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 145:

'A 54-year-old woman comes to the office because she has had intermittent shooting pain over her right cheek and jaw during the past 3 weeks. Each episode of pain lasts for 1 second or less. The pain is often triggered by cold air, chewing, tactile stimulation, and brushing her teeth. She has had no trauma to the face or head. Medical history is remarkable for tension headaches, obesity, and gastric bypass surgery. She is 165 cm (5 ft 5 in) tall and weighs 62 kg (137 lb); BMI is 23 kg/m². Vital signs are normal. The patient cannot tolerate touch over the right side of the face. There is no facial weakness or loss of sensation. The remainder of the physical examination shows no abnormalities. CT scan of the head with and without contrast shows no abnormalities. Which of the following is the most appropriate pharmacotherapy at this time?', A. 'Carbamazepine', B. 'Lamotrigine', C. 'Levetiracetam', D. 'Topiramate'

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Answer Option 1:

Final Answer: A

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Answer Option 2:

Final Answer: A

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Answer Option 3:

Final Answer: A

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Answer Option 4:

Final Answer: A

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Answer Option 5:

Final Answer: A

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Answer Option 6:

Final Answer: A

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Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: A

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Question 146:

'A 12-year-old boy with sickle cell disease and type 1 diabetes mellitus is brought to the office by his mother for an initial visit. The family recently moved to the area. Type 1 diabetes mellitus was diagnosed in the patient 6 years ago. Since that time, he has been treated with insulin and dietary management. His insulin regimen has not changed during the past year; however, his mother says he has been only marginally compliant with his insulin and dietary regimens. His diabetic diary shows home fingerstick blood glucose concentrations ranging from 140–200 mg/dL during the past 3 months. He admits to checking his glucose concentrations infrequently. Measurement of hemoglobin A1c obtained last week was 5.4%. The patient's vital signs are temperature 36.8°C (98.2°F), pulse 72/min, respirations 24/min, and blood pressure 110/64 mm Hg. Physical examination shows no abnormalities. Which of the following is the most likely explanation for the discrepancy between the patient's home fingerstick blood glucose concentrations and his hemoglobin A1c?', A. 'His daily glucose control is better than recorded', B. 'His glucometer is reading falsely high and should be replaced', C. 'His hemoglobin A1c is likely a result of laboratory error and should be repeated', D. 'His sickle cell disease is affecting his hemoglobin A1c'

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Answer Option 1:

Final Answer: A

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Answer Option 2:

Final Answer: A

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Answer Option 3:

Final Answer: A

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Answer Option 4:

Final Answer: A

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Answer Option 5:

Final Answer: A

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Answer Option 6:

Final Answer: A

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Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: A

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Question 147:

'A 68-year-old female has a history of breast cancer that has recurred twice in the past 5 years. She has undergone both radiation and chemotherapy for metastatic carcinoma to the bone. She presents to the office today to ask for help in dealing with midthoracic back pain to enable her to use less analgesic agents. The most appropriate osteopathic manipulative technique to treat this patient's spine is', A. 'high velocity, low amplitude', B. 'indirect myofascial release', C. 'isotonic exercise therapy', D. 'mid velocity, mid amplitude'

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Answer Option 1:

Final Answer: B

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Answer Option 2:

Final Answer: B

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Answer Option 3:

Final Answer: B

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Answer Option 4:

Final Answer: B

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Answer Option 5:

Final Answer: B

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Answer Option 6:

Final Answer: B

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Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 148:

'A 55-year-old woman with small cell carcinoma of the lung is admitted to the hospital to undergo chemotherapy. Six days after treatment is started, she develops a temperature of 38°C (100.4°F). Physical examination shows no other abnormalities. Laboratory studies show a leukocyte count of 100/mm³ (5% segmented neutrophils and 95% lymphocytes). Which of the following is the most appropriate pharmacotherapy to increase this patient's leukocyte count?', A. 'Darbepoetin', B. 'Dexamethasone', C. 'Filgrastim', D. 'Interferon alfa'

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Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: C

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Answer Option 4:

Final Answer: C

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Answer Option 5:

Final Answer: C

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Answer Option 6:

Final Answer: C

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Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 149:

'A 14-year-old girl has had nausea, intermittent diarrhea, and a 2.2-kg (5-lb) weight loss over the past 4 weeks. Examination shows a migrating serpiginous pruritic perianal rash. Her leukocyte count is 8000/mm³ with 20% eosinophils. Which of the following tests is most likely to yield an accurate diagnosis?', A. 'Blood smear', B. 'Bone marrow biopsy', C. 'KOH preparation', D. 'Microscopic examination of the stool'

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Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 150:

'A 37-year-old Anglo-American man is admitted to the hospital for treatment for cocaine dependency. He says he has tried repeatedly to abstain from cocaine use but lives in a part of town where there are heavy drug sales. He did not like his hospital outpatient group but liked his single session at Cocaine Anonymous. Vital signs are temperature 37.0°C (98.6°F), pulse 70/min, respirations 16/min, and blood pressure 125/85 mm Hg. Physical examination shows a thin man with good muscle strength and no focal neurologic deficits. The patient is using insurance coverage through his wife but does not wish for his diagnosis to be disclosed to anyone. He is on probation after a conviction for aggravated robbery 3 years ago. There is also a warrant for his arrest for assault and battery. After listening to his requests and weighing your obligations, you should disclose this patient's diagnosis only to which of the following?', A. 'His Cocaine Anonymous sponsor', B. 'His probation officer', C. 'His wife', D. 'Insurance company'

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Answer Option 1:

Final Answer: A

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Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: C

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Answer Option 4:

Final Answer: A

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Answer Option 5:

Final Answer: C

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Answer Option 6:

Final Answer: C

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Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 151:

'A 14-year-old boy is brought to the physician for a physical examination prior to participating in sports. He appears reluctant to remove his shirt for the examination, and says that he is embarrassed because he has grown breasts during the past year. He is at the 50th percentile for height and weight. Physical examination shows bilateral 1.5-cm fibroglandular masses located beneath the nipple-areolar complex and normal penis and testes. Pubic hair development is Tanner stage 3. Serum concentrations of gonadotropic hormones, estrogens, and testosterone are within the reference ranges. Which of the following is the most likely cause of this patient's breast enlargement?', A. 'Estradiol-secreting Leydig cell tumor', B. 'Peutz-Jeghers syndrome', C. 'Seminiferous tubule dysgenesis (Klinefelter syndrome)', D. 'Normal development'

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Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 152:

'A 37-year-old man comes to the physician because of nonradiating low back pain for 3 days. The pain began after he worked in his yard. He has not had any change in bowel movements or urination. He had one similar episode 3 years ago that resolved spontaneously. Vital signs are within normal limits. Examination of the back shows bilateral paravertebral muscle spasm. Range of motion is limited by pain. Straight-leg raising is negative. In addition to analgesia, which of the following is the most appropriate next step in management?', A. 'Bed rest', B. 'Regular activity', C. 'X-rays of the spine', D. 'MRI of the spine'

=====

Answer Option 1:

Final Answer: B

Answer Option 2:

Final Answer: B

Answer Option 3:

Final Answer: B

Answer Option 4:

Final Answer: B

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: B

Answer Option 7:

Final Answer: B

Answer Option 8:

Final Answer: B

Answer Option 9:

Final Answer: B

Question 153:

'A 29-year-old woman comes to the emergency department because she has had increasingly severe lower abdominal pain and nausea for the past 2 days. She is sexually active and does not use any contraception. Her last menstrual period ended 6 days ago. Temperature is 38.3°C (101.0°F). Physical examination discloses abdominal tenderness in the lower quadrants bilaterally with rebound and guarding. Pelvic examination discloses leukorrhea at the cervical os and tenderness of the uterus to palpation. The adnexal areas are tender but no masses are palpable. Which of the following is the most appropriate diagnostic study?', A. 'Cervical culture', B. 'Culdocentesis', C. 'Laparoscopy', D. 'Serum β -hCG concentration'

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Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: C

Answer Option 4:

Final Answer: C

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: C

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 154:

'A 57-year-old woman comes to the office for a preoperative evaluation 2 weeks before undergoing scheduled laparoscopic cholecystectomy. Medical history is otherwise unremarkable and the patient takes no medications. Family history is significant for stable angina in her father and rheumatoid arthritis in her mother. The patient has a 102-year-old grandmother who resides in a nursing care facility and has Parkinson disease. The patient does not smoke cigarettes or drink alcoholic beverages. During the interview, her face is expressionless. She has a flexed posture and is unable to open her mouth wide. She is 173 cm (5 ft 8 in) tall and weighs 81 kg (179 lb); BMI is 27 kg/m². Vital signs are normal. Physical examination discloses thickening and hardening of the skin over the dorsum of the hands and forearms, as well as mild kyphosis. Strength testing shows no abnormalities; muscle tension is normal. Passive and active range of motion of the upper extremities is full. Gait is slow and deliberate. The remainder of the physical examination discloses no abnormalities. Prior to surgery, further evaluation is indicated for which of the following conditions in this patient?', A. 'Parkinson disease', B. 'Progressive supranuclear palsy', C. 'Sarcopenia', D. 'Systemic sclerosis (scleroderma)'

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Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 155:

'A 40-year-old man comes to the office for a preemployment physical examination. The patient has been generally healthy. Medical history is unremarkable and he takes no routine medications. Vital signs are normal. Physical examination shows a palpable nodule in the right lobe of the thyroid gland. Serum thyroid-stimulating hormone concentration is within the reference range. Ultrasonography of the thyroid gland confirms a solid, 1-cm nodule. Which of the following is the most appropriate next step in evaluation?', A. 'CT scan of the neck', B. 'Fine-needle aspiration of the nodule', C. 'Radionuclide thyroid scan', D. 'Thyroidectomy'

=====

Answer Option 1:

Final Answer: B

Answer Option 2:

Final Answer: B

Answer Option 3:

Final Answer: B

Answer Option 4:

Final Answer: B

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: B

Answer Option 7:

Final Answer: B

Answer Option 8:

Final Answer: B

Answer Option 9:

Final Answer: B

Question 156:

'A 2-month-old female is brought to the office for her first routine health maintenance examination and for her immunization update. In order to determine whether or not any contraindications exist for diphtheria, tetanus, pertussis (DtaP) immunization, the parents should be questioned regarding', A. 'allergy to eggs', B. 'Apgar scores at birth', C. 'gestational age at birth', D. 'previous seizures'

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Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: D

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Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 157:

'A male neonate, who was born at 36 weeks' gestation 2 hours ago in the labor and delivery unit of the hospital, now shows signs of respiratory difficulty. The mother, an 18-year-old primigravid woman, smoked one pack of cigarettes daily throughout her pregnancy. She received prenatal care during most of the pregnancy. One episode of chlamydial cervicitis was detected during the last trimester and treated with azithromycin. The neonate was born via cesarean delivery due to fetal heart rate decelerations. The amniotic fluid was stained with light particulate meconium. Apgar scores were 9 and 9 at 1 and 5 minutes, respectively. The patient is 50 cm (20 in; 50th percentile) long and weighs 3005 g (6 lb 10 oz; 50th percentile); head circumference is 35 cm (14 in; 50th percentile). The infant's vital signs now are temperature 36.6°C (97.8°F), pulse 150/min, and respirations 70/min. Pulse oximetry on room air shows an oxygen saturation of 95%. Physical examination discloses mild subcostal and intercostal retractions. Chest x-ray shows prominent pulmonary vascular markings and fluid in the intralobar fissures. Which of the following is the most likely diagnosis?', A. 'Group B streptococcal sepsis', B. 'Meconium aspiration syndrome', C. 'Respiratory distress syndrome', D. 'Transient tachypnea of newborn'

=====

Answer Option 1:

Final Answer: B

Answer Option 2:

Final Answer: B

Answer Option 3:

Final Answer: B

Answer Option 4:

Final Answer: B

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: B

Answer Option 7:

Final Answer: B

Answer Option 8:

Final Answer: B

Answer Option 9:

Final Answer: B

Question 158:

'A study is conducted to assess the effectiveness of a new drug for the treatment of type 2 diabetes mellitus. A total of 1000 patients with type 2 diabetes mellitus are enrolled. Patients are randomly assigned to receive the new drug or standard treatment. The alpha and beta values for calculating probability are 0.05 and 0.20, respectively. Results show that the new drug is significantly better than standard treatment. If this study had been performed in a population of only 500 patients, which of the following would have been most likely to increase?', A. 'Chance of a type I error', B. 'Chance of a type II error', C. 'Power of the study', D. 'Sensitivity of the study'

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Answer Option 1:

Final Answer: A

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Answer Option 2:

Final Answer: A

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Answer Option 3:

Final Answer: B

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Answer Option 4:

Final Answer: B

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Answer Option 5:

Final Answer: B

=====

Answer Option 6:

Final Answer: B

=====

Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 159:

'A 78-year-old male presents to the office with the complaint of severe neck pain. He rates the pain as a 7 on a scale of 0 to 10 scale. He denies any trauma but reports that he had been doing a lot of painting over the past week. He denies any radicular pain or numbness. Cervical range of motion is moderately limited in all fields. He is treated with articulatory springing technique. Four hours later the physician receives a call from the local emergency department, where the patient presented confused, nauseated, and vertiginous. The physician may be found liable if', A. 'the motion barrier was articulated more than 3 times', B. 'the motion barrier was met with a vectored force from the direction of ease', C. 'the neck was treated in simultaneous hyperrotation and extension', D. 'the patient was previously treated for osteoarthritis of the cervical spine'

=====

Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: B

=====

Answer Option 3:

Final Answer: C

=====

Answer Option 4:

Final Answer: C

=====

Answer Option 5:

Final Answer: C

=====

Answer Option 6:

Final Answer: C

=====

Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 160:

'A physician is conducting a retrospective review of a trial involving the use of Drug X in patients with a specific disease. It is known that Drug X is associated with an increased probability of cancer in patients who use the drug. A total of 600 individuals with a specific disease were included in the trial. Of the participants, 200 individuals received Drug X and 400 individuals did not receive it. One hundred individuals who received Drug X died of a particular type of cancer and 100 individuals who did not receive the drug died of the same type of cancer. Based on these data, which of the following is the relative risk of death from this type of cancer in individuals who take Drug X as compared with individuals who do not take Drug X?', A. 'Individuals who take Drug X have an equal risk of dying from this type of cancer', B. 'Individuals who take Drug X have four times the risk of dying from this type of cancer', C. 'Individuals who take Drug X have three times the risk of dying from this type of cancer', D. 'Individuals who take Drug X have two times the risk of dying from this type of cancer'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: C

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

To calculate the relative risk, we need to compare the risk of death from the specific type of cancer in individuals who take Drug X to the risk in individuals who do not take the drug.

In this case, out of the 200 individuals who received Drug X, 100 died from the specific type of cancer. This gives us a risk of death of $100/200 = 0.5$ (or 50%).

Out of the 400 individuals who did not receive Drug X, 100 died from the specific type of cancer. This gives us a risk of death of $100/400 = 0.25$ (or 25%).

To calculate the relative risk, we divide the risk in individuals who take Drug X by the risk in individuals who do not take the drug.

Relative Risk = Risk in individuals who take Drug X / Risk in individuals who do not take Drug X

Relative Risk = $0.5 / 0.25$

Relative Risk = 2

Therefore, the relative risk of death from this type of cancer in individuals who take Drug X compared to individuals who do not take Drug X is 2.

Final Answer: D

Question 161:

'A 27-year-old woman comes to the physician because of a 3-year history of chronic diarrhea and intermittent, crampy, lower abdominal pain. The pain is usually relieved with defecation and does not occur at night or interfere with sleep. She says she is frustrated by her symptoms and has stopped traveling because of her frequent, urgent need to use the bathroom. She has no history of serious illness and takes no medications. Her temperature is 37°C (98.6°F), pulse is 70/min, respirations are 14/min, and blood pressure is 120/80 mm Hg. The lower abdomen is mildly tender to palpation; there is no rebound tenderness or guarding. The remainder of the examination shows no abnormalities. Results of laboratory studies are within the reference ranges. Test of the stool for occult blood is negative. Antigliadin antibodies are not present. Which of the following is the most appropriate pharmacotherapy?', A. 'Nefazodone', B. 'Nortriptyline', C. 'Phenelzine', D. 'Sertraline'

=====

Answer Option 1:

Final Answer: B

Answer Option 2:

Final Answer: B

Answer Option 3:

Final Answer: B

Answer Option 4:

Final Answer: B

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: B

Answer Option 7:

Final Answer: B

Answer Option 8:

Final Answer: B

Answer Option 9:

Final Answer: B

Question 162:

'A study is designed to evaluate the feasibility of acupuncture in children with chronic headaches. Sixty children with chronic headaches are recruited for the study. In addition to their usual therapy, all children are treated with acupuncture three times a week for 2 months. Which of the following best describes this study design?', A. 'Case-control', B. 'Case series', C. 'Crossover', D. 'Cross-sectional'

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Answer Option 1:

Final Answer: B

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Answer Option 2:

Final Answer: B

=====

Answer Option 3:

Final Answer: B

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Answer Option 4:

Final Answer: B

=====

Answer Option 5:

Final Answer: B

=====

Answer Option 6:

Final Answer: B

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Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 163:

'A 17-year-old girl is brought to the emergency department 15 minutes after being stung by a bee. She has mild lightheadedness but no difficulty swallowing. Her temperature is 37.1°C (98.8°F), pulse is 100/min, respirations are 30/min, and blood pressure is 115/70 mm Hg. Physical examination shows no urticaria. Bilateral wheezing is heard on auscultation of the chest. Which of the following types of drugs is the most appropriate pharmacotherapy for this patient?', A. ' α 1-Adrenergic agonist', B. ' α 2-Adrenergic agonist', C. ' α 1-Adrenergic antagonist', D. ' β 2-Adrenergic agonist'

=====

Answer Option 1:

Final Answer: D

=====

Answer Option 2:

Final Answer: D

=====

Answer Option 3:

Final Answer: D

=====

Answer Option 4:

Final Answer: D

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Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 164:

'Five years after being shot in the right thigh, a 21-year-old man comes to the emergency department because of a buzzing sensation adjacent to the scar. At the time of the initial wound, he was discharged after 6 hours of observation with no fractures or soft-tissue swelling. A loud murmur is heard on auscultation; there is a thrill. He has dilated varicose veins with incompetent valves in the lower leg. Which of the following is the most likely diagnosis?', A. 'Arterial spasm', B. 'Arteriovenous fistula', C. 'Deep venous thrombosis', D. 'Occlusion of the superficial femoral artery'

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Answer Option 1:

Final Answer: B

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Answer Option 2:

Final Answer: B

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Answer Option 3:

Final Answer: B

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Answer Option 4:

Final Answer: B

=====

Answer Option 5:

Final Answer: B

=====

Answer Option 6:

Final Answer: B

=====

Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 165:

'A previously healthy 40-year-old man is brought to the emergency department because of constant substernal chest pain for 12 hours that is exacerbated by coughing and inspiration. The pain is relieved with sitting up and leaning forward. There is no family history of heart disease. His temperature is 38°C (100.4°F), pulse is 120/min, and blood pressure is 110/60 mm Hg. The lungs are clear to auscultation. Cardiac examination shows distant heart sounds. An ECG shows diffuse ST-segment elevation in all leads. An x-ray of the chest shows normal findings. The most likely cause of his condition is injury to which of the following tissues?', A. 'Aortic intima', B. 'Esophageal sphincter', C. 'Myocardium', D. 'Pericardium'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 166:

'A 24-year-old man comes to the office because of a 2-day history of a red, itchy rash on his buttocks and legs. Four days ago, he returned from a cruise to the Caribbean, during which he swam in the ship's pool and used the hot tub. He appears well. His vital signs are within normal limits. Physical examination shows the findings in the photograph. The infectious agent causing these findings most likely began to proliferate in which of the following locations?', A. 'Apocrine gland', B. 'Dermis', C. 'Eccrine gland', D. 'Hair follicle'

=====

Answer Option 1:

Final Answer: C

=====

Answer Option 2:

Final Answer: C

=====

Answer Option 3:

Final Answer: D

=====

Answer Option 4:

Final Answer: C

=====

Answer Option 5:

Final Answer: C

=====

Answer Option 6:

Final Answer: C

=====

Answer Option 7:

Final Answer: C

=====

Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 167:

'A 15-year-old male presents to the office with the complaint of painless swelling in the left testicle that has varied in size over the past several months. There is no history of trauma. The lesion transilluminates well, and no inguinal nodes are palpable. Findings from a testicular scan are normal. The most appropriate management includes', A. 'injection with a sclerosing agent', B. 'needle aspiration', C. 'needle biopsy', D. 'surgical repair'

=====

Answer Option 1:

Final Answer: B

Answer Option 2:

Final Answer: C

Answer Option 3:

Final Answer: A

Answer Option 4:

Final Answer: B

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: C

Answer Option 7:

Final Answer: C

Answer Option 8:

Final Answer: C

Answer Option 9:

Final Answer: B

Question 168:

'A 10-month-old boy is brought to the physician because of a 4-day history of fever and cough. His illness began with lowgrade fever and copious, clear nasal discharge. Two days ago he developed a moist, nonproductive cough and rapid breathing. He has received all scheduled childhood immunizations. He attends a large day-care center and has three schoolaged siblings. His temperature is 38°C (100.4°F), pulse is 101/min, respirations are 38/min, and blood pressure is 85/60 mm Hg. Physical examination shows nasal flaring and rhinorrhea. Chest examination shows intercostal retractions along with bilateral, diffuse wheezes and expiratory rhonchi. The infectious agent of this patient's condition most likely has which of the following properties?', A. 'DNA genome', B. 'Double-stranded nucleic acid genome', C. 'Mature virion lacking viral polymerase', D. 'Mediation of cell entry via a fusion protein'

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Answer Option 1:

Final Answer: B

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: D

=====

Answer Option 5:

Final Answer: B

=====

Answer Option 6:

Final Answer: D

=====

Answer Option 7:

Final Answer: D

=====

Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 169:

'A 29-year-old woman is prescribed carbamazepine for trigeminal neuralgia. She has a strong family history of osteoporosis. As a result, the physician also advises her to increase her intake of vitamin D. The most likely reason for this recommendation is that carbamazepine may affect which of the following pharmacokinetic processes?', A. 'Absorption', B. 'Distribution', C. 'Excretion', D. 'Metabolism'

=====

Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

=====

Answer Option 4:

Final Answer: D

=====

Answer Option 5:

Final Answer: D

=====

Answer Option 6:

Final Answer: D

=====

Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 170:

'A 57-year-old man receives radiation therapy for a squamous cell carcinoma of the lung. Despite therapy, the tumor progressively increases in size, and he dies 6 months later. His tumor cells contain a point mutation in the p53 gene (TP53), leading to an inactive gene product. Based on this finding, the progressive tumor growth despite irradiation therapy is most likely to be related to a defect in cell cycle arrest in which of the following phases of the cell cycle?', A. 'G0', B. 'G1', C. 'G2', D. 'M'

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Answer Option 1:

Final Answer: B

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Answer Option 2:

Final Answer: B

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Answer Option 3:

Final Answer: B

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Answer Option 4:

Final Answer: B

=====

Answer Option 5:

Final Answer: B

=====

Answer Option 6:

Final Answer: B

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Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 171:

'An 87-year-old woman is brought to the physician by her son because of progressive memory loss over the past 2 years. Her son says that she repeats herself frequently and has been forgetting to take her routine medications. She takes hydrochlorothiazide for mild systolic hypertension and levothyroxine for hypothyroidism. She had vulvar cancer 10 years ago treated with wide excision. Her blood pressure is 138/78 mm Hg. Physical examination is within normal limits for her age. Mini-Mental State Examination score is 23/30. Laboratory studies, including serum vitamin B12 (cyanocobalamin), thyroxine (T4), and thyroid-stimulating hormone concentrations, are within normal limits. A CT scan of the head shows mild volume loss. Which of the following is the most appropriate pharmacotherapy?', A. 'β-Adrenergic agonist', B. 'Cholinesterase inhibitor', C. 'Dopamine agonist', D. 'Prednisone'

=====

Answer Option 1:

Final Answer: B

Answer Option 2:

Final Answer: B

Answer Option 3:

Final Answer: B

Answer Option 4:

Final Answer: B

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: B

Answer Option 7:

Final Answer: B

Answer Option 8:

Final Answer: B

Answer Option 9:

Final Answer: B

Question 172:

'A male stillborn is delivered at 32 weeks' gestation to a 30-year-old woman. The pregnancy was complicated by oligohydramnios. Examination of the stillborn shows the absence of a urethral opening. Which of the following additional findings is most likely in this stillborn?', A. 'Congenital diaphragmatic hernia', B. 'Intralobar sequestration', C. 'Pulmonary hypoplasia', D. 'Situs inversus'

=====

Answer Option 1:

Final Answer: C

=====

Answer Option 2:

Final Answer: C

=====

Answer Option 3:

Final Answer: C

=====

Answer Option 4:

Final Answer: C

=====

Answer Option 5:

Final Answer: C

=====

Answer Option 6:

Final Answer: C

=====

Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 173:

'A couple comes for preconceptional genetic counseling because they both have a family history of α -thalassemia. The woman has a minimally decreased hemoglobin concentration. Genetic studies show a single gene deletion. The man has microcytic anemia and a two-gene deletion. If the two-gene deletion is in trans (one deletion on the maternal gene and one deletion on the paternal gene), which of the following percentages of their offspring will have a two-gene deletion?', A. '0%', B. '25%', C. '50%', D. '75%'

=====

Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: C

=====

Answer Option 3:

Final Answer: C

=====

Answer Option 4:

Final Answer: C

=====

Answer Option 5:

Final Answer: B

=====

Answer Option 6:

Final Answer: B

=====

Answer Option 7:

Final Answer: B

=====

Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: B

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Question 174:

'A 27-year-old woman, gravida 2, para 1, at 12 weeks' gestation comes to the physician for a prenatal visit. She feels well. Pregnancy and delivery of her first child were uncomplicated. Medications include folic acid and a multivitamin. Her temperature is 37.2°C (99°F), and blood pressure is 108/60 mm Hg. Pelvic examination shows a uterus consistent in size with a 12-week gestation. Urine dipstick shows leukocyte esterase; urinalysis shows WBCs and rare gram-negative rods. Which of the following is the most appropriate next step in management?', A. 'Recommend drinking 8 oz of cranberry juice daily', B. 'Oral amoxicillin therapy', C. 'Oral metronidazole therapy', D. 'Intravenous cefazolin therapy'

=====

Answer Option 1:

Final Answer: C

=====

Answer Option 2:

Final Answer: B

=====

Answer Option 3:

Final Answer: B

=====

Answer Option 4:

Final Answer: B

=====

Answer Option 5:

Final Answer: B

=====

Answer Option 6:

Final Answer: B

=====

Answer Option 7:

Final Answer: B

=====

Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 175:

'A 5-year-old girl is brought to the physician by her parents for evaluation of recurrent injuries. Her parents say that she started walking at the age of 14 months and since then has always seemed clumsier and had more injuries than other children. She has had increasingly frequent chest pain with exertion since starting a soccer program 3 months ago. She usually has pain or swelling of her knees or ankles after practice. She has been wearing glasses for 2 years. Her 16-year-old brother has required two operations for a severe rotator cuff injury he sustained while taking a shower, and she has a maternal cousin who died of a ruptured aortic aneurysm at the age of 26 years. Today, the patient walks with a limp. She is at the 99th percentile for height and 50th percentile for weight. A midsystolic click is heard at the apex. The left ankle is swollen and tender; range of motion is limited by pain. The joints of the upper and lower extremities are hypermobile, including 25 degrees of genu recurvatum, thumbs that may be extended to touch the forearms, and flexibility at the waist, with palms easily touching the floor with straight knees. Which of the following is the most appropriate next step in diagnosis?', A. 'Skeletal survey', B. 'Echocardiography', C. 'Bone scan', D. 'MRI of the shoulder'

=====

Answer Option 1:

Final Answer: B

Answer Option 2:

Final Answer: B

Answer Option 3:

Final Answer: B

Answer Option 4:

Final Answer: B

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: B

Answer Option 7:

Final Answer: B

Answer Option 8:

Final Answer: B

Answer Option 9:

Final Answer: B

Question 176:

'A 42-year-old woman comes to the physician because of an 8-week history of intermittent nausea and abdominal pain that occurs 20 to 30 minutes after eating. The pain extends from the epigastrium to the right upper quadrant and is sometimes felt in the right scapula; it lasts about 30 minutes and is not relieved by antacids. The last episode occurred after she ate a hamburger and french fries. She has not had vomiting. She is currently asymptomatic. She is 165 cm (5 ft 5 in) tall and weighs 104 kg (230 lb); BMI is 38 kg/m². Examination shows no other abnormalities. Which of the following is the most appropriate next step in management?', A. 'Abdominal ultrasonography of the right upper quadrant', B. 'Upper gastrointestinal series with small bowel follow-through', C. 'CT scan of the abdomen', D. 'Endoscopic retrograde cholangiopancreatography'

=====

Answer Option 1:

Final Answer: A

Answer Option 2:

Final Answer: A

Answer Option 3:

Final Answer: A

Answer Option 4:

Final Answer: A

Answer Option 5:

Final Answer: A

Answer Option 6:

Final Answer: A

Answer Option 7:

Final Answer: A

Answer Option 8:

Final Answer: C

Answer Option 9:

Final Answer: A

Question 177:

'A 22-year-old male presents to the office with a 5-day history of diarrhea after completing his third course of antibiotics for mastoiditis. Physical examination reveals vague generalized abdominal pain on palpation. Culture on hektoen enteric agar is positive. The most likely etiologic agent causing the diarrhea is', A. 'Clostridium difficile', B. 'Entamoeba histolytica', C. 'Giardia lamblia', D. 'Salmonella typhi'

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Answer Option 1:

Final Answer: A

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Answer Option 2:

Final Answer: A

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Answer Option 3:

Final Answer: A

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Answer Option 4:

Final Answer: A

=====

Answer Option 5:

Final Answer: A

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Answer Option 6:

Final Answer: A

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Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: A

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Question 178:

'A 15-year-old male is brought to the office with a 2-day history of painful swelling over the sacral prominence that began after a fall during a high school wrestling match. The patient has a low-grade fever.

Examination reveals an erythematous, fluctuant, elevated mass with 3 midline pores. Rectal examination reveals no induration or pain. The most likely diagnosis is', A. 'anocutaneous fistula', B.

'coccygodynia', C. 'hidradenitis suppurativa', D. 'pilonidal abscess'

=====

Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

=====

Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: D

=====

Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 179:

'You are visiting an 86-year-old woman in her home at the request of the patient's daughter because of worsening shortness of breath at rest for the past 2 days. The patient is confined to her home because of severe chronic obstructive pulmonary disease with cor pulmonale. She was discharged 1 week ago from the hospital following 3 weeks of treatment for pneumonia that required intubation; her hospital stay was complicated by sepsis. She had a prolonged weaning program from intubation. Prior to discharge, the patient and her daughter met with you to review the patient's advance directive. During the discussion, the patient said, "I'd rather die than be intubated again." At that time, both the patient and her daughter signed an addendum to that effect on the patient's advance directive. Today, the patient is dyspneic and is unable to complete a sentence. Vital signs are temperature 37.8°C (100.0°F), pulse 88/min, respirations 35/min, and blood pressure 100/70 mm Hg. Pulse oximetry shows an oxygen saturation of 84% while the patient is breathing 4 L of oxygen. You ask the patient if she wishes to return to the hospital. She says, "No, I want to die at home." Her daughter takes you aside and says, "My mother doesn't know what she's saying. I insist that she be admitted to the hospital." After further discussion with the daughter regarding support available at home, which of the following is the most appropriate step?', A. 'Admit the patient to the hospital', B. 'Arrange for consultation with a home hospice team', C. 'Consult with the hospital ethics committee', D. 'Order a home continuous positive airway pressure machine and instruct the daughter in its use'

=====

Answer Option 1:

Final Answer: B

Answer Option 2:

Final Answer: B

Answer Option 3:

Final Answer: B

Answer Option 4:

Final Answer: B

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: B

Answer Option 7:

Final Answer: B

Answer Option 8:

Final Answer: B

Answer Option 9:

Final Answer: B

Question 180:

'A 37-year-old woman comes to the physician because of a 1-day history of throbbing facial pain. She describes the pain as 7 out of 10 in intensity. Over the past 9 days, she has had nasal congestion, purulent nasal discharge, sore throat, and a nonproductive cough. She does not smoke. Her husband and children have had no recent illness. Her temperature is 38.5°C (101.3°F). Examination shows congested nasal mucosa and purulent discharge on the left. There is tenderness to palpation over the left cheek and no transillumination over the left maxillary sinus. The tympanic membranes are normal, and there is no erythema of the throat. Examination shows no cervical adenopathy. The lungs are clear to auscultation. Which of the following is the most likely causal organism?', A. 'Haemophilus influenzae type b', B. 'Moraxella catarrhalis', C. 'Staphylococcus aureus', D. 'Streptococcus pneumoniae'

=====

Answer Option 1:

Final Answer: D

=====

Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

=====

Answer Option 4:

Final Answer: D

=====

Answer Option 5:

Final Answer: B

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Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 181:

'A 42-year-old woman is brought to the emergency department 10 minutes after being involved in a high-speed motor vehicle collision in which she was a restrained passenger. On arrival, she has shortness of breath and abdominal pain. Her pulse is 135/min, respirations are 30/min, and blood pressure is 80/40 mm Hg. Breath sounds are decreased at the left lung base. An x-ray of the chest shows opacification of the left lower lung field with loss of the diaphragmatic shadow. Placement of a chest tube yields a small amount of air followed by greenish fluid. Which of the following is the most appropriate next step in management?', A. 'CT scan of the abdomen', B. 'CT scan of the chest', C. 'Thoracoscopy', D. 'Laparotomy'

=====

Answer Option 1:

Final Answer: B

Answer Option 2:

Final Answer: B

Answer Option 3:

Final Answer: B

Answer Option 4:

Final Answer: B

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: B

Answer Option 7:

Final Answer: B

Answer Option 8:

Final Answer: B

Answer Option 9:

Final Answer: B

Question 182:

'A 19-year-old woman who is a regular patient comes to the office for her annual physical examination and cervical cytology. She tells you that she has not had a menstrual period for the past 6 months. She is a college student who is in good health, has not had any medical illnesses or surgery, and has never been pregnant. She is currently sexually active and uses barrier contraception. She reports that during the past year her menses had become very irregular prior to complete cessation 6 months ago. She also notes that she has gained about 9 kg (20 lb) in the past 6 months and has had an increasing problem with acne and a troublesome growth of hair on her thighs and abdomen. She has been somewhat depressed about this, and her grades have declined. She reports that one of her sisters also had this problem prior to getting married. Physical examination shows a mildly obese young woman who has scattered facial acne, mild male pattern hair growth on the abdomen, and an essentially normal pelvic examination except for slight enlargement of the uterus and both ovaries. This patient's history is most consistent with which of the following?', A. 'Androgen-producing ovarian tumor', B. 'Cushing syndrome', C. 'Hypothyroidism', D. 'Polycystic ovarian syndrome'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 183:

'A 44-year-old female presents to the office for evaluation of a lump on her neck that she noted 1 week ago. She denies any tenderness, fever, weight loss, or fatigue. Physical examination reveals a 2-cm freely movable mass in the lower left lobe of the thyroid. In addition to thyroid-stimulating hormone and free thyroxine levels, the most appropriate initial method to investigate this lesion is', A. 'a nuclear thyroid scan', B. 'an iodine131 scan', C. 'fine-needle aspiration', D. 'ultrasonography of the thyroid gland'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 184:

'A 22-year-old woman comes to the office because of a 3-day history of cold symptoms and a 1-week history of progressive fatigue. Six weeks ago, she received a kidney transplant from a living, related donor. Immediately after the operation, she received monoclonal anti-CD3 therapy. Current medications are azathioprine, cyclosporine, and prednisone. Her temperature is 39°C (102.2°F). Physical examination shows a well-healed surgical scar. Serum studies show that her urea nitrogen and creatinine concentrations have tripled. A diagnosis of allograft rejection is suspected. In addition, this patient's clinical presentation is best explained by an infection with which of the following agents?', A. 'Adenovirus', B. 'BK virus', C. 'Epstein-Barr virus', D. 'Herpes simplex virus'

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Answer Option 1:

Final Answer: B

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Answer Option 2:

Final Answer: B

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Answer Option 3:

Final Answer: B

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Answer Option 4:

Final Answer: B

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Answer Option 5:

Final Answer: B

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Answer Option 6:

Final Answer: B

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Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 185:

'A 53-year-old man comes to the physician because of a 6-month history of intermittent blood in his stool. He has had no pain with defecation. Physical examination shows a 1-cm, visible anal mass located below the dentate line. A biopsy of the mass is scheduled. If the mass is found to be malignant, it is most appropriate to evaluate which of the following lymph nodes for possible metastasis?', A. 'Internal iliac', B. 'Popliteal', C. 'Sacral', D. 'Superficial inguinal'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 186:

'A study is being conducted to assess mesothelioma in shipyard workers. A large shipyard firm has provided the asbestos exposure records of all employees during the past 50 years. The health insurer for the workers has provided claims data that documents all chest x-rays and diagnoses of mesothelioma among current workers and retirees. The study enrolled shipyard workers who were diagnosed with mesothelioma and shipyard workers who were not diagnosed with mesothelioma. All subjects in the study had to have chest xrays. Which of the following is the best rationale for selecting a comparison group that had chest x-rays?', A. 'Address confounding', B. 'Demonstrate causality', C. 'Minimize ascertainment bias', D. 'Reduce recall bias'

=====

Answer Option 1:

Final Answer: C

=====

Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: C

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Answer Option 4:

Final Answer: C

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Answer Option 5:

Final Answer: C

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Answer Option 6:

Final Answer: C

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Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 187:

'A 34-year-old woman comes to the office because of a 3- to 4-week history of swelling of her legs and a 9-kg (20-lb) weight gain. Medical history is significant for sickle cell trait and mild anemia. She has been taking 800 mg of ibuprofen three times daily for Achilles tendinitis diagnosed 1 month ago. She has smoked five cigarettes daily for the past 15 years, and she drinks one to five beers on weekends. She experimented with cocaine briefly 16 years ago, but she has never used intravenous drugs. She has been in a monogamous sexual relationship for the past 12 years. Today, vital signs are temperature 37.2°C (99.0°F), pulse 88/min, respirations 16/min, and blood pressure 145/95 mm Hg. Physical examination discloses periorbital edema but no jugular venous distention. Lungs are clear to auscultation. Cardiac examination discloses an S1 and S2 without murmurs or gallops. Abdominal examination discloses bulging flanks and shifting dullness to percussion. Examination of the lower extremities shows pitting edema from the mid thigh to the ankles bilaterally. Results of which of the following studies are most likely to be abnormal in this patient?', A. 'HIV antibody study', B. 'Serum B-type natriuretic peptide concentration', C. 'Toxicology screening of the urine', D. 'Urine protein concentration'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 188:

'A 31-year-old man with a 5-year history of HIV infection comes to the office because of anal pain, particularly on defecation, for the past 4 months. He says he has seen spots of blood on the toilet tissue but has not had any other noticeable bleeding. He reports no change in bowel habits and has not had recent fever, chills, or rectal drainage. He says he and his partner engage in anal-receptive intercourse. His most recent CD4+ T-lymphocyte count 2 months ago was 350/mm³ ; HIV viral load at that time was undetectable. He currently is being treated with antiretroviral therapy. He has had no opportunistic infections. Medical history is also significant for syphilis and genital herpes treated with penicillin and acyclovir, respectively. He does not smoke cigarettes or drink alcoholic beverages. Vital signs are normal. Physical examination shows small bilateral inguinal lymph nodes, but respiratory, cardiac, and abdominal examinations disclose no abnormalities. There are several tender fleshy lesions around the perianal area. Rectal examination produces tenderness, but there is no rectal discharge. Test of the stool for occult blood is trace positive. Which of the following is the most appropriate pharmacotherapy at this time?', A. 'Acyclovir', B. 'Imiquimod', C. 'Levofloxacin', D. 'Metronidazole'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: B

Answer Option 7:

Final Answer: B

Answer Option 8:

Final Answer: B

Answer Option 9:

Final Answer: B

Question 189:

'A 71-year-old woman is brought to the emergency department by her daughter for evaluation of her mental status. The daughter says, "I visited Mom today for the first time in 6 months; her memory has worsened, her bills are unpaid, and her house is unusually messy." The patient says, "I'm perfectly healthy." Medical history is significant for hypertension diagnosed more than 25 years ago, and two small strokes occurring 3 years and 7 months ago. The daughter gives you three empty medicine bottles from her mother's home: metoprolol, hydrochlorothiazide, and aspirin. The patient is 165 cm (5 ft 5 in) tall and weighs 59 kg (130 lb); BMI is 22 kg/m². Vital signs are temperature 36.4°C (97.6°F), pulse 76/min, respirations 16/min, and blood pressure 196/112 mm Hg. Pulse oximetry on room air shows an oxygen saturation of 93%. Muscle strength in her left hand is 1/5. Strength in the right extremities is 4/5. The patient is oriented only to self; she does not know the day of the week or today's date. She recalls 0 of 3 words at 5 minutes, and she is unable to name 2 objects, correctly draw interlocking pentagons, or count backwards by serial sevens. Complete blood count, renal function studies, liver function studies, and urinalysis are all within the reference ranges. ECG shows no abnormalities. Which of the following is the most likely underlying cause of the patient's symptoms?', A. 'Amyotrophic lateral sclerosis', B. 'Cortical basal ganglionic degeneration', C. 'Neurosyphilis', D. 'Vascular dementia'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 190:

'A 17-year-old girl has never had a menstrual period. Physical examination shows a normal female body habitus, normal breast development, and normal appearing external genitalia. She has no axillary or pubic hair. The patient refuses to have a pelvic or rectal examination. Which of the following is the most likely explanation for the clinical presentation?', A. 'Androgen insensitivity', B. 'Congenital adrenal hyperplasia', C. 'Ectodermal dysplasia', D. 'A psychiatric disorder'

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Answer Option 1:

Final Answer: B

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Answer Option 2:

Final Answer: B

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Answer Option 3:

Final Answer: B

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Answer Option 4:

Final Answer: B

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Answer Option 5:

Final Answer: B

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Answer Option 6:

Final Answer: B

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Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 191:

'A 68-year-old female presents to the emergency department with a 3-day history of worsening fever and headache. Today the patient is nauseated and less responsive. Lumbar puncture reveals a protein level of 89 mg/dL (reference range: 15-45 mg/dL) with pleocytosis. The most likely etiologic organism is', A. 'Clostridium perfringens', B. 'Haemophilus influenzae', C. 'rhinovirus', D. 'Streptococcus pneumoniae'

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Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 192:

'A 22-year-old male college student presents to the office with a 6-month history of intermittent loose stools alternating with constipation. He says that he has been constipated for the past 5 days and denies hemochezia and melena. He says that he usually has loose stools during final exam week. Vital signs are normal. Physical examination reveals mild diffuse abdominal tenderness, and the remainder of the findings are normal. Where does the sympathetic innervation for the viscera involved in this patient's condition originate?', A. 'C1-C2', B. 'T1-T4', C. 'T7-L2', D. 'L3-L5'

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Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: C

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Answer Option 4:

Final Answer: C

=====

Answer Option 5:

Final Answer: C

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Answer Option 6:

Final Answer: C

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Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 193:

'A 33-year-old woman comes to the physician because of a 2-day history of mild nausea, increased urinary urgency and frequency, and constipation. She also has had a 4.5-kg (10-lb) weight loss during the past 2 weeks and a 3-week history of vaginal bleeding. Pelvic examination shows a nodular cervix with an irregular, friable posterior lip, and a rock-hard, irregular, immobile pelvic mass that extends across the pelvis. Examination of biopsy specimens from the cervix and anterior wall of the vagina show well-differentiated keratinizing squamous cell carcinoma. Which of the following best describes the pathogenesis of this patient's disease?', A. 'Inactivation of cellular p53', B. 'Insertion of viral promotors adjacent to cellular growth factor genes', C. 'Specialized transduction', D. 'Transactivation of cellular growth factor genes by TAX'

=====

Answer Option 1:

Final Answer: A

Answer Option 2:

Final Answer: A

Answer Option 3:

Final Answer: A

Answer Option 4:

Final Answer: A

Answer Option 5:

Final Answer: A

Answer Option 6:

Final Answer: A

Answer Option 7:

Final Answer: A

Answer Option 8:

Final Answer: A

Answer Option 9:

Final Answer: A

Question 194:

'A 52-year-old woman has had dyspnea and hemoptysis for 1 month. She has a history of rheumatic fever as a child and has had a cardiac murmur since early adulthood. Her temperature is 36.7°C (98°F), pulse is 130/min and irregularly irregular, respirations are 20/min, and blood pressure is 98/60 mm Hg. Jugular venous pressure is not increased. Bilateral crackles are heard at the lung bases. There is an opening snap followed by a low-pitched diastolic murmur at the third left intercostal space. An x-ray of the chest shows left atrial enlargement, a straight left cardiac border, and pulmonary venous engorgement. Which of the following is the most likely explanation for these findings?', A. 'Aortic valve insufficiency', B. 'Aortic valve stenosis', C. 'Mitral valve insufficiency', D. 'Mitral valve stenosis'

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Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: D

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Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 195:

'A 16-month-old girl is brought to the emergency department by emergency medical technicians because of a generalized tonic-clonic seizure that began 25 minutes ago and has continued despite administration of 0.5 mg/kg rectal diazepam 10 minutes ago. The patient was at home at the time of the seizure. In the emergency department, she is given an additional 0.5 mg/kg dose of diazepam intravenously and the convulsion terminates. Within 2 minutes, her oxygen saturation drops to 75% and she appears cyanotic. Respirations are 10/min and shallow. She receives bag-valve-mask ventilation, followed by intubation and mechanical ventilation. Medical history is unremarkable. She takes no medications. Temperature is 39.1°C (102.5°F). Which of the following is the most likely underlying cause of the patient's respiratory insufficiency?', A. 'Airway occlusion', B. 'Encephalitis', C. 'Medication-induced suppression of central respiratory drive', D. 'Meningitis'

=====

Answer Option 1:

Final Answer: C

=====

Answer Option 2:

Final Answer: C

=====

Answer Option 3:

Final Answer: C

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Answer Option 4:

Final Answer: C

=====

Answer Option 5:

Final Answer: C

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Answer Option 6:

Final Answer: C

=====

Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 196:

'A 7-year-old male is brought to the office for evaluation of school problems. The mother says that the teacher has told her that the patient is inattentive, has difficulty following sequential instructions, and often seems to drift off to sleep during class. A polysomnogram reveals obstructive sleep apnea. The most appropriate management is', A. 'elevation of the head of the bed', B. 'heart rate and apnea monitoring', C. 'imipramine', D. 'surgical evaluation'

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Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: D

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Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 197:

'A previously healthy 19-year-old college student comes to student health services 24 hours after the onset of headache, stiff neck, and sensitivity to light. She does not recall any sick contacts. She had chickenpox at the age of 7 years. Her most recent examination 1 year ago included PPD skin testing and showed no abnormalities. She takes a daily multivitamin and an herbal weight-loss preparation. She received all appropriate immunizations during childhood but has not received any since then. She does not smoke, drink alcohol, or use illicit drugs. There is no family history of serious illness. She appears lethargic. Her temperature is 39.1°C (102.4°F), pulse is 112/min, respirations are 20/min, and blood pressure is 100/68 mm Hg. Examination shows diffuse petechiae. Kernig and Brudzinski signs are present. The remainder of the examination shows no abnormalities. A lumbar puncture is performed. Cerebrospinal fluid (CSF) analysis shows numerous segmented neutrophils and a decreased glucose concentration. A Gram stain of the CSF shows gram-negative cocci. Which of the following is the most appropriate pharmacotherapy?', A. 'Ceftriaxone', B. 'Clindamycin', C. 'Erythromycin', D. 'Metronidazole'

=====

Answer Option 1:

Final Answer: A

Answer Option 2:

Final Answer: A

Answer Option 3:

Final Answer: A

Answer Option 4:

Final Answer: A

Answer Option 5:

Final Answer: A

Answer Option 6:

Final Answer: A

Answer Option 7:

Final Answer: A

Answer Option 8:

Final Answer: A

Answer Option 9:

Final Answer: A

Question 198:

'A 55-year-old man has had crushing substernal chest pain on exertion over the past 6 weeks. He had a myocardial infarction 2 months ago. He takes nitroglycerin as needed and one aspirin daily. He has smoked two packs of cigarettes daily for 30 years. Examination shows normal heart sounds and no carotid or femoral bruits. Treatment with a β -adrenergic blocking agent is most likely to improve his symptoms due to which of the following mechanisms?', A. 'Decreasing myocardial contractility', B. 'Dilating the coronary arteries', C. 'Peripheral vasodilation', D. 'Preventing fibrin and platelet plugs'

=====

Answer Option 1:

Final Answer: A

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Answer Option 2:

Final Answer: A

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Answer Option 3:

Final Answer: A

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Answer Option 4:

Final Answer: A

=====

Answer Option 5:

Final Answer: A

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Answer Option 6:

Final Answer: A

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Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: A

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Question 199:

'A 78-year-old man, who underwent coronary angiography with stent placement 8 years ago, comes to the office for a routine health maintenance examination. The patient reports no new symptoms except for shortness of breath and fatigue during exercise that began 3 months ago when he tried to increase the distance of his daily walk from 1 mile to 3 miles. He has not had orthopnea, paroxysmal nocturnal dyspnea, or chest pain. Additional medical history is significant for hypertension, coronary artery disease, dyslipidemia, and polymyalgia rheumatica. The patient also has a heart murmur that was discovered at an armed forces screening physical examination at age 18 years, but it did not prevent him from serving in the military. Medications are metoprolol, atorvastatin, lisinopril, omeprazole, and a low dose of prednisone every other day. The patient is active and manages a small farm. BMI is 26 kg/m². Vital signs are temperature 37.0°C (98.6°F), pulse 60/min, respirations 18/min, and blood pressure 124/61 mm Hg. Cardiac examination discloses a normal S1, pronounced S2, and a grade 2/6 late systolic murmur heard at the right upper parasternal border. Pulses are normal in contour. Results of laboratory studies are within the reference ranges. ECG shows no abnormalities. Which of the following is the most appropriate next step in management?', A. 'Decrease the dose of metoprolol', B. 'Increase the dose of prednisone', C. 'Obtain serum vitamin D concentration', D. 'Order a transthoracic echocardiography'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 200:

'A 70-year-old woman comes to the office because of worsening tremor of her hands. The tremor has been present for most of her life and initially was mild and would occur only when she was tired or stressed. During the past month the shaking has become more noticeable and frequent. She is now embarrassed to eat with other people because of how obvious the tremor has become. The patient has been taking fluoxetine for the past 3 weeks to help her to cope with the death of her husband 2 months ago. Medical history is also remarkable for essential hypertension controlled with lisinopril and hyperlipidemia controlled with atorvastatin. Her only other medication is occasional ibuprofen for joint pain. She used to drink one to two alcoholic beverages monthly but now drinks one glass of wine daily because, she says, it reduces her tremor. She is 168 cm (5 ft 6 in) tall and weighs 70 kg (155 lb); BMI is 25 kg/m². Vital signs are temperature 36.4°C (97.6°F), pulse 80/min, respirations 18/min, and blood pressure 130/85 mm Hg. Physical examination shows a moderate tremor of both hands that is not present at rest. Complete blood count, serum chemistry profile, and serum thyroid function tests are ordered and results are pending. Which of the following is the most likely cause of the patient's worsening tremor?', A. 'Adverse effect of fluoxetine therapy', B. 'Bereavement reaction', C. 'Early Parkinson disease', D.

'Increase in alcohol consumption'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: A

Answer Option 5:

Final Answer: A

Answer Option 6:

Final Answer: A

Answer Option 7:

Final Answer: A

Answer Option 8:

Final Answer: A

Answer Option 9:

Final Answer: A

Question 201:

'An 18-year-old female presents to the office with a 3-day history of lower abdominal pain and a 2-day history of fever. She reports frequent unprotected sexual intercourse with different partners since she started college 4 months ago. Abdominal examination reveals suprapubic tenderness. Bimanual examination of the uterus reveals more intense tenderness. Swabs of cervical mucus are obtained. This patient should be given antimicrobial chemotherapy to provide treatment for', A. 'Candida albicans and Chlamydia trachomatis', B. 'Chlamydia trachomatis and Neisseria gonorrhoeae', C. 'Chlamydia trachomatis and Treponema pallidum', D. 'Gardnerella vaginalis and Mobiluncus species'

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Answer Option 1:

Final Answer: B

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Answer Option 2:

Final Answer: B

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Answer Option 3:

Final Answer: B

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Answer Option 4:

Final Answer: B

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Answer Option 5:

Final Answer: B

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Answer Option 6:

Final Answer: B

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Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 202:

'A 76-year-old man comes to the office because of early awakening at night. He has no difficulty falling asleep but routinely wakes up between 2:00 and 3:00 AM. The patient is a retired postal worker, and he has always been physically active. He has diabetes mellitus controlled by diet. The patient drinks one cup of coffee in the morning with breakfast and usually walks for exercise in the morning. Before retiring at night he has one alcoholic beverage. He has no history of depression, nightmares, or snoring and he takes no over-the-counter medications. His wife of 45 years is also in good health. Vital signs are temperature 37.1°C (98.8°F), pulse 96/min and regular, respirations 18/min, and blood pressure 135/90 mm Hg. Physical examination shows a well-nourished, well-developed man. He is not obese. Examination of the head and neck is normal; there are no bruits or jugular venous distention. Chest is clear, and heart is normal with S1 and S2. Abdomen is soft and nontender with active bowel sounds and no organomegaly. Rectal examination discloses no abnormalities. Which of the following is the most appropriate management of this patient's insomnia?', A. 'Advise the patient to discontinue his bedtime drink of alcohol', B. 'Advise the patient to read and snack in bed to relax', C. 'Prescribe a vigorous pre-bedtime exercise regimen', D. 'Prescribe sertraline'

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Answer Option 1:

Final Answer: A

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Answer Option 2:

Final Answer: A

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Answer Option 3:

Final Answer: A

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Answer Option 4:

Final Answer: A

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Answer Option 5:

Final Answer: A

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Answer Option 6:

Final Answer: A

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Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: A

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Question 203:

'A 15-year-old girl is brought to the physician 3 months after she had a blood pressure of 150/95 mm Hg at a routine examination prior to participation in school sports. She is asymptomatic and has no history of serious illness. Twelve months ago, she was diagnosed with a urinary tract infection and treated with oral trimethoprim-sulfamethoxazole. She currently takes no medications. Subsequent blood pressure measurements on three separate occasions since the last visit have been: 155/94 mm Hg, 145/90 mm Hg, and 150/92 mm Hg. She is at the 50th percentile for height and 95th percentile for weight. Her blood pressure today is 150/90 mm Hg confirmed by a second measurement, pulse is 80/min, and respirations are 12/min. Examination shows no other abnormalities. Her hematocrit is 40%. Urinalysis is within normal limits. Cardiac and renal ultrasonography shows no abnormalities. Which of the following is the most appropriate next step in management?', A. 'Exercise and weight reduction program', B.

'Measurement of urine catecholamine concentrations', C. 'Measurement of urine corticosteroid concentrations', D. 'Captopril therapy'

=====

Answer Option 1:

Final Answer: A

Answer Option 2:

Final Answer: A

Answer Option 3:

Final Answer: B

Answer Option 4:

Final Answer: B

Answer Option 5:

Final Answer: A

Answer Option 6:

Final Answer: B

Answer Option 7:

Final Answer: A

Answer Option 8:

Final Answer: B

Answer Option 9:

Final Answer: B

Question 204:

'A previously healthy 14-year-old girl is brought to the physician because of a 2-day history of fever and pain and swelling of the right knee. She remembers injuring the knee while playing soccer last week, but she was able to finish the game. She has no history of rash or joint pain. Her sister has inflammatory bowel disease. The patient's temperature is 39°C (102.2°F), blood pressure is 110/80 mm Hg, pulse is 95/min, and respirations are 20/min. Examination of the right knee shows swelling, tenderness, warmth, and erythema; range of motion is limited. Which of the following is the most appropriate next step in management?', A. 'Nuclear scan of the right knee', B. 'MRI of the right knee', C. 'Antibiotic therapy', D. 'Arthrocentesis'

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Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 205:

'A 14-year-old boy is brought to the physician because of a 2-day history of a sore throat and fever that peaks in the late afternoon. He also has a 1-week history of progressive fatigue. He recently began having unprotected sexual intercourse with one partner. He appears ill. His temperature is 39°C (102.2°F). Physical examination shows cervical lymphadenopathy and pharyngeal erythema with a creamy exudate. Which of the following is the most likely diagnosis?', A. 'Candidiasis', B. 'Herpangina', C. 'Infectious mononucleosis', D. 'Mumps'

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Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: C

=====

Answer Option 4:

Final Answer: C

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Answer Option 5:

Final Answer: C

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Answer Option 6:

Final Answer: C

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Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 206:

'A 1-year-old male is brought to the emergency department with blistered fresh burns over his hands and feet in a stocking and glove distribution. His mother reports that he was accidentally burned when he turned on the hot water in the bathtub while she was answering the telephone in the bedroom. In addition to debridement of the burns, pain management, a thorough history and physical examination, and baseline laboratory studies, the most appropriate next step is to', A. 'administer a 5% albumin infusion', B. 'administer intravenous steroids', C. 'contact child protective services', D. 'discharge the patient home with his parents'

=====

Answer Option 1:

Final Answer: C

Answer Option 2:

Final Answer: C

Answer Option 3:

Final Answer: C

Answer Option 4:

Final Answer: C

Answer Option 5:

Final Answer: C

Answer Option 6:

Final Answer: C

Answer Option 7:

Final Answer: C

Answer Option 8:

Final Answer: C

Answer Option 9:

Final Answer: C

Question 207:

'A 42-year-old man comes to the physician because of malaise, muscle and joint pain, and temperatures to 38.4°C (101.1°F) for 3 days. Three months ago, he underwent cadaveric renal transplantation resulting in immediate kidney function. At the time of discharge, his serum creatinine concentration was 0.8 mg/dL. He is receiving cyclosporine and corticosteroids. Examination shows no abnormalities. His leukocyte count is 2700/mm³, and serum creatinine concentration is 1.6 mg/dL; serum cyclosporine concentration is in the therapeutic range. A biopsy of the transplanted kidney shows intracellular inclusion bodies. Which of the following is the most appropriate next step in management?', A. 'Increase the dosage of corticosteroids', B. 'Increase the dosage of cyclosporine', C. 'Begin amphotericin therapy', D. 'Begin ganciclovir therapy'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 208:

'During a clinical study examining the effects of exercise, men between the ages of 20 and 30 years are evaluated during a 15- minute session on a treadmill. The average pulse for the last 2 minutes of the session is 175/min. During the last minute of exercise, various measurements are taken. Compared with the measurement before the session, which of the following is most likely to be decreased?', A. 'Pulse pressure', B. 'Stroke volume', C. 'Systolic blood pressure', D. 'Total peripheral resistance'

=====

Answer Option 1:

Final Answer: B

=====

Answer Option 2:

Final Answer: C

=====

Answer Option 3:

Final Answer: D

=====

Answer Option 4:

Final Answer: D

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Answer Option 5:

Final Answer: C

=====

Answer Option 6:

Final Answer: A

=====

Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: C

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Question 209:

'A 22-year-old man is brought to the emergency department 30 minutes after he sustained a gunshot wound to the abdomen. His pulse is 120/min, respirations are 28/min, and blood pressure is 70/40 mm Hg. Breath sounds are normal on the right and decreased on the left. Abdominal examination shows an entrance wound in the left upper quadrant at the midclavicular line below the left costal margin. There is an exit wound laterally in the left axillary line at the 4th rib. Intravenous fluid resuscitation is begun. Which of the following is the most appropriate next step in management?', A. 'CT scan of the chest', B. 'Intubation and mechanical ventilation', C. 'Peritoneal lavage', D. 'Left tube thoracostomy'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 210:

'A 31-year-old woman, gravida 3, para 2, who is at 32 weeks' gestation, is admitted to the hospital because of a 1-week history of progressive dyspnea and wheezing. She says her heart is "racing" and she is coughing up a small amount of bloodstreaked sputum. Medical history is significant for hypothyroidism, for which she takes levothyroxine. An intravenous catheter is placed. Vital signs are temperature 36.9°C (98.4°F), pulse 132/min, respirations 32/min, and blood pressure 135/78 mm Hg. Pulse oximetry on 100% oxygen via nasal cannula shows an oxygen saturation of 92%. Auscultation of the lungs discloses decreased breath sounds at the bases with expiratory crackles bilaterally. Cardiac examination discloses an irregularly irregular rhythm, an indistinct point of maximal impulse, and a loud S1. A grade 3/6, low-pitched, diastolic, rumbling murmur is audible at the apex; a distinct snapping sound precedes the murmur. Fetal heart rate is 144/min. Which of the following is the most likely cause of the findings in this patient?', A. 'Chronic mitral regurgitation secondary to rheumatic heart disease', B. 'Coarctation of the aorta', C. 'Congenital aortic stenosis', D. 'Mitral stenosis complicated by atrial fibrillation'

=====

Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

=====

Answer Option 4:

Final Answer: D

=====

Answer Option 5:

Final Answer: D

=====

Answer Option 6:

Final Answer: D

=====

Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 211:

'A 47-year-old man comes to the physician 12 hours after the sudden onset of a severe occipital headache and stiff neck. He has not had any other symptoms and has no history of severe headache. He has hypertension and gastroesophageal reflux disease. Current medications include hydrochlorothiazide and ranitidine. He is oriented to person, place, and time. His temperature is 36.7°C (98.1°F), pulse is 100/min, and blood pressure is 160/90 mm Hg. Range of motion of the neck is decreased due to pain. Neurologic examination shows no focal findings. Which of the following is the most likely diagnosis?', A. 'Cluster headache', B. 'Meningitis', C. 'Migraine', D. 'Subarachnoid hemorrhage'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: B

Answer Option 4:

Final Answer: B

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 212:

'A 10-year-old girl is brought to the office by her mother because her school nurse thinks that she may have Marfan syndrome. She is at the 95th percentile for height and 25th percentile for weight. Physical examination shows a narrow palate with dental crowding, long slender extremities, and joint laxity. Molecular testing for FBN1 shows a single nucleotide difference that does not change the amino acid at that locus. Her mother is 163 cm (5 ft 4 in) tall. There is no clinical evidence of Marfan syndrome in the mother, but she has the same single nucleotide change as the patient. The same nucleotide change is found in 15 of 200 individuals without Marfan syndrome. Which of the following best describes the single nucleotide change in the patient and her mother?', A. 'It is a disease-causing mutation in the patient and her mother', B. 'It is a polymorphism', C. 'It is a sequence variant of unknown significance', D. 'It will change the folding of the protein'

=====

Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: C

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Answer Option 4:

Final Answer: C

=====

Answer Option 5:

Final Answer: C

=====

Answer Option 6:

Final Answer: C

=====

Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: C

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Question 213:

'A 50-year-old woman comes to the office for the first time because of recurrent abdominal pain. Review of her extensive medical chart, which she has brought with her, discloses that she has a long history of varying physical symptoms. Definitive causes for these symptoms have not been found despite extensive diagnostic studies, consultations with many physicians, and several surgical explorations. She gives dramatic and exaggerated descriptions of her present and past symptoms, and she makes conflicting statements about her history. She has been hospitalized at least 23 times since age 18 years. Which of the following is the most likely diagnosis?', A. 'Conversion disorder', B. 'Histrionic personality disorder', C. 'Occult medical disorder', D. 'Somatic symptom disorder'

=====

Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

=====

Answer Option 4:

Final Answer: D

=====

Answer Option 5:

Final Answer: A

=====

Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 214:

'A 5-year-old boy returns to the office with his 19-year-old mother to discuss results of studies done to evaluate his behavior of eating dirt. The patient sits quietly while his mother answers questions about his health. She says her son seems healthy, although he does not seem to be as active as other children his age. He has said his head hurts three or four times during the past 2 weeks. He has not had fever, sweats, or chills. She says he has a good appetite but has had a habit of eating sand and dirt since age 3 years. She says, "I don't know where he gets that habit. I used to eat dirt, but I stopped years ago. I try to stop him from eating dirt, but I'm not around much since I work two jobs." The patient takes no medications. Vaccinations are upto-date. Height, weight, and BMI are at the 50th percentile. Vital signs are normal. Physical examination discloses no abnormalities except for symmetrical nontender cervical adenopathy. Results of laboratory studies, including serum zinc, lead, and iron concentrations, are within the reference ranges. Serologic testing confirms toxoplasmosis. In addition to prescribing pyrimethamine and sulfadiazine therapy, which of the following is the most appropriate next step in management?', A. 'Prescribe fluoxetine', B. 'Prescribe methylphenidate', C. 'Prescribe risperidone', D. 'Refer the patient to a child psychiatrist'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 215:

'A 32-year-old man and his 29-year-old wife come to the office for evaluation for infertility. The wife's gynecologist has reported that her anatomic and physiologic evaluation disclosed no abnormalities and that assessment of potential male factors is needed. The husband is 188 cm (6 ft 3 in) tall with fair skin and little facial hair. He has mild gynecomastia and small, firm testicles. No sperm are seen on semen analysis. Which of the following tests is most likely to establish the underlying cause of this couple's infertility?', A. 'Karyotype from peripheral leukocytes', B. 'Serum estrogen and testosterone concentrations', C. 'Serum follicle-stimulating hormone and luteinizing hormone concentrations', D. 'Serum prolactin concentration'

=====

Answer Option 1:

Final Answer: C

Answer Option 2:

Final Answer: C

Answer Option 3:

Final Answer: C

Answer Option 4:

Final Answer: C

Answer Option 5:

Final Answer: C

Answer Option 6:

Final Answer: C

Answer Option 7:

Final Answer: C

Answer Option 8:

Final Answer: C

Answer Option 9:

Final Answer: C

Question 216:

'A 28-year-old man comes to the office because he would like to quit smoking cigarettes. He says, "I cannot go more than a day without cigarettes because I get so anxious and irritable. I even wake up at night to smoke." The patient began smoking cigarettes at age 12 years; he was smoking two packs of cigarettes daily by age 17 years, and he has not curtailed his use since that time. He does not drink alcoholic beverages or use illicit drugs. Medical history is remarkable for childhood febrile seizures. He takes no medications. Vital signs are normal. The patient is interested in using a nicotine patch and bupropion therapy because he says his friend found the treatments to be helpful. In combining these two therapies, this patient is at greatest risk for which of the following?', A. 'Hypertension', B. 'Polyuria', C. 'Renal insufficiency', D. 'The patient is at no increased risk'

=====

Answer Option 1:

Final Answer: A

Answer Option 2:

Final Answer: A

Answer Option 3:

Final Answer: A

Answer Option 4:

Final Answer: A

Answer Option 5:

Final Answer: A

Answer Option 6:

Final Answer: A

Answer Option 7:

Final Answer: A

Answer Option 8:

Final Answer: A

Answer Option 9:

Final Answer: A

Question 217:

'A 40-year-old male presents to the office with symptoms of odynophagia and gastroesophageal reflux. He also says that he experienced hematemesis once last week. Past medical history reveals AIDS, and his most recent CD4 count was 30 cells/mcL. The patient's tilt test result and hemoglobin level are normal. Rectal examination demonstrates brown stool that is positive for occult blood. What is the most appropriate initial step in this patient's management?', A. 'prescription for a proton pump inhibitor and a prokinetic agent', B. 'prescription for an H2-blocker trial for 6 weeks', C. 'prescription for clotrimazole troches', D. 'referral for an upper endoscopy with biopsy'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 218:

'A 55-year-old man comes to the physician for a routine physical examination. He is currently taking no medications. His pulse is 80/min, and blood pressure is 165/95 mm Hg. Physical examination shows no other abnormalities. The presence of which of the following mechanisms is most likely to increase this patient's blood pressure further?', A. 'Decreased cardiac output', B. 'Decreased pulse', C. 'Decreased stroke volume', D. 'Increased peripheral vascular resistance'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 219:

'A 54-year-old man comes to the physician for a follow-up examination 10 days after undergoing a stereotactic brain operation to remove a small tumor. The operation was successful. During the procedure, he was under conscious sedation. The patient recalls that at one point during the operation he experienced a sudden, intense feeling of overwhelming fear. Which of the following areas of the brain was most likely stimulated at that time?', A. 'Amygdala', B. 'Hippocampus', C. 'Mammillary body', D. 'Prefrontal cortex'

=====

Answer Option 1:

Final Answer: A

=====

Answer Option 2:

Final Answer: A

=====

Answer Option 3:

Final Answer: A

=====

Answer Option 4:

Final Answer: A

=====

Answer Option 5:

Final Answer: A

=====

Answer Option 6:

Final Answer: A

=====

Answer Option 7:

Final Answer: A

=====

Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: A

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Question 220:

'A 5-year-old boy is brought to the physician because of a 2-day history of fever and painful swelling of the left ankle. He has had recurrent cervical lymphadenitis and pneumonia since infancy. Two years ago, a culture from an abscess in the cervical region grew *Staphylococcus aureus*. His temperature is 38°C (100.4°F). Examination shows a tender, erythematous, edematous left ankle; there is point tenderness over the medial malleolus. A bone scan shows increased uptake in the left lower tibial metaphysis. Culture of bone aspirate grows *Serratia marcescens*. Nitroblue tetrazolium test shows no color change. Which of the following is the most likely mechanism for these findings?', A. 'Developmental arrest of maturation of B lymphocytes', B. 'Dysmorphogenesis of the third and fourth pharyngeal pouches', C. 'Impaired chemotaxis', D. 'Impaired phagocytic oxidative metabolism'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 221:

'A placebo-controlled clinical trial is conducted to assess whether a new antihypertensive drug is more effective than standard therapy. A total of 5000 patients with essential hypertension are enrolled and randomly assigned to one of two groups: 2500 patients receive the new drug and 2500 patients receive placebo. If the alpha is set at 0.01 instead of 0.05, which of the following is the most likely result?', A. 'Significant findings can be reported with greater confidence', B. 'The study will have more power', C. 'There is a decreased likelihood of a Type II error', D. 'There is an increased likelihood of statistically significant findings'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: C

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: C

Answer Option 8:

Final Answer: C

Answer Option 9:

Final Answer: A

Question 222:

'A 25-year-old man is brought to the emergency department because of a 6-day history of fever, severe muscle pain, and diffuse, painful swelling of his neck, underarms, and groin area. The symptoms began after returning from a camping trip in New Mexico. He appears ill and lethargic and can barely answer questions. His temperature is 39.2°C (102.5°F), pulse is 120/min, respirations are 22/min, and blood pressure is 110/70 mm Hg. Physical examination shows generalized scattered black maculae. Examination of the right upper extremity shows an erythematous, solid, tender mass on the underside of the upper extremity just above the elbow; the mass is draining blood and necrotic material. The most effective antibiotic for this patient's disorder will interfere with which of the following cellular processes or enzymes?'. A. 'DNA helicase', B. 'Glucuronosyltransferase', C. 'Proteasomal degradation', D. 'Ribosomal assembly'

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Answer Option 1:

Final Answer: A

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Answer Option 2:

Final Answer: D

=====

Answer Option 3:

Final Answer: D

=====

Answer Option 4:

Final Answer: D

=====

Answer Option 5:

Final Answer: D

=====

Answer Option 6:

Final Answer: D

=====

Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: A

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Question 223:

'A 26-year-old woman with HIV infection comes to the office because of a 4-day history of pain and redness of her left lower leg. She says the symptoms began after she tripped over a tree branch in her yard and scraped her left leg. Current medications include antiretroviral therapy and ibuprofen as needed. Vital signs are temperature 38.3°C (100.9°F), pulse 86/min, respirations 14/min, and blood pressure 138/70 mm Hg. There is a 5x8-cm area on the anterior surface of her left lower extremity that is swollen, erythematous, and tender. She previously has developed a rash after taking erythromycin, and she has had an anaphylactic response to penicillin. Which of the following antibiotic therapies is most appropriate for this patient?', A. 'Amoxicillin', B. 'Ciprofloxacin', C. 'Clarithromycin', D. 'Clindamycin'

=====

Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

=====

Answer Option 3:

Final Answer: D

=====

Answer Option 4:

Final Answer: D

=====

Answer Option 5:

Final Answer: D

=====

Answer Option 6:

Final Answer: D

=====

Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 224:

'A 35-year-old woman comes to the physician because of two 12-hour episodes of dizziness over the past 3 months. During episodes, she experiences the acute onset of rotatory vertigo and imbalance, decreased hearing, tinnitus, a sense of fullness of the right ear, and vomiting. Examination shows a mild hearing loss of the right ear. Which of the following is the most likely diagnosis?', A. 'Acoustic neuroma', B. 'Benign positional vertigo', C. 'Brain stem transient ischemic attacks', D. 'Meniere's disease'

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Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: D

=====

Answer Option 5:

Final Answer: D

=====

Answer Option 6:

Final Answer: D

=====

Answer Option 7:

Final Answer: D

=====

Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 225:

'A 22-year-old woman comes to the emergency department because of a 5-day history of sore throat and fever. During the past 3 days, she also has noticed a change in her voice and has had increased pain with swallowing. She has been taking acetaminophen since her symptoms began. Medical history is unremarkable and she takes no routine medications. Vital signs are temperature 40.0°C (104.0°F), pulse 130/min, respirations 18/min, and blood pressure 102/66 mm Hg. Pulse oximetry on room air shows an oxygen saturation of 97%. Examination of the oropharynx shows erythema, edema, and anterior displacement of the right side of the soft palate. The uvula is deviated to the left. There is a white exudate on the right tonsil. Trismus is noted. Palpation of the neck discloses enlarged, tender, mobile anterior cervical lymph nodes. In addition to antibiotic therapy, which of the following is the most appropriate management?', A. 'Incision and drainage', B. 'Intravenous methylprednisolone therapy', C. 'Oral nystatin therapy', D. 'Salt water gargle'

=====

Answer Option 1:

Final Answer: A

Answer Option 2:

Final Answer: A

Answer Option 3:

Final Answer: A

Answer Option 4:

Final Answer: A

Answer Option 5:

Final Answer: A

Answer Option 6:

Final Answer: A

Answer Option 7:

Final Answer: A

Answer Option 8:

Final Answer: A

Answer Option 9:

Final Answer: A

Question 226:

'A 45-year-old female presents to the office for evaluation of unexplained elevations of her blood pressure. Paroxysmal episodes of headache, sweating, anxiety, nausea, and vomiting occur frequently. A CT scan reveals a left adrenal mass. Which of the following urinary assays will be most helpful in establishing this patient's diagnosis?', A. 'cortisol', B. 'glucose', C. 'sodium', D. 'vanillylmandelic acid'

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Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

=====

Answer Option 3:

Final Answer: D

=====

Answer Option 4:

Final Answer: D

=====

Answer Option 5:

Final Answer: D

=====

Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 227:

'A 24-year-old man is brought to the emergency department 40 minutes after he was involved in a motor vehicle collision. He was the unrestrained driver. He is conscious. Physical examination shows numerous lacerations and ecchymoses over the face. His vision is normal. Ocular, facial, and lingual movements are intact. The gag reflex is present. Sensation to pinprick is absent over the right side of the face anterior to the right ear, extending down along the full extent of the mandible to the chin. Sensation also is absent over the right side of the tongue. X-rays of the skull show fractures of the orbit, zygomatic arch, and infratemporal fossa. The most likely cause of these findings is a fracture affecting which of the following locations?', A. 'Foramen lacerum', B. 'Foramen ovale', C. 'Foramen rotundum', D. 'Foramen spinosum'

=====

Answer Option 1:

Final Answer: B

Answer Option 2:

Final Answer: B

Answer Option 3:

Final Answer: C

Answer Option 4:

Final Answer: B

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: B

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: B

Answer Option 9:

Final Answer: A

Question 228:

'A 3-week-old male infant is brought to the office by his mother because of a 2-day history of white lesions in the mouth. The infant was born at term via uncomplicated spontaneous vaginal delivery; he has been breast-feeding well and is urinating and having bowel movements normally. At birth, he weighed 3289 g (7 lb 4 oz; 30th percentile). Today, he weighs 3629 kg (8 lb; 25th percentile). He appears adequately hydrated. Vital signs are normal. Physical examination discloses white patches on the tongue and buccal mucosa that do not come off when gently scraped with a tongue blade. Which of the following is the most appropriate pharmacotherapy?', A. 'Acyclovir', B. 'Fluconazole', C. 'Nystatin', D. 'Valacyclovir'

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Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: C

=====

Answer Option 4:

Final Answer: C

=====

Answer Option 5:

Final Answer: C

=====

Answer Option 6:

Final Answer: C

=====

Answer Option 7:

Final Answer: C

=====

Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 229:

'A 45-year-old man comes to the physician because of right shoulder pain that began after he chopped wood 2 days ago. Examination of the right upper extremity shows no obvious bone deformities or point tenderness. The pain is reproduced when the patient is asked to externally rotate the shoulder against resistance; there is no weakness. In addition to the teres minor, inflammation of which of the following tendons is most likely in this patient?', A. 'Infraspinatus', B. 'Pectoralis', C. 'Subscapularis', D. 'Supraspinatus'

=====

Answer Option 1:

Final Answer: A

Answer Option 2:

Final Answer: A

Answer Option 3:

Final Answer: A

Answer Option 4:

Final Answer: A

Answer Option 5:

Final Answer: A

Answer Option 6:

Final Answer: A

Answer Option 7:

Final Answer: A

Answer Option 8:

Final Answer: A

Answer Option 9:

Final Answer: A

Question 230:

'A 67-year-old woman comes to the physician because of easy bruising for 4 months. She has a history of lung cancer treated with radiation therapy 6 months ago. She has a 2-year history of hypertension treated with a thiazide diuretic and an angiotensin-converting enzyme (ACE) inhibitor. Examination, including neurologic examination, shows no abnormalities except for multiple ecchymoses. Her hemoglobin concentration is 13 g/dL, leukocyte count is 5000/mm³, and platelet count is 35,000/mm³. A serum antiplatelet antibody assay is negative. Which of the following is the most appropriate next step in diagnosis?', A. 'CT scan of the abdomen', B. 'CT scan of the chest', C. 'Bronchoscopy', D. 'Bone marrow aspiration'

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Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: D

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Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 231:

'A 16-year-old girl is brought to the office by her mother because she is concerned that she may have contracted meningitis from her soccer teammate, who was diagnosed with meningococcal meningitis and admitted to the hospital yesterday. The patient's soccer team traveled to a neighboring state to participate in a tournament 1 week ago and she shared a hotel room with the girl who was hospitalized. The patient feels well but is concerned she may have "caught the same bug." Medical history is remarkable for asthma. Medications include inhaled albuterol. Vital signs are temperature 37.2°C (98.9°F), pulse 64/min, respirations 16/min, and blood pressure 107/58 mm Hg. Physical examination shows no abnormalities. Which of the following is the most appropriate intervention for this patient at this time?', A. 'Administer the meningococcal vaccine', B. 'Prescribe doxycycline', C. 'Prescribe penicillin', D. 'Prescribe rifampin'

=====

Answer Option 1:

Final Answer: D

=====

Answer Option 2:

Final Answer: A

=====

Answer Option 3:

Final Answer: D

=====

Answer Option 4:

Final Answer: D

=====

Answer Option 5:

Final Answer: D

=====

Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: A

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Question 232:

'A 19-year-old woman comes to the emergency department because, she says, "I'm burning up." Medical history is significant for intravenous drug use. Physical examination discloses a systolic heart murmur over the precordium. An expected physical finding will be which of the following?', A. 'Decreased intensity of S1', B. 'Increased intensity of the murmur with deep inspiration', C. 'Increased intensity of the murmur with forced expiration', D. 'Positive Kussmaul sign (rise in jugular venous pulse with inspiration)'

=====

Answer Option 1:

Final Answer: B

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Answer Option 2:

Final Answer: B

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Answer Option 3:

Final Answer: B

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Answer Option 4:

Final Answer: B

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Answer Option 5:

Final Answer: B

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Answer Option 6:

Final Answer: B

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Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: A

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Question 233:

'A 26-year-old male police officer comes to the office for an annual health maintenance examination. He is physically active and feels well, but he notes that his asthma has been more active during the past month. He says that he has had to use his albuterol inhaler one to two times daily for wheezing and chest tightness. He has not had gastroesophageal reflux symptoms, productive cough, or fever. Medical history is remarkable for atopic allergies, especially to pollen and cats. He has had cold and exercise-induced asthma for the past 14 years. He takes no other medications. He is 188 cm (6 ft 2 in) tall and weighs 90 kg (200 lb); BMI is 25 kg/m². Vital signs are temperature 37.0°C (98.6°F), pulse 70/min, respirations 12/min, and blood pressure 120/76 mm Hg. Physical examination shows no abnormalities except for scattered rhonchi and wheezes with forced expiration. Peak expiratory flow rate is 240 L/min. Which of the following is the most appropriate management?', A. 'Chest x-ray', B. 'Fexofenadine therapy', C. 'Increased use of the albuterol inhaler', D. 'Initiation of a daily corticosteroid inhaler'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 234:

'A previously healthy 15-year-old boy is brought to the emergency department in August 1 hour after the onset of headache, dizziness, nausea, and one episode of vomiting. His symptoms began during the first hour of full-contact football practice in full uniform. He reported feeling weak and faint but did not lose consciousness. He vomited once after drinking water. On arrival, he is diaphoretic. He is not oriented to person, place, or time. His temperature is 39.5°C (103.1°F), pulse is 120/min, respirations are 40/min, and blood pressure is 90/65 mm Hg. Examination, including neurologic examination, shows no other abnormalities. Which of the following is the most appropriate next step in management?', A. 'Obtain a CT scan of the head', B. 'Administer sodium chloride tablets', C. 'Administer intravenous fluids', D.

'Immerse the patient in an ice water bath'

=====

Answer Option 1:

Final Answer: C

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: C

Answer Option 7:

Final Answer: C

Answer Option 8:

Final Answer: C

Answer Option 9:

Final Answer: D

Question 235:

'A new severe respiratory illness caused by a newly identified virus is discovered. Which of the following properties of a killed vaccine relative to a live vaccine is the most appropriate rationale for developing a killed vaccine for this illness?'. A. 'Avoids the concern for reversion to virulence', B. 'Develops more rapid protective immunity', C. 'Is less likely to require subsequent boosters for lifelong immunity', D. 'Is most likely to generate mucosal immunity'

=====

Answer Option 1:

Final Answer: A

Answer Option 2:

Final Answer: A

Answer Option 3:

Final Answer: A

Answer Option 4:

Final Answer: A

Answer Option 5:

Final Answer: A

Answer Option 6:

Final Answer: A

Answer Option 7:

Final Answer: A

Answer Option 8:

Final Answer: A

Answer Option 9:

Final Answer: A

Question 236:

'A 43-year-old man with a history of self-mutilation comes to the emergency department because of pain in his right thigh and shaking chills during the past 3 days. He says he intentionally burned his right thigh several times with a cigarette lighter 6 days ago. This morning he soaked his thigh in a tub of hot water and massaged it, after which a large amount of "greenish fluid" drained from the wound sites. The patient normally takes lithium carbonate but stopped 3 months ago after he lost his job. Medical history is otherwise unremarkable. Vital signs are temperature 39.2°C (102.5°F), pulse 170/min, respirations 18/min, and blood pressure 120/60 mm Hg. Physical examination shows an edematous right lateral thigh with multiple burn sites with a white exudative appearance. There is erythema surrounding the burn areas with red streaks extending up the thigh. Palpation of the burn sites discloses fluctuance. Results of laboratory studies show a hemoglobin concentration of 14 g/dL and a leukocyte count of 19,000/mm³. In addition to beginning antibiotic therapy, which of the following is the most appropriate next step?', A. 'Incision and drainage', B. 'Psychiatric consultation', C. 'Topical silver sulfadiazine', D. 'Transfer to a burn center'

=====

Answer Option 1:

Final Answer: A

Answer Option 2:

Final Answer: A

Answer Option 3:

Final Answer: A

Answer Option 4:

Final Answer: A

Answer Option 5:

Final Answer: A

Answer Option 6:

Final Answer: A

Answer Option 7:

Final Answer: A

Answer Option 8:

Final Answer: A

Answer Option 9:

Final Answer: A

Question 237:

'A 32-year-old man comes to the physician because he has had difficulty focusing on tasks at work and at home during the past 2 months. He works as an automobile mechanic. He has had a lot of energy for work but often is distracted to the point that he does not complete assigned tasks. He frequently stops working on his own tasks to attempt to develop greater efficiency in his shop. He states that he is delighted with his newfound energy and reports that he now needs only 4 hours of sleep nightly. He has no history of psychiatric illness. He always performed well in school. He has a history of drinking alcohol excessively and using methamphetamines and cocaine during his 20s, but he has not consumed alcohol or used illicit drugs for the past 3 years. His temperature is 37°C (98.6°F), pulse is 60/min, and blood pressure is 125/80 mm Hg. Physical examination shows no abnormalities. On mental status examination, he describes his mood as "good." He has a labile affect. His speech is rapid in rate but normal in rhythm, and his thought process is organized. Short- and long-term memory are intact. Attention and concentration are fair; he makes no errors when performing serial sevens, and he can repeat seven digits forward and five in reverse sequence. He has had no delusions or hallucinations. Which of the following is the most likely diagnosis?', A. 'Antisocial personality disorder', B. 'Attention-deficit/hyperactivity disorder', C. 'Bipolar disorder', D. 'Borderline personality disorder'

=====

Answer Option 1:

Final Answer: C

Answer Option 2:

Final Answer: C

Answer Option 3:

Final Answer: C

Answer Option 4:

Final Answer: C

Answer Option 5:

Final Answer: C

Answer Option 6:

Final Answer: C

Answer Option 7:

Final Answer: C

Answer Option 8:

Final Answer: C

Answer Option 9:

Final Answer: C

Question 238:

'A 72-year-old woman comes to the physician because of a 2-month history of painless swelling of both ankles. She also reports shortness of breath with exertion and when lying down. She has been awakened from sleep by shortness of breath. She has not had chest pain. Her pulse is 96/min and regular, respirations are 24/min, and blood pressure is 128/76 mm Hg. Jugular venous pressure is 15 cm H2O. Pulmonary examination shows crackles at both lung bases. Cardiac examination shows a regular rhythm and a soft S3. A grade 3/6 holosystolic murmur is heard best at the apex, radiating to the axilla. There is 2+ pitting edema of the lower legs and ankles. Which of the following is most likely to confirm the diagnosis?', A. 'Measurement of serum troponin I concentration', B. 'ECG', C. 'Exercise stress test', D. 'Echocardiography'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 239:

'A 32-year-old man who is a jackhammer operator comes to the physician because of pain and swelling of his right arm for 3 days. The symptoms are moderately exacerbated by exertion. Examination of the right upper extremity shows erythema and moderate edema. Capillary refill time is less than 3 seconds. Which of the following is the most likely diagnosis?', A. 'Axillary-subclavian venous thrombosis', B. 'Deep venous valvular insufficiency', C. 'Superficial thrombophlebitis of the basilic vein', D. 'Superior vena cava syndrome'

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Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: C

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Answer Option 4:

Final Answer: C

=====

Answer Option 5:

Final Answer: C

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Answer Option 6:

Final Answer: C

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Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 240:

'A 63-year-old woman is in the hospital recovery room 4 hours after elective left hemicolectomy for colon carcinoma at the splenic flexure. She has a preoperative written directive for no blood products through transfusion for religious reasons. Medical history is significant for hypertension and coronary artery disease. The nurse tells you the patient's blood pressure has progressively declined since the operation. Vital signs now are temperature 35.8°C (96.4°F), pulse 130/min, respirations 20/min, and blood pressure 80/50 mm Hg. Physical examination discloses a slightly distended abdomen with an intact incision. ECG shows sinus tachycardia. Urine output has been 10 mL during the past 2 hours. Hematocrit is 30%; preoperative hematocrit was 41%. The patient has received 4 L of intravenous crystalloid in the recovery room. Reported operative blood loss was 200 mL. Drainage from the nasogastric tube is clear. Damage to which of the following structures is most likely responsible for these findings?', A.

'Epigastric artery', B. 'Liver', C. 'Middle colic artery', D. 'Spleen'

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Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: C

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Answer Option 4:

Final Answer: C

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Answer Option 5:

Final Answer: C

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Answer Option 6:

Final Answer: C

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Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 241:

'A 30-year-old woman comes to the physician because of a 2-day history of abdominal pain. She has a history of recurrent upper respiratory tract infections, sinusitis, and pancreatitis. She has thick nasal secretions. She says that her sweat is salty and crystallizes on her skin. Her vital signs are within normal limits. Physical examination shows epigastric tenderness. Genetic testing for the 36 most common mutations shows a detectable mutation (G551D) in one allele of the CFTR gene. Which of the following best explains this patient's clinical phenotype?', A. 'Only one G551D allele is needed in CFTR', B. 'The patient is a CFTR obligate carrier', C. 'The patient's CFTR mutation is unrelated to her clinical phenotype', D. 'The second CFTR mutation was not detected by the testing obtained'

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Answer Option 1:

Final Answer: A

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Answer Option 2:

Final Answer: A

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Answer Option 3:

Final Answer: A

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Answer Option 4:

Final Answer: A

=====

Answer Option 5:

Final Answer: A

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Answer Option 6:

Final Answer: A

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Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: A

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Question 242:

'A 27-year-old man is brought to the emergency department by his sister because of increasing confusion for 10 hours. He is unable to answer questions. His sister states that he recently saw a psychiatrist for the first time because of hearing voices; he was prescribed a medication, but she is not sure what it is. She says that he has a history of excessive drinking, and she thinks that he has also experimented with illicit drugs. He appears acutely ill. His temperature is 39.1°C (102.3°F), pulse is 124/min, and blood pressure is 160/102 mm Hg. Examination shows profuse diaphoresis and muscle rigidity. His neck is supple. The abdomen is soft and nontender. Mental status examination shows psychomotor agitation alternating with lethargy. His leukocyte count is 15,600/mm³, and serum creatine kinase activity is 943 U/L. Which of the following is the most likely explanation for this patient's symptoms?', A. 'Amphetamine intoxication', B. 'Bacterial meningitis', C. 'Delirium tremens', D. 'Neuroleptic malignant syndrome'

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Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: D

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Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 243:

'A 16-year-old boy is admitted to the emergency department because of a knife wound to the left side of his chest. An x-ray of the chest shows an air-fluid level in the left side of the chest, partial collapse of the left lung, and elevation of the stomach bubble. The mediastinum is in the midline. Which of the following is the most likely diagnosis?', A. 'Hemopneumothorax, not under tension', B. 'Hemothorax, not under tension', C. 'Pneumothorax, not under tension', D. 'Tension hemopneumothorax'

=====

Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: A

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Answer Option 3:

Final Answer: A

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Answer Option 4:

Final Answer: C

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Answer Option 5:

Final Answer: C

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Answer Option 6:

Final Answer: C

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Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: A

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Question 244:

'A 72-year-old man is admitted to the intensive care unit for pain management and observation of ventricular ectopy 4 hours after undergoing uncomplicated left total knee replacement. He is receiving fentanyl via systemic patient-controlled analgesic pump for pain management. Medical history is remarkable for coronary artery disease, for which he takes atorvastatin, furosemide, carvedilol, lisinopril, and 81-mg aspirin. Baseline echocardiogram showed an ejection fraction of 0.20. Vital signs now are temperature 38.0°C (100.4°F), pulse 90/min, respirations 16/min, and blood pressure 130/90 mm Hg. Pulse oximetry on room air shows an oxygen saturation of 96%. Physical examination discloses no unexpected abnormalities. Which of the following regimens for prophylaxis of deep venous thrombosis will likely be most beneficial in this patient?', A. 'Continuous application of bilateral lower extremity pneumatic compression devices', B. 'Continuous intravenous infusion of heparin titrated to a PTT of 1.5 to 2.0 times the control value', C. 'Oral warfarin', D. 'Subcutaneous enoxaparin'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 245:

'A 67-year-old woman has had fatigue, dry skin, brittle hair, swelling of the ankles, and cold intolerance for 1 year; she has gained 9 kg (20 lb) during this period. Her pulse is 55/min, and blood pressure is 150/90 mm Hg. She appears lethargic. Examination shows dry skin and a nontender thyroid gland that is enlarged to two times its normal size. There is mild edema of the ankles bilaterally. The relaxation phase of the Achilles reflex is greatly prolonged. Which of the following is the most likely diagnosis?'; A. 'Chronic lymphocytic thyroiditis (Hashimoto disease)', B. 'Defect in thyroxine (T4) biosynthesis', C. 'Graves disease', D. 'Multinodular goiter'

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Answer Option 1:

Final Answer: A

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Answer Option 2:

Final Answer: A

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Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: A

=====

Answer Option 5:

Final Answer: A

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Answer Option 6:

Final Answer: A

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Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: A

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Question 246:

'A 2-year-old boy is brought to the office by his mother for follow-up of a chromosome analysis done 1 month ago. The child has minor dysmorphic features, and growth and developmental delay.

Chromosome analysis showed a small unbalanced chromosome translocation, with extra chromosomal material at the tip of chromosome 3. The cytogenetics laboratory requested blood samples from both parents for follow-up studies. The parents are divorced, and the mother has custody of the child. The relationship between the parents is hostile. The mother has been tested and has normal chromosomes without evidence of translocation. At today's visit, she reacts angrily when the issue of contacting the child's father for testing is raised. She states that he abandoned them and that he has no interest in his child. She refuses to cooperate in contacting the father, who could be a translocation carrier. You do not know the father, but an office worker told you that he lives in a nearby town. The mother says that he is living with a new girlfriend. Which of the following is the most appropriate next step?', A. 'Attempt to identify the father's physician and work with that physician to obtain chromosome studies on the father', B. 'Contact the father by telephone and arrange for him to give a blood sample at a local hospital', C. 'Document your attempts to work with the mother but proceed no further, since you have no physician-patient relationship with the father', D. 'Help the mother deal with her anger and educate her regarding the potential benefit to her son and others if the father's chromosome studies are done'

=====

Answer Option 1:

Final Answer: A

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: A

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 247:

'A 3-year-old girl is brought to the physician because of fever and left ear pain for 3 days. She has been treated with amoxicillin for the past 5 days for left otitis media. Her temperature is 38.5°C (101.3°F), pulse is 100/min, respirations are 20/min, and blood pressure is 80/60 mm Hg. Examination shows the left ear displaced forward and laterally from the head. There is edema and tenderness behind the left ear. Ooscopic examination shows a red, dull, left tympanic membrane that does not move. Which of the following is the most likely diagnosis?', A. 'Acoustic neuroma', B. 'Labyrinthitis', C. 'Lateral sinus thrombosis', D. 'Mastoiditis'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 248:

'A 62-year-old woman comes to the physician because of low back pain for 1 week. Menopause occurred 10 years ago. Physical examination shows localized tenderness over the lumbar spine after movement. X-rays of the spine show a compression fracture of L1-2. A DEXA scan shows decreased bone mineral density. Serum calcium and phosphorus concentrations and serum alkaline phosphatase activity are within the reference ranges. A bisphosphonate drug is prescribed. The expected beneficial effect of this drug is most likely due to which of the following actions?', A. 'Decreased insulin-like growth factor-1 concentration', B. 'Decreased osteoclast activity', C. 'Decreased osteoprotegerin production', D. 'Increased 1,25-dihydroxycholecalciferol concentration'

=====

Answer Option 1:

Final Answer: B

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Answer Option 2:

Final Answer: B

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Answer Option 3:

Final Answer: B

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Answer Option 4:

Final Answer: B

=====

Answer Option 5:

Final Answer: B

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Answer Option 6:

Final Answer: B

=====

Answer Option 7:

Final Answer: B

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Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 249:

'A 72-year-old woman who has smoked 20 cigarettes daily for the past 38 years begins using eyedrops for glaucoma. Three days later, she has a marked increase in shortness of breath while walking up a flight of stairs. Which of the following drugs is the most likely cause of the development of shortness of breath in this patient?', A. 'Apraclonidine', B. 'Epinephrine', C. 'Latanoprost', D. 'Timolol'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 250:

'A 38-year-old man with Down syndrome and severe mental retardation is brought to the emergency department by ambulance because of increasing lethargy for the past several hours. The patient is noncommunicative and you are unable to obtain an initial history of his present illness or a past medical history. You do not know if he takes any medications. Vital signs are temperature 38.3°C (100.9°F), pulse 90/min, respirations 19/min, and blood pressure 120/60 mm Hg. On physical examination the patient is awake but lethargic. Auscultation of the chest discloses clear lungs; cardiac examination discloses a systolic click. Neurologic examination shows decreased muscle tone. Serum electrolyte concentrations are normal. Complete blood count shows a leukocyte count of 18,000/mm³ with 23% band neutrophils. The patient's caregiver, who is also the patient's guardian, cannot be located and staff at the group home where the patient resides cannot be reached by telephone. The patient refuses lumbar puncture for examination of cerebrospinal fluid. Toxicologic screening of the urine is negative. Which of the following is the most appropriate next step?', A. 'Administer intravenous antibiotics', B. 'Await contact with the caregiver before proceeding with management', C. 'Obtain CT scan of the head', D. 'Obtain echocardiography'

=====

Answer Option 1:

Final Answer: A

Answer Option 2:

Final Answer: C

Answer Option 3:

Final Answer: A

Answer Option 4:

Final Answer: A

Answer Option 5:

Final Answer: A

Answer Option 6:

Final Answer: A

Answer Option 7:

Final Answer: A

Answer Option 8:

Final Answer: C

Answer Option 9:

Final Answer: A

Question 251:

'After being severely beaten and sustaining a gunshot wound to the abdomen, a 42-year-old woman undergoes resection of a perforated small bowel. During the operation, plastic reconstruction of facial fractures, and open reduction and internal fixation of the left femur are also done. Thirty-six hours postoperatively, she is awake but not completely alert. She is receiving intravenous morphine via a patient-controlled pump. She says that she needs the morphine to treat her pain, but she is worried that she is becoming addicted. She has no history of substance use disorder. She drinks one to two glasses of wine weekly. Which of the following initial actions by the physician is most appropriate?', A. 'Reassure the patient that her chance of becoming addicted to narcotics is minuscule', B. 'Maintain the morphine, but periodically administer intravenous naloxone', C. 'Switch the patient to oral acetaminophen as soon as she can take medication orally', D. 'Switch the patient to intramuscular lorazepam'

=====

Answer Option 1:

Final Answer: A

Answer Option 2:

Final Answer: A

Answer Option 3:

Final Answer: A

Answer Option 4:

Final Answer: A

Answer Option 5:

Final Answer: A

Answer Option 6:

Final Answer: A

Answer Option 7:

Final Answer: A

Answer Option 8:

Final Answer: A

Answer Option 9:

Final Answer: A

Question 252:

'A 57-year-old man comes to the emergency department because of cramping in his hands and feet and numbness and tingling around his lips and in his fingers; these symptoms occurred intermittently for 6 months but have been progressively severe during the past 2 weeks. He also has had a 13-kg (30-lb) weight loss and bulky, foul-smelling stools that do not flush easily. He has a 10-year history of drinking 8 to 10 beers daily. He has been hospitalized twice for severe abdominal pain 4 and 6 years ago. His pulse is 80/min, and blood pressure is 105/65 mm Hg. He appears cachectic and chronically ill. The abdomen is nontender. Deep tendon reflexes are 4+ bilaterally. Chvostek and Trousseau signs are present. His serum calcium concentration is 6.5 mg/dL. Which of the following is the most likely diagnosis?',
A. 'Hypomagnesemia', B. 'Hypoparathyroidism', C. 'Osteomalacia', D. 'Vitamin D deficiency'

=====

Answer Option 1:

Final Answer: B

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Answer Option 2:

Final Answer: B

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Answer Option 3:

Final Answer: A

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Answer Option 4:

Final Answer: B

=====

Answer Option 5:

Final Answer: A

=====

Answer Option 6:

Final Answer: A

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Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: B

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Question 253:

'A 78-year-old woman is admitted to the hospital for replacement of her left knee joint due to degenerative joint disease. She has type 2 diabetes mellitus, a long history of hypertension, and chronic renal failure presumed secondary to diabetes mellitus and hypertension. Reversible causes of renal failure have been excluded. She underwent a tonsillectomy at age 9 years and a laparoscopic cholecystectomy at age 68 years. Serum creatinine concentration on admission was 6.0 mg/dL. Her current therapy includes a low-sodium, low-protein American Diabetes Association (ADA) diet, enalapril, and acetaminophen. She is a retired seamstress. She and her husband live on a farm 90 miles from the nearest dialysis facility. In considering longterm treatment options for this patient, which of the following is the most appropriate factor to consider?', A. 'Her eligibility to receive Medicare', B. 'Her history of an abdominal operation', C. 'Her history of arthritis', D. 'Her suitability for home dialysis'

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Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: D

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Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 254:

'A 75-year-old female presents to the office for a health maintenance examination. She says that she is more fatigued than she was at 65, but she still gardens and drives to the grocery store. Routine laboratory studies reveal a leukocyte count of $25.0 \times 10^3/\text{mcL}$ (reference range $4.5\text{--}11.0 \times 10^3/\text{mcL}$) and 97% mature-appearing lymphocytes on a peripheral blood smear. Immunohistochemical stains demonstrate the lymphocytes to be of B-cell origin. The most likely diagnosis is', A. 'acute lymphocytic leukemia', B. 'acute myelogenous leukemia', C. 'chronic lymphocytic leukemia', D. 'chronic myelogenous leukemia'

=====

Answer Option 1:

Final Answer: C

Answer Option 2:

Final Answer: C

Answer Option 3:

Final Answer: C

Answer Option 4:

Final Answer: C

Answer Option 5:

Final Answer: C

Answer Option 6:

Final Answer: C

Answer Option 7:

Final Answer: C

Answer Option 8:

Final Answer: C

Answer Option 9:

Final Answer: C

Question 255:

'A previously healthy 27-year-old nulligravid woman comes to the emergency department because of a 2-day history of moderate-to-severe pain and swelling of the left labia. She is sexually active and uses condoms inconsistently. Her temperature is 37.2°C (99°F), pulse is 92/min, respirations are 18/min, and blood pressure is 115/75 mm Hg. Pelvic examination shows a 4 x 3-cm, tender, fluctuant mass medial to the left labium majus compromising the introital opening. Which of the following is the most appropriate next step in management?', A. 'Administration of intravenous metronidazole', B. 'Administration of intravenous penicillin G', C. 'Ultrasound-guided needle aspiration of the mass', D. 'Incision and drainage'

=====

Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 256:

'A previously healthy 24-year-old woman who is a college student comes to the office because of a 6-month history of abdominal bloating, upper abdominal discomfort, and constipation. The symptoms are more severe when she is preparing for examinations but improve after bowel movements. She takes no medications. She does not smoke or use illicit drugs. She drinks alcoholic beverages occasionally. She is 160 cm (5 ft 3 in) tall and weighs 57 kg (125 lb); BMI is 22 kg/m². Her pulse is 72/min, and blood pressure is 100/72 mm Hg. Physical examination, including digital rectal examination, shows no other abnormalities. A complete blood count and serum electrolyte concentrations are within the reference ranges. A urease breath test result is negative. Upper and lower endoscopies show no abnormalities. Which of the following is the most appropriate pharmacotherapy for this patient?', A. 'Azathioprine', B. 'Infliximab', C. 'Lubiprostone', D. 'Mesalamine'

=====

Answer Option 1:

Final Answer: C

Answer Option 2:

Final Answer: C

Answer Option 3:

Final Answer: C

Answer Option 4:

Final Answer: C

Answer Option 5:

Final Answer: C

Answer Option 6:

Final Answer: C

Answer Option 7:

Final Answer: C

Answer Option 8:

Final Answer: C

Answer Option 9:

Final Answer: C

Question 257:

'A 22-year-old woman comes to the office because of urticaria. This is her first episode of urticaria and it has occurred and then resolved several times in the past week. The history and physical examination disclose no abnormalities. Which of the following is the most appropriate course of action?', A. 'Determine the serum IgE concentration', B. 'Determine the total eosinophil count', C. 'Refer her to an allergist', D. 'Treat the symptoms'

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Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 258:

'A 72-year-old man comes to the physician because of a 7-month history of leg weakness and dry eyes and mouth. He also has had a 10.4-kg (23-lb) weight loss over the past 4 months despite no change in appetite. He has smoked one and a half packs of cigarettes daily for 50 years. He drinks 4 oz of alcohol daily. He has peptic ulcer disease and emphysema. Medications include cimetidine, theophylline, and low-dose prednisone. Examination shows mild ptosis. He has a barrelshaped chest. Breath sounds are distant. There is moderate weakness of proximal muscles of the lower extremities. Reflexes are absent. He has difficulty rising from a chair. Sensory examination shows no abnormalities. An x-ray shows a hyperinflated chest and a 3 x 4-cm mass in the right hilum. His neurologic findings are most likely due to a lesion involving which of the following?', A. 'Muscle membrane', B. 'Parasympathetic nervous system', C. 'Peripheral nerve', D. 'Presynaptic neuromuscular junction'

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Answer Option 1:

Final Answer: C

Answer Option 2:

Final Answer: C

Answer Option 3:

Final Answer: C

Answer Option 4:

Final Answer: C

Answer Option 5:

Final Answer: C

Answer Option 6:

Final Answer: C

Answer Option 7:

Final Answer: C

Answer Option 8:

Final Answer: C

Answer Option 9:

Final Answer: C

Question 259:

'A 4-year-old boy is brought for a follow-up examination. He has a history of chronic recurrent otitis media and recently completed a 10-day course of antibiotics. His vital signs are within normal limits.

Examination shows clear ear canals and intact tympanic membranes; a brown, irregular mass is visualized behind the tympanic membrane. Which of the following is the most likely explanation for these findings?', A. 'Epithelial tissue proliferation', B. 'Lingual papillae loss', C. 'Middle ear effusion', D. 'Midface hypoplasia'

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Answer Option 1:

Final Answer: A

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Answer Option 2:

Final Answer: A

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Answer Option 3:

Final Answer: A

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Answer Option 4:

Final Answer: A

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Answer Option 5:

Final Answer: A

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Answer Option 6:

Final Answer: A

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Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: A

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Question 260:

'A 35-year-old male presents to the office for the result of an HIV test, and he is informed that the result is positive. The patient resists disclosure to his wife because he has not told her about his extramarital sexual partners. The physician informs the patient that his wife's right to know is paramount because she could also be HIV positive. Which of the following relationships best describes the rationale for the physician's recommendation that the patient inform his wife of his condition rather than withhold this information?', A. 'autonomy overrides beneficence', B. 'autonomy overrides justice', C. 'beneficence overrides autonomy', D. 'nonmaleficence overrides autonomy'

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Answer Option 1:

Final Answer: C

=====

Answer Option 2:

Final Answer: C

=====

Answer Option 3:

Final Answer: C

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Answer Option 4:

Final Answer: C

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Answer Option 5:

Final Answer: C

=====

Answer Option 6:

Final Answer: C

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Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 261:

'A 10-year-old boy is brought for a follow-up examination 2 days after he was seen in the emergency department because of hives, hoarseness, and light-headedness. His symptoms began 15 minutes after he was stung by a bee and lasted approximately 60 minutes; they resolved before he was treated. He has been stung by bees three times over the past year, and each reaction has been more severe.

Examination shows no abnormalities. Which of the following is the most appropriate recommendation to prevent future morbidity and mortality from this condition?', A. 'Avoid areas known to have bees', B.

'Avoid wearing colorful clothing outside', C. 'Carrying diphenhydramine tablets', D. 'Carrying self-injectable epinephrine'

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Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 262:

'A 25-year-old man is brought to the emergency department after being discovered semiconscious and incoherent at home. On arrival, he is stuporous. His blood pressure is 105/70 mm Hg, pulse is 80/min, and respirations are 12/min. Examination shows cool, damp skin. The pupils are pinpoint and react sluggishly to light. Which of the following is the most likely substance taken?', A. 'Alcohol', B. 'Barbiturates', C. 'Cocaine', D. 'Heroin'

=====

Answer Option 1:

Final Answer: B

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: B

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: B

Answer Option 7:

Final Answer: B

Answer Option 8:

Final Answer: B

Answer Option 9:

Final Answer: B

Question 263:

'A 52-year-old female presents to the office with the complaint of greenish discharge from her left nipple. There is no history of trauma or fever, and the patient is not currently using oral contraceptives nor is she on hormone replacement therapy. Her last pregnancy was approximately 20 years ago. Physical examination findings are normal except for the green discharge. The most likely cause of this patient's presenting complaint is', A. 'breast cancer', B. 'fibrocystic disease', C. 'mammary duct ectasia', D. 'pituitary adenoma'

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Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: C

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Answer Option 4:

Final Answer: C

=====

Answer Option 5:

Final Answer: C

=====

Answer Option 6:

Final Answer: C

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Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 264:

'A 15-year-old boy is brought to the office by his mother because he has been tired and irritable for the past 3 months. He is a high school freshman and a member of the track team. He reports that his symptoms began shortly after starting spring training. He practices sprints 5 nights a week and runs 2 to 5 miles several days a week in addition to leg training with weights. He admits to being tired and says the training is becoming more intense and that he is a little concerned about his ability to continue on the team. His appetite has been unchanged. Medical history is unremarkable and he takes no medications. He has been your patient for the past 3 years. He seems more sullen than you remember from previous visits. You ask his mother to leave the examining room while you complete the physical examination. After she leaves the room, he admits that he is worried about some lumps in his groin. It is most appropriate to obtain additional history regarding which of the following?', A. 'Fever and chills', B. 'Mood symptoms', C. 'School performance', D. 'Sexual activity'

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Answer Option 1:

Final Answer: B

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Answer Option 2:

Final Answer: B

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Answer Option 3:

Final Answer: B

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Answer Option 4:

Final Answer: D

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Answer Option 5:

Final Answer: B

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Answer Option 6:

Final Answer: A

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Answer Option 7:

Final Answer: B

=====

Answer Option 8:

Final Answer: B

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Answer Option 9:

Final Answer: B

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Question 265:

'An 18-year-old primigravid woman comes for her initial prenatal visit at 16 weeks' gestation. She is not sure about the date of her last menstrual period but says that the pregnancy probably occurred immediately after she stopped taking oral contraceptives 5 months ago. Maternal serum α -fetoprotein (MSAFP) concentration is increased to 3 multiples of the median. Which of the following is the most appropriate next step in management?', A. 'Repeat measurement of MSAFP concentration', B. 'Triple screening for MSAFP, serum β -hCG, and serum estriol concentrations', C. 'Ultrasonography', D.

'Amniocentesis for measurement of α -fetoprotein concentration'

=====

Answer Option 1:

Final Answer: C

Answer Option 2:

Final Answer: B

Answer Option 3:

Final Answer: B

Answer Option 4:

Final Answer: B

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: C

Answer Option 7:

Final Answer: B

Answer Option 8:

Final Answer: B

Answer Option 9:

Final Answer: C

Question 266:

'A 25-year-old woman comes to the office because of a 6-month history of increasingly severe low back pain and heavy menses. Her temperature is 37.1°C (98.8°F), pulse is 75/min, respirations are 13/min, and blood pressure is 115/79 mm Hg. Physical examination shows no abnormalities. An endometrial biopsy specimen shows regular tubular endometrial glands with abundant mitotic figures in the endometrial glands and stroma. Which of the following proteins or enzymes regulate the progression of cells into this phase of this patient's menstrual cycle?', A. 'AMP-dependent kinases', B.

'Cyclin-dependent kinases', C. 'Hexokinases', D. 'Lipid kinases'

=====

Answer Option 1:

Final Answer: B

Answer Option 2:

Final Answer: B

Answer Option 3:

Final Answer: B

Answer Option 4:

Final Answer: B

Answer Option 5:

Final Answer: B

Answer Option 6:

Final Answer: B

Answer Option 7:

Final Answer: B

Answer Option 8:

Final Answer: B

Answer Option 9:

Final Answer: B

Question 267:

'A 63-year-old woman comes to the physician 1 day after the sudden onset of pain and swelling of her right knee. She has had no injury. Her medications include occasional ibuprofen for mild osteoarthritis of both knees. Her temperature is 37°C (98.6°F), pulse is 97/min, respirations are 19/min, and blood pressure is 129/79 mm Hg. Examination of the right knee shows warmth, erythema, and effusion. Exquisite tenderness is produced with minimal range-of-motion testing. Examination of synovial fluid obtained via joint aspiration shows that it is clear, with positively birefringent rhomboids observed under polarized light microscopy. Deposition of which of the following substances is the most likely cause of these findings?', A. 'Ammonium urate', B. 'Calcium oxalate', C. 'Calcium pyrophosphate', D. 'Calcium urate'

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Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: C

=====

Answer Option 4:

Final Answer: C

=====

Answer Option 5:

Final Answer: C

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Answer Option 6:

Final Answer: C

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Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 268:

'A 64-year-old female presents to the office with the complaint of difficulty swallowing saliva for about 6 months. She has slurred speech. Examination of the tongue reveals wasting and fasciculation.

Decreased deep tendon reflexes and fasciculation are noted in the left lower extremity. The deep tendon reflexes of the left upper extremity are hyperactive. The most likely diagnosis is', A. 'amyotrophic lateral sclerosis', B. 'Friedreich ataxia', C. 'Pick disease', D. 'progressive multifocal leukoencephalopathy'

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Answer Option 1:

Final Answer: A

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Answer Option 2:

Final Answer: A

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Answer Option 3:

Final Answer: A

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Answer Option 4:

Final Answer: A

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Answer Option 5:

Final Answer: A

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Answer Option 6:

Final Answer: A

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Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: A

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Question 269:

'Four days after undergoing open reduction and internal fixation of a fracture of the right femur sustained in a motor vehicle collision, a 47-year-old man continues to have agitation and confusion despite treatment with haloperidol. He has mild hypertension. Other medications include acetaminophen, atenolol, and prophylactic subcutaneous heparin. His temperature is 37.2°C (99°F), pulse is 98/min, respirations are 24/min, and blood pressure is 168/98 mm Hg. During the examination, he is uncooperative and refuses to answer questions. Neurologic examination shows tremulousness and no focal findings. He is oriented to person but not to place or time. A CT scan of the head shows no abnormalities. Which of the following is the most likely cause of these findings?', A. 'Adverse effect of medication', B. 'Alcohol withdrawal', C. 'Fat emboli', D. 'Sepsis'

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Answer Option 1:

Final Answer: C

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Answer Option 2:

Final Answer: C

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Answer Option 3:

Final Answer: C

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Answer Option 4:

Final Answer: B

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Answer Option 5:

Final Answer: C

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Answer Option 6:

Final Answer: C

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Answer Option 7:

Final Answer: C

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Answer Option 8:

Final Answer: C

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Answer Option 9:

Final Answer: C

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Question 270:

'A 57-year-old woman comes to the physician because of an 8-week history of difficulty sleeping, fatigue, and muscle tension. During this period, she also has had memory lapses, difficulty concentrating, and has been reprimanded at work for arriving late. Over the past 2 weeks, she has had three episodes of palpitations and shortness of breath that have awakened her from sleep. Her pulse is 80/min, and blood pressure is 110/90 mm Hg. Physical examination shows no abnormalities. Mental status examination shows a depressed mood and constricted affect. She says that she is no longer interested in activities that she used to enjoy. She has suicidal ideation without a plan. Her hemoglobin concentration is 11 g/dL, and serum ferritin concentration is 140 ng/mL. Which of the following is the most appropriate initial step in treatment?', A. 'Donepezil therapy', B. 'Ferrous sulfate therapy', C. 'Ginkgo biloba extract therapy', D. 'Paroxetine therapy'

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Answer Option 1:

Final Answer: D

Answer Option 2:

Final Answer: D

Answer Option 3:

Final Answer: D

Answer Option 4:

Final Answer: D

Answer Option 5:

Final Answer: D

Answer Option 6:

Final Answer: D

Answer Option 7:

Final Answer: D

Answer Option 8:

Final Answer: D

Answer Option 9:

Final Answer: D

Question 271:

'A 40-year-old man with paranoid schizophrenia is transferred to the emergency department from the residential facility where he lives 2 hours after having swallowed a nail. The patient says he does not have any symptoms. Medical history is otherwise unremarkable. His only current medication is haloperidol. The patient is not in acute distress. Vital signs are normal. Physical examination shows no abnormalities. Mental status examination discloses a flat affect, distractibility, and derailment of thoughts. X-ray of the abdomen is obtained and shows a 4-cm nail in the left upper quadrant. No free air is visible. After admitting the patient to the hospital, which of the following is the most appropriate management?', A. 'Administration of ipecac to induce vomiting and expectoration of the nail', B. 'Observation to allow passage of the nail via normal peristalsis', C. 'Open laparotomy and removal of the nail through a gastrotomy incision', D. 'Removal of the nail through endoscopic esophagogastrosctopy'

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Answer Option 1:

Final Answer: D

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: D

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Answer Option 4:

Final Answer: D

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Answer Option 5:

Final Answer: D

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Answer Option 6:

Final Answer: D

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Answer Option 7:

Final Answer: D

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Answer Option 8:

Final Answer: D

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Answer Option 9:

Final Answer: D

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Question 272:

'A 52-year-old man is brought to the emergency department 30 minutes after he had an episode of chest pain radiating to his jaw while shoveling snow. His pulse is 80/min, and blood pressure is 130/70 mm Hg. The lungs are clear to auscultation. Cardiac examination shows an S4. While undergoing an ECG, the patient says that he feels the chest pain returning. The most appropriate immediate treatment is a drug with which of the following mechanisms of action?', A. 'Increases cAMP concentration', B. 'Increases nitric oxide concentration', C. 'Inhibits potassium flux', D. 'Inhibits sodium flux'

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Answer Option 1:

Final Answer: A

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Answer Option 2:

Final Answer: D

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Answer Option 3:

Final Answer: A

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Answer Option 4:

Final Answer: D

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Answer Option 5:

Final Answer: A

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Answer Option 6:

Final Answer: A

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Answer Option 7:

Final Answer: A

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Answer Option 8:

Final Answer: A

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Answer Option 9:

Final Answer: A

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