

# American Board of Family Medicine



IN-TRAINING EXAMINATION

TIME-4 HOURS



1. A 52-year-old female with morbid obesity is incidentally noted to have mildly elevated AST (SGOT) levels. She does not consume alcohol and denies using recreational drugs. A workup for chronic viral hepatitis and hemochromatosis is negative.

Which one of the following is most likely to improve her hepatic condition?

- A) Pentoxifylline
- B) Simvastatin (Zocor)
- C) L-carnitine
- D) Vitamin E
- E) Weight loss

2. A 44-year-old male with papulopustular rosacea sees you for follow-up. You have been treating his condition with topical azelaic acid (Finacea), and although his condition is improved he is not satisfied with the results.

You suggest adding which one of the following oral medications?

- A) Clarithromycin (Biaxin)
- B) Clindamycin (Cleocin)
- C) Doxycycline
- D) Erythromycin
- E) Metronidazole (Flagyl)

3. A 52-year-old male has a skin lesion removed from his arm with appropriate sterile precautions. Which one of the following would be most appropriate to use on this surgical wound?

- A) Petrolatum
- B) Silver sulfadiazine (Silvadene) cream
- C) Mupirocin (Bactroban) ointment
- D) Polymyxin B/bacitracin ointment (Polysporin)
- E) Triple-antibiotic (neomycin/polymyxin B/bacitracin) ointment

4. A 15-year-old male is brought to the office for a well child visit. His parents report that he has had a nighttime cough and wheezing for the past several months. He is otherwise healthy and up-to-date on all of his immunizations. You suspect that he has asthma.

Which one of the following would be most appropriate at this point?

- A) Treat empirically with a short-acting  $\beta$ -agonist
- B) Perform spirometry
- C) Order radiologic testing
- D) Start an inhaled corticosteroid
- E) Start a leukotriene inhibitor

5. A 36-year-old female presents with a several-week history of polyuria and intense thirst. She currently takes no medications. On examination her blood pressure and pulse rate are normal, and she is clinically euvolemic. Laboratory tests, including serum electrolyte levels, renal function tests, and plasma glucose, are all normal. A urinalysis is significant only for low specific gravity. Her 24-hour urine output is >5 L with low urine osmolality.

The most likely cause of this patient's condition is a deficiency of

- A) angiotensin II
  - B) aldosterone
  - C) renin
  - D) insulin
  - E) arginine vasopressin
6. A 39-year-old female presents with lower abdominal/pelvic pain. On examination, with the patient in a supine position, you palpate the tender area of her lower abdomen. When you have her raise both legs off the table while you palpate the abdomen, her pain intensifies.

Which one of the following is the most likely diagnosis?

- A) Appendicitis
  - B) A hematoma within the abdominal wall musculature
  - C) Diverticulitis
  - D) Pelvic inflammatory disease
  - E) An ovarian cyst
7. Which one of the following is one of the five basic principles of the patient-centered medical home?
- A) Utilizing the latest research and advances in treatment and diagnosis
  - B) Coordinating a patient's care across all elements of the health care system
  - C) Acting as a gatekeeper to limit access to specialist care
  - D) Serving as the base of a pyramid in support of a complex health care system
  - E) Transitioning away from delivering care in an office, and focusing on meeting patients in their own homes
8. Mild cognitive impairment is characterized by which one of the following?
- A) Localized motor dysfunction
  - B) Impairment in at least one activity of daily living
  - C) Impairment in at least one instrumental activity of daily living
  - D) The presence of the APO E4 allele
  - E) Objective evidence of memory decline

9. A healthy 24-year-old male presents with a sore throat of 2 days' duration. He reports mild congestion and a dry cough. On examination his temperature is 37.2°C (99.0°F). His pharynx is red without exudates, and there are no anterior cervical nodes. His tympanic membranes are normal, and his chest is clear.

Which one of the following would be most appropriate at this point?

- A) Analgesics and supportive care only
  - B) A rapid strep test
  - C) A throat culture and empiric treatment with penicillin
  - D) Azithromycin (Zithromax)
10. Routine vaccination against which one of the following organisms has significantly reduced the risk of bacterial meningitis among young children?
- A) *Borrelia burgdorferi*
  - B) *Escherichia coli*
  - C) *Haemophilus influenzae*
  - D) *Listeria monocytogenes*
  - E) *Mycoplasma pneumoniae*
11. To prevent joint damage from gout, uric acid levels should be lowered by medication to
- A) < 6.0 mg/dL
  - B) < 8.0 mg/dL
  - C) < 10.0 mg/dL
  - D) a level that keeps the patient symptom-free for 6 months
12. A 30-year-old female sees you because of increasing fatigue. She has no chronic medical problems and reports no recent acute illnesses. She recalls being told that she was mildly anemic after the birth of her daughter 3 years ago. The anemia resolved after 3 months of oral iron supplementation. The patient's menstrual periods are regular and last approximately 6 days, with heavy bleeding for the first 3 days then moderate to mild flow for approximately 3 days. She denies epistaxis, black stools, or other signs of bleeding.

On examination her temperature is 36.7°C (98.1°F), pulse rate 93 beats/min, respiratory rate 16/min, and blood pressure 116/58 mm Hg. The remainder of her physical examination is unremarkable. A CBC is notable for a hemoglobin level of 10.9 g/dL (N 12.0–16.0) and a mean corpuscular volume of 70  $\mu\text{m}^3$  (N 78–102).

Which one of the following serum levels would be most appropriate for further evaluating her microcytic anemia at this point?

- A) Ferritin
- B) Folate
- C) Erythropoietin
- D) Hemoglobin A<sub>1c</sub>
- E) TSH

13. An elderly male who has an implanted cardioverter-defibrillator is admitted to long-term care. He has several chronic comorbidities, including hypertension, a previous stroke, coronary artery disease, osteoarthritis, advanced chronic systolic heart failure, chronic kidney disease with a calculated glomerular filtration rate of 20 mL/min/1.73 m<sup>2</sup>, diabetes mellitus, and hypercholesterolemia.

The patient's quality of life has declined to the point that he wishes to receive only palliative care. He does not want aggressive treatments, including hospitalization, except for reasons of comfort. He has decided he does not wish to be resuscitated, including CPR or intubation.

When considering his goals, and after consultation with the patient and his spouse, which one of the following would be most appropriate for managing his defibrillator?

- A) Adjust the defibrillator to deliver shocks only for ventricular fibrillation
  - B) Adjust the defibrillator to deliver shocks only for a heart rate > 140 beats/min
  - C) Remove the defibrillator generator
  - D) Deactivate the defibrillator
  - E) Make no change to the defibrillator
14. A 50-year-old male with difficult-to-control hypertension seeks your advice regarding progressive breast enlargement. Your examination reveals bilateral firm, glandular tissue in a concentric mass around the nipple-areola complex. You diagnose gynecomastia.

Which one of the following antihypertensive medications is most likely to cause this problem?

- A) Doxazosin (Cardura)
  - B) Hydrochlorothiazide
  - C) Lisinopril (Prinivil, Zestril)
  - D) Losartan (Cozaar)
  - E) Spironolactone (Aldactone)
15. A large wooden splinter went deep into the forearm of a 24-year-old male while he was working in a horse barn, and he has required local anesthesia and a small incision to remove it completely. After thorough wound cleansing, you inquire about his tetanus status. He is certain that he received all of his primary childhood vaccines and a "tetanus booster" at age 20, but does not know which vaccine he received.

Which one of the following is the best choice for this patient regarding tetanus immunization at this time?

- A) TT (tetanus toxoid)
- B) Td (tetanus toxoid with reduced diphtheria)
- C) Tdap (tetanus toxoid with reduced diphtheria and acellular pertussis)
- D) TIG (tetanus immune globulin)
- E) No immunization

16. A previously healthy 16-year-old male presents to your office after having a syncopal episode at the start of track practice. An EKG revealed a QTc of 520 ms. This was confirmed on a subsequent EKG.

This finding is associated with which one of the following rhythm abnormalities?

- A) Sinus arrest
  - B) Third degree atrioventricular block
  - C) Paroxysmal supraventricular tachycardia
  - D) Polymorphic ventricular tachycardia
  - E) Atrial fibrillation with a rapid ventricular response
17. Which one of the following intravenous agents is the best INITIAL management for hypercalcemic crisis?
- A) Furosemide
  - B) Pamidronate
  - C) Hydrocortisone
  - D) Saline
18. An 84-year-old male is walking across the street and has to hurry to avoid oncoming traffic. He suddenly develops extreme pain in his knee and falls down, and has to be carried to the sidewalk.

The following day he comes to the emergency department. He is comfortable when placed in a knee immobilizer, but is very tender just above the patella. He can bend his knee but when he tries to straighten his leg it is so weak that he cannot move it at all. Radiographs of the knee are shown below.

What is the most likely diagnosis?

- A) Patellar tendon rupture
  - B) Quadriceps tendon rupture
  - C) Tibial plateau fracture
  - D) Patellar subluxation
  - E) Lumbar radiculopathy
19. A 58-year-old postmenopausal female presents with a recent onset of painless vaginal bleeding. Her last menses occurred 8 years ago and she has had no bleeding until now. She reports that her Papanicolaou smears have always been normal, with the last one obtained a year ago. A pelvic examination today is normal.

Which one of the following management options is the preferred next diagnostic step?

- A) Colposcopy with endocervical curettage
- B) Transvaginal ultrasonography
- C) Saline infusion sonohysterography
- D) Hysteroscopy

20. A 67-year-old male is admitted to your inpatient service with a week-long acute exacerbation of COPD. He also has hypertension and type 2 diabetes mellitus. After 24 hours of intravenous fluids and intravenous methylprednisolone, he is now tolerating oral intake.

Which one of the following corticosteroid regimens is best for this patient at this time?

- A) Continue intravenous methylprednisolone until his COPD is back to baseline, then switch to oral methylprednisolone for a 14-day total course of treatment
  - B) Switch to oral prednisone for a 14-day total course of treatment, including the initial 24-hour intravenous treatment
  - C) Switch to oral prednisone for 4 more days of treatment
  - D) Use only inhaled corticosteroids by nebulizer
  - E) Discontinue corticosteroid treatment altogether after 24 hours
21. Which one of the following medications used for anxiety has also been shown to reduce the symptoms of irritable bowel syndrome?
- A) Buspirone
  - B) Clonazepam (Klonopin)
  - C) Divalproex sodium (Depakote)
  - D) Risperidone (Risperdal)
  - E) Citalopram (Celexa)
22. Which one of the following ethnic groups in the United States is at greatest risk for complications from influenza?
- A) African-American
  - B) Asian-American
  - C) Mexican-American
  - D) Native American
  - E) Scandinavian-American
23. The Infectious Diseases Society of America recommends which one of the following as the drug of choice for group A streptococcal pharyngitis?
- A) Azithromycin (Zithromax)
  - B) Cefadroxil
  - C) Cephalexin (Keflex)
  - D) Clindamycin (Cleocin)
  - E) Penicillin



24. A 7-year-old Hispanic female has a 3-day history of a fever of 104.0°F (40.0°C), muscle aches, vomiting, anorexia, and headache. Over the past 12 hours she has developed a painless maculopapular rash that includes her palms and soles but spares her face, lips, and mouth. She has recently returned from a week at summer camp in Texas. Her pulse rate is 140 beats/min, and her blood pressure is 70/40 mm Hg.

Which one of the following is the most likely diagnosis?

- A) Mucocutaneous lymph node syndrome
  - B) Leptospirosis
  - C) Rocky Mountain spotted fever
  - D) Scarlet fever
  - E) Toxic shock syndrome
25. A 76-year-old male with metastatic cancer, diabetes mellitus, and stage IV chronic renal disease develops confusion and myoclonus. His current medications include enalapril (Vasotec), 10 mg/day; glipizide (Glucotrol), 10 mg/day; and morphine sulfate, 30 mg every 4 hours for pain. The morphine was started 4 weeks ago and the dosage was gradually increased until the pain was controlled.

Which one of the following is the most likely cause of his symptoms?

- A) A drug-drug interaction
  - B) Metastasis to the lumbar spine
  - C) Diabetic neuropathy
  - D) Toxic metabolites of morphine
26. A 29-year-old female presents with redness of her left eye. She has just returned from a summer beach vacation with her children and woke up with a red eye. Your examination reveals a watery discharge, a hyperemic conjunctiva, and a palpable preauricular lymph node. Her cornea is clear on fluorescein staining.

Which one of the following is most appropriate for this patient?

- A) Reassurance only
- B) Culture-guided antibiotic therapy
- C) Quinolone eyedrops
- D) Corticosteroid/antibiotic eyedrops
- E) Urgent ophthalmologic referral

27. A 75-year-old female is evaluated in the emergency department in the evening for heart failure. She is acutely symptomatic with dyspnea. Vital signs include a pulse rate of 96 beats/min, a blood pressure of 140/90 mm Hg, and an oxygen saturation of 94% on room air. A chest radiograph shows mild pulmonary congestion.

Which one of the following would be most appropriate regarding placement of an indwelling urinary catheter for accurate measurement of urine output and for patient comfort?

- A) Avoiding indwelling urinary catheter placement
  - B) Placement of an indwelling urinary catheter only until initial diuresis is completed
  - C) Placement of an indwelling urinary catheter and removal when the patient is transferred out of the emergency department
  - D) Placement of an indwelling urinary catheter until 6:00 a.m. tomorrow
  - E) Placement of an indwelling urinary catheter and removal within 24 hours
28. A 75-year-old male with a history of hypertension sees you after experiencing an episode of numbness on his right side and loss of strength in his right arm. The numbness and weakness resolved spontaneously within 20 minutes. Carotid Doppler ultrasonography and cerebral angiography both reveal significant carotid stenosis.

In addition to starting aspirin, which one of the following would be the most appropriate next step for this patient?

- A) Aggressive lowering of blood pressure
  - B) Clopidogrel (Plavix)
  - C) Carotid artery stenting
  - D) Evaluation for occult patent ductus arteriosus
  - E) High-dose statin therapy
29. A 57-year-old female is hospitalized for hypotension. She has stage IV breast cancer with extensive visceral and skeletal metastases. For the past 2 weeks she has had fatigue, nausea, and anorexia. She also reports a 3-lb weight loss during this time. She decided to stop chemotherapy 1 month ago.

The patient appears pale with a pulse rate of 78 beats/min and a blood pressure of 82/54 mm Hg. Her physical examination is unremarkable except for lower thoracic spine tenderness on percussion. Laboratory studies reveal a serum sodium level of 132 mEq/L, a potassium level of 5.2 mEq/L, and a hemoglobin level of 10.5 g/L. Chest radiographs reveal scattered pulmonary metastatic lesions. The patient is started on intravenous fluid resuscitation with normal saline. On day 2 her blood pressure continues to remain low despite aggressive fluid replacement.

Which one of the following should be administered next to manage her hypotension?

- A) Broad-spectrum antibiotics
- B) Dobutamine
- C) Dopamine
- D) Hydrocortisone
- E) Packed RBCs

30. Which one of the following is the most accurate imaging study for assessing early osteomyelitis?
- A) Plain radiography
  - B) Ultrasonography
  - C) CT
  - D) MRI
  - E) A bone scan

31. A 43-year-old asymptomatic male is found to have slightly elevated ALT (SGPT) and AST (SGOT) levels on laboratory work prior to donating blood. He feels well and is otherwise healthy.

Which one of the following should be ordered to evaluate the patient for hereditary hemochromatosis?

- A) A serum iron panel, including a serum ferritin level and transferrin saturation
- B) An  $\alpha$ -fetoprotein (AFP) level
- C) HFE genetic testing
- D) Hepatic ultrasonography
- E) A liver biopsy

32. Which one of the following findings on pulmonary function testing is most consistent with restrictive lung disease?

- A) Reduced FEV<sub>1</sub> and a decreased FEV<sub>1</sub>/FVC ratio
- B) Reduced FEV<sub>1</sub> and a normal FEV<sub>1</sub>/FVC ratio
- C) Reduced FEV<sub>1</sub> and an increased FEV<sub>1</sub>/FVC ratio
- D) Reduced FVC and an increased FEV<sub>1</sub>/FVC ratio
- E) Decreased diffusing capacity of the lung for carbon monoxide (DLCO)

33. The parents of a 4-year-old male bring him in for evaluation because of behavioral problems in his preschool. They report that he is inattentive, hyperactive, and impulsive, has difficulty remaining seated, always seems to be moving, frequently interrupts others, and talks incessantly. His teacher also told them that he never plays quietly, has difficulty taking turns, and intrudes often in other children's play.

Which one of the following is recommended by the American Academy of Pediatrics for initial management in this child's case?

- A) Behavioral treatment alone
- B) Methylphenidate (Ritalin) alone
- C) Atomoxetine (Strattera) alone
- D) Methylphenidate combined with behavioral treatment
- E) Methylphenidate combined with atomoxetine

34. A 56-year-old male with diabetes mellitus and hypertension presents with a 6-month history of generalized pruritus. He reports that he scratches frequently. On examination his skin is dry and scaly. He has multiple linear excoriations and thickened skin on his forearms, legs, and neck.

Which one of the following is the most likely cause of his pruritus?

- A) Contact dermatitis
- B) Chronic urticaria
- C) Lichen simplex chronicus
- D) Scabies

35. A 50-year-old female with a history of refractory hypertension presents with abdominal pain. Her laboratory results are significant for a positive *Helicobacter pylori* antibody. You decide to initiate treatment for her *H. pylori* infection with sequential therapy using the following drug regimen: rabeprazole (Aciphex) plus amoxicillin, followed by clarithromycin (Biaxin) plus tinidazole (Tindamax). She is currently on multiple medications for her hypertension.

Which one of her antihypertensive agents would be most affected by the treatment regimen described?

- A) Amlodipine (Norvasc)
- B) Clonidine transdermal (Catapres-TTS)
- C) Hydrochlorothiazide
- D) Metoprolol tartrate (Lopressor)
- E) Ramipril (Altace)

36. A 65-year-old female presents with an 11-mm lesion on her nasolabial fold. You perform a shave biopsy that confirms basal cell carcinoma.

Which one of the following would be the most appropriate treatment of this lesion?

- A) Excision with wide margins
- B) Electrodesiccation and curettage
- C) Mohs micrographic surgery
- D) Cryotherapy
- E) Imiquimod (Aldara) cream

37. A 39-year-old female presents with a 4-month history of gradually worsening left elbow pain. She does not recall an injury but frequently lifts and holds her 10-month-old son in her left arm. She has tenderness over the lateral epicondyle. Her elbow range of motion is normal but she has pain with supination and pronation. The remainder of the examination is normal.

For long-term pain relief, the best evidence supports which one of the following?

- A) Expectant/conservative management
- B) Physical therapy
- C) Oral anti-inflammatory agents
- D) A corticosteroid injection

38. Azithromycin (Zithromax) is prescribed for a 65-year-old male with coronary artery disease. This drug should be used with caution in this patient due to an increased risk for
- A) an adverse effect on left ventricular function
  - B) peripheral edema
  - C) elevation of systolic blood pressure
  - D) fatal arrhythmias
39. A 62-year-old female with type 2 diabetes mellitus routinely has fasting blood glucose levels in the 80–100 mg/dL range and her hemoglobin A<sub>1c</sub> level is 7.8%. She has been diligently monitoring her blood glucose levels and all are acceptable with the exception of elevated bedtime readings. She currently is on insulin glargine (Lantus), 18 U at night.

Which one of the following changes would be most appropriate for this patient?

- A) Adding rapid-acting insulin at breakfast
  - B) Adding rapid-acting insulin at lunch
  - C) Adding rapid-acting insulin at dinner
  - D) Increasing the nightly insulin glargine dose
  - E) Increasing the insulin glargine dosage and giving two-thirds in the morning and one-third at night
40. A 56-year-old male is brought to the emergency department by his wife because of a 3-day history of fever up to 102.1°F (38.9°C). He complains of headache, body aches, and a cough. His wife notes that he seems to be confused at times, and mentions that he has type 2 diabetes mellitus.

On examination the patient's temperature is 38.7°C (101.7°F), heart rate 113 beats/min, blood pressure 96/64 mm Hg, respiratory rate 24/min, and oxygen saturation 93% on room air. You administer 2 L of oxygen via nasal cannula and his oxygen saturation rises to 98%. A CBC, blood cultures, and a basic metabolic panel are ordered, as well as a chest radiograph and urinalysis.

In addition to starting antibiotics, which one of the following would be most appropriate at this point?

- A) A bolus of normal saline
- B) Bicarbonate therapy
- C) Vasopressin (Pitressin)
- D) Hydrocortisone intravenously
- E) Norepinephrine

41. A 4-year-old male is brought to your office by his parents who are concerned that he is increasingly “knock-kneed.” His uncle required leg braces as a child, and the parents are worried about long-term gait abnormalities. On examination, the patient’s knees touch when he stands and there is a 15° valgus angle at the knee. He walks with a stable gait.

Which one of the following should you do now?

- A) Refer to orthopedics for therapeutic osteotomy
  - B) Refer to physical therapy for customized bracing
  - C) Prescribe quadriceps-strengthening exercises
  - D) Provide reassurance to the patient and his family
42. A 71-year-old female with a history of hypertension and osteoporosis presents to your office for preoperative clearance for upcoming eye surgery. She complains of progressively worsening fatigue over the past 8–10 months. She says she often feels dizzy but denies a history of syncope. Her current medications include alendronate and hydrochlorothiazide. You obtain the EKG shown below as part of her preoperative evaluation.

Which one of the following would be most appropriate at this point?

- A) Clearance for eye surgery with no further evaluation
  - B) An exercise treadmill test
  - C) A 48-hour Holter monitor
  - D) A 7-day event monitor
  - E) Referral to a cardiologist for pacemaker placement
43. You are treating an 18-year-old college freshman for allergic rhinitis. It is September, and he tells you that he has severe symptoms every autumn that impair his academic performance. He has a strongly positive family history of atopic dermatitis.

Which one of the following intranasal medications is considered optimal treatment for this condition?

- A) Glucocorticoids
- B) Cromolyn sodium
- C) Decongestants
- D) Antihistamines

44. One week after a complete and adequate baseline screening colonoscopy, a 51-year-old female with no history of previous health problems visits you to review the pathology report on the biopsy specimen obtained from the solitary 8-mm polyp discovered in her sigmoid colon. The report confirms that this was a hyperplastic polyp. Her family history is negative for colon cancer.

Which one of the following is the most appropriate interval for follow-up colonoscopy in this patient?

- A) 1 year
- B) 2 years
- C) 5 years
- D) 10 years

45. A 55-year-old overweight male presents with a complaint of pain in the left big toe. He recently started jogging 2 miles a day to try to lose weight, but has not changed his diet and says he drinks 4 cans of beer every night. The pain has developed gradually over the last 2 weeks and is worse after running.

An examination shows a normal foot with tenderness and swelling of the medial plantar aspect of the left first metatarsophalangeal joint. Passive dorsiflexion of the toe causes pain in that area. Plantar flexion produces no discomfort, and no numbness can be appreciated.

Which one of the following is the most likely diagnosis?

- A) Sesamoid fracture
- B) Gout
- C) Morton's neuroma
- D) Cellulitis

46. A 49-year-old white female is concerned because she has painful, cold fingertips that sometimes turn white when she is hanging out her laundry. Which one of the following medications has been shown to be useful for this patient's condition?

- A) Propranolol
- B) Nifedipine (Procardia)
- C) Ergotamine/caffeine (Cafergot)
- D) Cilostazol (Pletal)

47. A 78-year-old male experiences two episodes of near-syncope within several hours. You order an EKG, which is shown below.

Which one of the following does this EKG show?

- A) Atrial fibrillation with a slow ventricular response
- B) Sinus bradycardia
- C) Complete heart block
- D) 2:1 Mobitz AV block

48. A disheveled 89-year-old male with dementia who relies on a caregiver for bathing, dressing, shopping, and meal preparation is brought in for continued evaluation of weight loss. No medical cause has been found at this point. On examination a large purplish bruise is noted over his posterior leg and a more faded greenish-yellow bruise is noted over his abdomen, which his caregiver explains by saying that he has fallen several times recently. The patient is also noted to have a large sacral decubitus ulcer.

Which one of the following should you suspect as the cause of bruising in this patient?

- A) Senile purpura
  - B) Thrombocytopenia
  - C) Leukemia
  - D) Elder abuse
  - E) Cushing syndrome
49. A 36-year-old male laborer presents to an urgent care center 5 hours after falling off a ladder. He was 7–8 feet off the ground, and he fell directly on his anterolateral leg as he landed. Weight bearing is painful. Foot pulses are normal, as is a sensorineural examination of the foot and leg. The anterolateral lower leg is quite tender but only slightly swollen, and there is exquisite pain in that area with passive plantar flexion of the great toe. Radiographs of the lower leg and ankle are negative.

In addition to ice, elevation, and analgesia, which one of the following would be most appropriate?

- A) Scheduled oral muscle relaxants
  - B) A 6-day oral corticosteroid taper
  - C) Physical therapy referral for early mobilization and ultrasound therapy
  - D) A short leg splint and non-weight bearing for 5–7 days
  - E) Urgent orthopedic referral for possible fasciotomy
50. A 25-year-old female with hypothyroidism sees you for preconception counseling. Her thyroid problem has been well managed with levothyroxine (Synthroid), 75 µg daily, but she asks your advice about changing her treatment to something more natural now that she is planning to become pregnant.

Which one of the following is the best recommendation for this patient?

- A) Continue the current dosage of levothyroxine
- B) Reduce the current dosage of levothyroxine to 50 µg daily
- C) Change to a comparable dosage of combination levothyroxine/L-triiodothyronine
- D) Change to a comparable dosage of desiccated thyroid



51. A 25-year-old female kindergarten teacher comes to your office for evaluation of a cough she has had for 2 weeks. The preceding week she had symptoms of rhinorrhea, mild malaise, low-grade fever, and lacrimation. She reports that episodes of coughing are so severe that vomiting is induced. She was evaluated at a walk-in clinic 1 week ago and was diagnosed with bronchitis. Treatment with hydrocodone cough syrup and amoxicillin has not helped. On examination she has mild rhinorrhea and injected conjunctivae, but her lungs are clear. A chest radiograph is normal and her laboratory results reveal a mild lymphocytosis.

Which one of the following is the most appropriate next step in the management of this patient?

- A) Corticosteroid therapy
  - B) A sputum culture
  - C) A nasopharyngeal culture and polymerase chain reaction testing
  - D) Direct fluorescent antibody testing
  - E) Serologic testing
52. Blood pressure classification in children is based on
- A) sex, weight, and height
  - B) sex, weight, and age
  - C) sex, height, and age
  - D) weight, height, and age
53. A 45-year-old male with no known medical problems sees you for a general physical examination. Which one of the following screening measures is recommended by the U.S. Preventive Services Task Force for this patient?
- A) A fasting lipid profile
  - B) Colorectal cancer screening
  - C) Abdominal aortic aneurysm screening
  - D) Testicular examination
  - E) Prostate-specific antigen (PSA) testing
54. A 35-year-old female with a history of chronic abdominal pain and diarrhea develops tender red nodules on her shins. These findings are most consistent with which one of the following?
- A) Celiac disease
  - B) Crohn's disease
  - C) Diverticular disease
  - D) Irritable bowel syndrome
  - E) Clostridium difficile colitis

55. A decrease in which one of the following could be expected from long-term use of postmenopausal estrogen plus progesterone?
- A) Ischemic heart disease
  - B) Dementia
  - C) All-cause mortality
  - D) Breast cancer
  - E) Hip fracture
56. In a patient with symptoms of thyrotoxicosis and elevated free T<sub>4</sub>, the presence of thyroid TSH receptor site antibodies would indicate which one of the following as the cause of thyroid gland enlargement?
- A) Toxic multinodular goiter
  - B) Toxic adenoma
  - C) Hashimoto's (lymphadenoid) thyroiditis
  - D) Subacute (giant cell) thyroiditis
  - E) Graves disease
57. Which one of the following is a risk factor for prolonged recovery from a sports-associated concussion?
- A) Blurred vision
  - B) Headache lasting longer than 60 hours
  - C) Amnesia for the injury
  - D) Loss of consciousness at the time of injury
  - E) Convulsions following the injury
58. A 53-year-old obese female presents with left calf swelling and tenderness. Using the Wells criteria you determine that she is at intermediate risk for deep vein thrombosis.
- Which one of the following is the most appropriate next step in the evaluation and treatment of this patient?
- A) Anticoagulation
  - B) D-dimer assessment
  - C) Compression ultrasonography
  - D) Impedance plethysmography
  - E) Contrast venography

59. Which one of the following is recommended with regard to the use of osteoporosis medications in elderly patients?
- A) Substitution of denosumab (Prolia) for bisphosphonates in patients planning extensive dental work
  - B) Use of denosumab in patients at increased risk for infection
  - C) Use of denosumab rather than bisphosphonates in patients with class III or IV renal dysfunction
  - D) Continuous use of bisphosphonates for 10 years or more

60. A 4-month-old female is brought to your office by her parents for a 3-day history of fever up to 101.7°F (38.7°C). She is fussy and her oral intake is down. She has no rash, no emesis, and no diarrhea. Her urine output is normal. She is in day care 3 days a week.

On examination she is alert but fussy. Her rectal temperature is 38.4°C (101.1°F). The examination is otherwise normal and there are no focal findings of infection. The parents are reliable and you choose to manage the baby as an outpatient.

Which one of the following tests is most likely to be helpful in this situation?

- A) A CBC with manual differential
  - B) A urinalysis and urine culture
  - C) A chest radiograph
  - D) C-reactive protein
  - E) A lumbar puncture
61. A 36-year-old male with a history of complex regional pain syndrome has been on oxycodone (OxyContin) for the past 5 years. His pain is well controlled.

Which one of the following side effects is most likely to occur with long-term chronic use of opioids?

- A) Diarrhea
  - B) Sedation
  - C) Hypoalgesia
  - D) Respiratory depression
  - E) Hypogonadism
62. An asymptomatic 56-year-old male has an echocardiogram that demonstrates trivial mitral regurgitation. Which one of the following is the recommended follow-up for this patient if he remains asymptomatic?
- A) No repeat echocardiography
  - B) Repeat echocardiography in 1 year
  - C) Repeat echocardiography in 2 years
  - D) Repeat echocardiography in 5 years
  - E) Repeat echocardiography in 10 years

63. A 20-year-old offensive lineman who plays football for the small college in your town presents to your office at midseason with pain in his right groin. He describes it as a burning, aching sensation that gets worse when he coughs or strains during a bowel movement, and when he is required to block opponents or push against the blocking sled in practice.

As part of the physical examination, you have the patient stand, and you insert your finger into the inguinal canal and follow the spermatic cord to the internal inguinal ring. When you reach the internal ring the patient reports discomfort. When you ask him to cough and strain the pain increases and you feel an impulse or bulge at the tip of your finger. The remainder of his physical examination is normal.

This patient's history and examination findings are most consistent with which one of the following diagnoses?

- A) Athletic pubalgia (sports hernia)
  - B) Osteitis pubis
  - C) Adductor muscle tendinopathy
  - D) Ilioinguinal nerve entrapment
  - E) Inguinal hernia
64. A 40-year-old runner complains of gradually worsening pain on the lateral aspect of his foot. He runs on asphalt, and has increased his mileage from 2 miles/day to 5 miles/day over the last 2 weeks. Palpation causes pain over the lateral fifth metatarsal. The pain is also reproduced when he jumps on the affected leg. When you ask about his shoes he tells you he bought them several years ago.

Which one of the following is the most likely diagnosis?

- A) Ligamentous sprain of the arch
  - B) Stress fracture
  - C) Plantar fasciitis
  - D) Osteoarthritis of the metatarsal joint
65. A 2-year-old female is brought to the urgent care center with a fever and cough. Her symptoms started suddenly a few hours ago with a runny nose and fever to 101°F. On examination the child is crying and has a persistent barking cough but has no stridor or significant respiratory distress. Her lungs are clear to auscultation. Her skin is warm, pink, and well perfused, and her oxygen saturation is 99% on room air. A chest radiograph is normal.

Which one of the following treatments has been shown to improve outcomes for this problem?

- A) Humidified air
- B) Nebulized albuterol (Proventil, Ventolin)
- C) Oral azithromycin (Zithromax)
- D) Oral dexamethasone
- E) Oxygen therapy

66. An 80-year-old male presents with a 10-day history of intermittent colicky abdominal pain. The pain is low and central and seems to be worse after eating. He has no associated fever or vomiting but does feel nauseated when the pain is present. He says that prior to this episode he had hard stools once or twice a week that were difficult to pass. For the past several days he has had only watery stools, several times a day.

On examination there is fullness in his left lower quadrant with nonspecific tenderness diffusely and no guarding or rebound. A urine dipstick is normal.

Which one of the following is the most likely diagnosis?

- A) Viral gastroenteritis
  - B) Acute colitis
  - C) Constipation
  - D) Urinary tract infection
  - E) Nephrolithiasis
67. Which one of the following therapeutic interventions improves outcomes in adults with acute respiratory distress syndrome (ARDS)?
- A) Early initiation of antibiotics
  - B) Surfactant therapy
  - C) Pulmonary artery catheterization
  - D) Aggressive intravenous fluid resuscitation
  - E) Starting mechanical ventilation with lower tidal volumes
68. According to the Joint Commission's sentinel event program, the most common root cause of serious medical errors is a deficiency of
- A) competency and credentialing
  - B) staffing
  - C) communication
  - D) leadership
  - E) organization culture
69. A 4-year-old male sees you for pre-kindergarten screening. On corneal light reflex testing, the light reflex in the patient's right eye is in the center of the pupil. In the left eye it is located below the pupil, over the inferior-lateral portion of the iris.

This clinical finding is associated with a congenital palsy of which one of the following cranial nerves?

- A) Third
- B) Fourth
- C) Fifth
- D) Sixth
- E) Seventh

70. A 32-year-old primigravida at 36 weeks gestation complains of headaches. She denies vaginal bleeding, leakage of fluid, and contractions, and the fetus is moving normally. Her blood pressure is 155/100 mm Hg and a urinalysis shows 4+ protein. The rest of her examination is normal and a cervical examination shows 1 cm of dilation, 50% effacement, a soft consistency, anterior position, and -2 vertex station. Results of a preeclampsia panel are all in the normal range.

Which one of the following is the most appropriate management for this patient?

- A) Start labetalol (Trandate) and discharge home on bed rest with close follow-up
  - B) Start magnesium sulfate and induce labor now
  - C) Start magnesium sulfate, administer corticosteroids, and induce labor in 48 hours
  - D) Start magnesium sulfate, lower blood pressure to 140/90 mm Hg, and induce labor at 37 weeks gestation
  - E) Arrange for urgent cesarean section
71. A 75-year-old otherwise healthy white female states that she has passed out three times in the last month during her daily brisk walk. Which one of the following is the most likely cause of her syncope?
- A) Vasovagal syncope
  - B) Transient ischemic attack
  - C) Orthostatic hypotension
  - D) Atrial myxoma
  - E) Aortic stenosis
72. A 62-year-old male has a 1-month history of intermittent vomiting, early satiety, and a weight loss of 4 kg (9 lb). Initially he had diarrhea but it has resolved. He does not have abdominal pain or bloody stools. He says that over-the-counter famotidine (Pepcid) has relieved the symptoms somewhat.

Which one of the following would be most appropriate at this point?

- A) Abdominal radiographs
- B) Abdominal ultrasonography
- C) Esophagogastroduodenoscopy
- D) Famotidine at a higher dosage
- E) A proton pump inhibitor

73. An 18-month-old male is brought to your office by his mother. The patient is tugging at both ears and has a temperature of 39.0°C (102.2°F). You diagnose bilateral acute otitis media for the third time in the last 6 months. The most recent infection was 3 weeks ago and resolution of the infection was documented after 10 days of treatment with amoxicillin.

Which one of the following antibiotic regimens would be most appropriate at this time?

- A) Amoxicillin, 45 mg/kg/day for 10 days
  - B) Amoxicillin, 90 mg/kg/day for 10 days
  - C) Amoxicillin, 90 mg/kg/day for 10 days followed by prophylactic treatment with amoxicillin for 6 months
  - D) Amoxicillin/clavulanate (Augmentin), 90 mg/kg/day for 10 days
  - E) Amoxicillin/clavulanate, 90 mg/kg/day for 10 days followed by prophylactic treatment with amoxicillin for 6 months
74. A 36-year-old white female calls you to report that she removed a small blood-engorged tick from her upper arm the previous evening, 3 days after returning from a camping trip in the mountains of New Hampshire.

Which one of the following would you recommend?

- A) A single 200-mg dose of doxycycline
  - B) Doxycycline, 100 mg twice daily for 7 days
  - C) Azithromycin (Zithromax), 500 mg daily for 7 days
  - D) Topical mupirocin ointment (Bactroban), twice daily for 3 days
  - E) No treatment unless she develops the typical erythema migrans rash
75. A 45-year-old female had myalgias, a sore throat, and a fever 2 weeks ago. She now has anterior neck tenderness and swelling, with pain radiating up to her ears. Your examination reveals a tender goiter.

Which one of the following would support a diagnosis of subacute granulomatous thyroiditis?

- A) Pretibial myxedema
- B) Exophthalmos
- C) Multiple nodules on ultrasonography
- D) Low radioactive iodine uptake (<5%)

76. A 48-year-old female sees you for routine follow-up. She was diagnosed with type 2 diabetes mellitus 2 years ago and has been treated with metformin (Glucophage), 850 mg orally 3 times daily, and glipizide (Glucotrol XL), 20 mg orally daily, along with diet and exercise. Her other medical problems include hypertension and obesity. She has no known cardiovascular disease or microvascular complications. She came in for laboratory testing yesterday, and her hemoglobin A<sub>1c</sub> is 8.0% (N < 5.7%).

Which one of the following medications would help with both glycemic control and weight loss for this patient?

- A) Exenatide (Byetta)
  - B) Pioglitazone (Actos)
  - C) Sitagliptin (Januvia)
  - D) Insulin
77. Which one of the following is the best exercise to improve function in older adults living in nursing homes?
- A) Swimming
  - B) Walking
  - C) Stretching
  - D) Stationary bicycling
  - E) Resistance training
78. A 45-year-old female has been admitted to the hospital for an episode of acute diverticulitis. Which one of the following features would most strongly suggest a need for surgical intervention?
- A) A previous admission for diverticulitis in the last 12 months
  - B) Pain uncontrolled by oral analgesics
  - C) A microperforation seen on CT at the site of the diverticulitis
  - D) A 4-cm simple abscess at the site of the diverticulitis
  - E) The presence of generalized peritonitis



79. A 21-year-old female sees you because of a depressed mood since the birth of her son 2 months ago. She is breastfeeding, and her baby is doing well. She reports no difficulties sleeping, other than what is to be expected when caring for a newborn. She denies any suicidal or homicidal ideation and has never had thoughts about hurting the baby. She has a history of depression 2 years ago that was associated with starting college and feeling very isolated in the dormitory. She began taking sertraline (Zoloft), changed her schedule, and spent more time exercising. Within 6 months her depression resolved and she stopped the medication. She reports this current depression feels worse than her previous depression.

Which one of the following would be the most appropriate medication for this patient?

- A) Amitriptyline
  - B) Diazepam (Valium)
  - C) Phenytoin
  - D) Sertraline
  - E) Zolpidem (Ambien)
80. An 18-month-old female with atopic dermatitis is brought to your office. She has recently had a flare-up of her condition that has been slow to resolve, and the mother says the child scratches “constantly” despite daily use of emollients.

Which one of the following would be the best treatment?

- A) A topical mild-potency corticosteroid
  - B) Topical pimecrolimus (Elidel)
  - C) Oral diphenhydramine (Benadryl)
  - D) Oral cetirizine (Zyrtec)
  - E) Probiotics
81. A 53-year-old white female with chronic hepatitis C is concerned about ulcers in her mouth. She is not currently receiving therapy. Your examination reveals several ulcers involving the buccal mucosa. The patient also points out a number of pruritic, reddish-purple plaques on her wrists, ankles, and back. Laboratory studies are within normal limits except for mildly elevated transaminases.

Which one of the following is the most likely diagnosis?

- A) Behçet’s syndrome
- B) Lichen planus
- C) Aphthous stomatitis
- D) Herpetic stomatitis
- E) HIV infection

82. An 86-year-old female nursing-home resident has type 2 diabetes mellitus, chronic diastolic heart failure, chronic kidney disease, advanced osteoarthritis, hypertension, Alzheimer's disease, and other comorbidities. She requires assistance with dressing, bathing, and feeding.

For this patient, the American Geriatrics Society recommends a hemoglobin A<sub>1c</sub> goal of

- A) <7.0%
- B) <8.0%
- C) <8.5%
- D) <9.0%
- E) <9.5%

83. A new serum marker has been developed for the diagnosis of pulmonary embolism. The test has a likelihood ratio of 1.

Which one of the following conclusions can be made from this information?

- A) The test can confirm pulmonary embolism
- B) The test rules out pulmonary embolism
- C) The test can neither confirm nor rule out pulmonary embolism
- D) The likelihood ratio does not determine how well a test performs

84. A gynecologist requests a preoperative consultation on your patient, a 38-year-old white gravida 2 para 0 abortus 2 whom you referred for total abdominal hysterectomy for adenomatous endometrial hyperplasia.

The patient has been hospitalized twice for deep-vein thrombophlebitis in the past 2 years and had spontaneous second-trimester abortions at the ages of 34 and 36. Routine preoperative blood screening reveals the following:

Platelet count. . . . .	189,000/mm <sup>3</sup> (N 150,000–400,000)
Prothrombin time. . . . .	12.0 sec (N 10.0–12.5)
INR. . . . .	1.1
Activated partial thromboplastin time. . . . .	42 sec (N 25–35)

There is no family history of bleeding disorders and the evaluation is otherwise completely normal.

A repeat activated partial thromboplastin time with a 1:1 mixture of normal plasma does not correct to normal.

The most likely diagnosis is

- A) protein C deficiency
- B) antiphospholipid antibody syndrome
- C) factor VIII deficiency (hemophilia A)
- D) chronic liver disease
- E) von Willebrand disease

85. A 45-year-old female who is a new patient sees you for a well care visit. She requests all screening tests and procedures that are appropriate for her.

She is unmarried but has been in a monogamous relationship with a male partner for the past 10 years. She reports that she has never had an abnormal Papanicolaou (Pap) test result, but that when she had a Pap test last year she did not have a test for human papillomavirus (HPV). She also had normal findings on a mammogram 1 year ago. Her previous physician had been seeing her every 3 months to monitor her blood pressure, which has consistently been 135–140 mm Hg systolic and 85–90 mm Hg diastolic. She takes no antihypertensive medication, but has instituted dietary and lifestyle changes.

According to the U.S. Preventive Services Task Force, which one of the following screening tests or procedures is now recommended for this patient?

- A) A bimanual pelvic examination with CA-125 testing to screen for ovarian cancer
  - B) A Pap test with co-testing for HPV
  - C) Screening for Chlamydia
  - D) Screening for diabetes mellitus
  - E) Screening for colorectal cancer
86. A 2-week-old female is brought to the office for a well child visit. The physical examination is completely normal except for a clunking sensation and feeling of movement when adducting the hip and applying posterior pressure.

Which one of the following would be the most appropriate next step?

- A) Referral for orthopedic consultation
  - B) Reassurance only, and follow-up in 2 weeks
  - C) Triple diapering and follow-up in 2 weeks
  - D) A radiograph of the pelvis
87. A 57-year-old female on dialysis for end-stage renal disease develops chronic, severe generalized pain. Which one of the following opioids is preferred for management of her pain?
- A) Codeine
  - B) Fentanyl
  - C) Hydrocodone
  - D) Morphine

88. Which one of the following strategies for preventing the spread of *Clostridium difficile* infection has been shown to be most effective?
- A) Use of alcohol-based hand sanitizer
  - B) Handwashing with soap and water
  - C) Screening health care providers for the carrier state
  - D) Administration of probiotics to at-risk patients
  - E) Use of N95 masks and negative-pressure rooms

89. A 55-year-old female has severe sepsis due to pyelonephritis. Her systolic blood pressure remains at 70 mm Hg despite antibiotics and adequate fluid resuscitation.

Which one of the following should be considered the vasopressor of first choice for this patient?

- A) Dopamine
- B) Epinephrine
- C) Vasopressin (Pitressin)
- D) Dobutamine
- E) Norepinephrine (Levophed)

90. A 55-year-old male has a 3-month history of chronic shortness of breath and dyspnea on exertion. His physical examination is unremarkable except for 1+ ankle edema bilaterally and a soft systolic murmur. A stress echocardiogram is normal. Pulmonary function tests are normal except for a low diffusing capacity of the lung for carbon monoxide (DLCO).

Which one of the following conditions should be considered in this patient?

- A) Chronic pulmonary thromboembolism
- B) Emphysema
- C) Interstitial lung disease
- D) Asthma
- E) Hypersensitivity pneumonitis

91. In patients who die from an opioid overdose, a second medication is often present that contributes to the patient's death. Which one of the following additional medications is most likely to be found in conjunction with a fatal opioid overdose?

- A) Acetaminophen
- B) Antidepressants
- C) Antipsychotics
- D) Benzodiazepines
- E) Muscle relaxants

92. You test a patient's muscle strength and find that his maximum performance consists of the ability to move with gravity neutralized. This qualifies as which grade of muscle strength, on a scale of 0 to 5?

- A) 0
- B) 1
- C) 2
- D) 3
- E) 4

93. A 21-year-old male comes to your office for a follow-up visit to discuss pharmacologic treatment for his acne. He has moderate inflammatory acne lesions with comedones and several papules and pustules, but few nodules. Multiple topical antibiotic therapies, in combination with benzoyl peroxide, have been minimally effective. He is currently using just topical benzoyl peroxide. You would like to prescribe an oral agent to add to his regimen.

Which one of the following would be the most effective oral medication to start at this time?

- A) Amoxicillin
  - B) Ciprofloxacin (Cipro)
  - C) Minocycline (Minocin)
  - D) Prednisone
94. Based on U.S. Preventive Services Task Force guidelines, screening for lung cancer with low-dose CT of the chest is indicated for which one of the following patients with a 30-pack-year smoking history?
- A) A 50-year-old current smoker
  - B) An 85-year-old current smoker
  - C) A 60-year-old who quit smoking 10 years ago
  - D) A 75-year-old who quit smoking 20 years ago
95. A 37-year-old male complains of severe headaches that typically involve his right eye, and often cause the eye to tear. The headaches occur at about the same time each day and recur for several days in a row before remitting. He reports that he is currently experiencing a third episode of these headaches.

Which one of the following therapies will help prevent future recurrences of this patient's headaches?

- A) Oxygen
  - B) Sumatriptan (Imitrex)
  - C) Lithium
  - D) Verapamil (Calan, Verelan)
96. An 85-year-old male admitted to the hospital for shortness of breath is diagnosed with terminal lung cancer. He decides he would like to receive home hospice care. Over the course of his hospitalization he becomes increasingly confused and forgets where he is and why he is there. He appears depressed with a flat affect. He repeatedly tries to get out of bed and pulls at his IV line and catheter.

Which one of the following medications would be most appropriate for treating these symptoms?

- A) Haloperidol
- B) Nortriptyline (Pamelor)
- C) Pentobarbital (Nembutal)
- D) Lorazepam (Ativan)
- E) Mirtazapine (Remeron)

97. An 18-month-old male with a history of prematurity at 36 weeks gestation but no baseline lung disease is brought to the emergency department with a fever of 38.3°C (100.9°F), rhinorrhea, cough, wheezing, mild tachypnea, and an oxygen saturation of 88%. A chest radiograph reveals perihilar infiltrates, and a nasal swab is positive for respiratory syncytial virus (RSV) antigen.

Which one of the following management options has evidence of benefit for this patient?

- A) Aerosolized ribavirin
  - B) Supplemental oxygen
  - C) Intravenous corticosteroids
  - D) Macrolide antibiotics
98. An 85-year-old male smoker presents with a 6-day history of subacute abdominal pain. He reports nausea without vomiting, and no change in stool. His past medical history includes coronary artery disease, peripheral vascular disease, and a cholecystectomy. The physical examination reveals moderate periumbilical tenderness without guarding or rebound.

Laboratory Findings

WBCs.....	20,000/mm <sup>3</sup> (N 4500–10,800)
Segmented neutrophils.....	82%
Bands.....	7%
Chemistry panel.....	normal
Urinalysis.....	normal
Amylase.....	180 U/L (N < 140)
Lipase.....	normal
Lactic acid.....	3.8 mmol/L (N 0.5–2.2)

Abdominal CT reveals air within the wall of dilated loops of small bowel.

Which one of the following is the most likely diagnosis?

- A) Acute cholangitis secondary to a common duct stone
- B) Acute diverticulitis
- C) Acute mesenteric ischemia
- D) Acute pancreatitis
- E) Acute appendicitis

99. A 75-year-old male reports that his handwriting seems more “cramped,” he has started shuffling more as he walks, and he has been experiencing some difficulty turning over in bed, rising from a chair, and opening jars. He also reports increasing body stiffness and a resting tremor in his hand.

Given the stage of his disease, which one of the following options for initial medical management is supported by the best evidence?

- A) Amantadine
  - B) Bromocriptine (Parlodel)
  - C) Benztropine
  - D) Carbidopa/levodopa (Sinemet)
  - E) Entacapone (Comtan)
100. When assessing the nutritional status and growth of a full-term infant, it is useful to know that birth weight is expected to be regained within
- A) 5 days
  - B) 14 days
  - C) 21 days
  - D) 28 days
101. A 70-year-old white female with hypertension and atrial fibrillation has been chronically anticoagulated. A higher dosage of warfarin (Coumadin) would be required to achieve a therapeutic INR if the patient were found to have
- A) malnutrition
  - B) hypothyroidism
  - C) heart failure
  - D) acute kidney injury
  - E) progressive nonalcoholic cirrhosis
102. Which one of the following is most likely to cause hypoglycemia in elderly patients?
- A) Metformin (Glucophage)
  - B) Pioglitazone (Actos)
  - C) Glipizide (Glucotrol)
  - D) Sitagliptin (Januvia)
  - E) Glyburide (DiaBeta)

103. A 75-year-old male presents to the emergency department with a 2-day history of pain and swelling in his left calf. He had a total knee replacement 2 weeks ago and was discharged home with a prescription for warfarin (Coumadin). He experienced symptoms of nausea, headache, and fatigue, which he attributed to the medication. He stopped taking the warfarin and now refuses to resume it, and he also does not want to be hospitalized. Ultrasonography confirms thrombosis in the deep veins distal to the popliteal fossa.

Which one of the following would be most appropriate at this time?

- A) Aspirin
- B) Clopidogrel (Plavix)
- C) Rivaroxaban (Xarelto)
- D) Intravenous tenecteplase (TNKase)

104. A 34-year-old male who recently immigrated to the United States from Mexico comes to your clinic to complete a comprehensive health evaluation for a custodial job at a hospital, and he must be screened for tuberculosis. He recalls getting many vaccines as a child, including one for tuberculosis.

Which one of the following screening tests for tuberculosis is preferred for this patient?

- A) A stained sputum culture for acid-fast bacilli
- B) Skin testing
- C) Serology
- D) Nucleic acid amplification testing
- E) Interferon-gamma release assays

105. A 53-year-old male complains of fatigue, dyspnea, and orthopnea. Which one of the following would have the highest specificity for heart failure?

- A) Ankle edema
- B) A third heart sound (S<sub>3</sub> gallop)
- C) Crackles
- D) Cardiomegaly on a chest radiograph
- E) Elevated BNP

106. A 7-year-old male is brought to your office after hurting his hand when he fell on a wet kitchen floor. He is unable to describe the mechanism of injury. On examination the maximal point of tenderness is at the third metacarpophalangeal joint, which also has some generalized swelling but no ecchymosis. Range of motion is limited in this joint due to pain. A radiograph of the hand is shown below.

Which one of the following is the most likely diagnosis?

- A) Boxer's fracture
- B) Greenstick fracture
- C) Salter-Harris type II fracture
- D) Spiral fracture
- E) No abnormality



107. In a patient presenting with unstable angina, which one of the following findings would denote the highest risk for death or myocardial infarction?
- A) New-onset angina beginning 2 weeks to 2 months before presentation
  - B) Angina with hypotension
  - C) Angina provoked at a lower threshold than in the past
  - D) Increased anginal frequency

108. A 72-year-old white female presents to your office with a 6-week history of “tanned skin.” She initially attributed it to having gone on a cruise 2 months ago, but noticed her skin continued to darken as time passed. She is slender and has lost 5 kg (11 lb) since her last checkup 6 months ago. She denies fever, malaise, or abdominal pain. Her only medications are hydrochlorothiazide and a baby aspirin daily.

On examination your suspicion of jaundice is confirmed by the presence of scleral icterus. You also note a single enlarged left supraclavicular lymph node which is nontender. The abdomen is soft and nontender; on deep palpation of the right upper quadrant you feel a smooth, nontender mass.

Which one of the following is the most likely diagnosis?

- A) Biliary cirrhosis
  - B) Ascending cholangitis
  - C) Obstructing pancreatic pseudocyst
  - D) Carcinoma of the head of the pancreas
  - E) Hepatocellular carcinoma
109. Hyperbaric oxygen treatment has been shown to be beneficial for which one of the following conditions?
- A) Tinnitus
  - B) Malignant otitis externa
  - C) Crush injury wounds
  - D) Nonunion of bone fractures
  - E) Vascular dementia
110. A 4-year-old female is treated at a local urgent care center with amoxicillin for acute pharyngitis. Several days after starting treatment her initial symptoms resolve. When she is 8 days into the 10-day course of her antibiotic treatment she returns to your office because she has developed a diffuse erythematous maculopapular rash starting on her torso and extending to her proximal extremities.

Which one of the following is the best course of action at this time?

- A) Continue the amoxicillin and begin prednisone and diphenhydramine (Benadryl)
- B) Continue the amoxicillin and change the diagnosis to scarlet fever
- C) Discontinue the amoxicillin and change the diagnosis to viral exanthem
- D) Discontinue the amoxicillin and note amoxicillin as a potential allergy in her record

111. An obese 70-year-old male with chronic pain due to osteoarthritis complains of fatigue, anhedonia, hypersomnolence, and increased appetite. Which one of the following would be the best pharmacologic agent for this patient?
- A) Duloxetine (Cymbalta)
  - B) Mirtazapine (Remeron)
  - C) Citalopram (Celexa)
  - D) Paroxetine (Paxil)
  - E) Nortriptyline (Pamelor)

112. A 42-year-old female with a past medical history significant for type 2 diabetes mellitus, hypertension, obesity, and major depressive disorder presents with a chief complaint of amenorrhea for 9 weeks. A home pregnancy test was positive 2 days ago. Her medications include metformin (Glucophage), insulin glargine (Lantus), lisinopril (Prinivil, Zestril), atenolol (Tenormin), fluoxetine (Prozac), and bupropion (Wellbutrin). You confirm her pregnancy with a urine pregnancy test in your office and you believe she is at 11 weeks gestation based on the date of her last menstrual period.

In addition to the lisinopril, which one of her current medications should be discontinued?

- A) Atenolol
  - B) Bupropion
  - C) Fluoxetine
  - D) Glargine
  - E) Metformin
113. A 55-year-old male with diabetes mellitus is found to have asymptomatic microscopic hematuria. The rest of his urinalysis is negative. He has no other medical problems and quit smoking 10 years ago. His only medication is metformin (Glucophage). A urine culture is negative and his renal function is normal. CT urography is also negative.

Which one of the following should be the next step in the evaluation of his microscopic hematuria?

- A) Urine cytology
- B) Cystoscopy
- C) Nephrology referral
- D) Stopping metformin and performing a repeat urinalysis
- E) Antibiotic therapy

114. A 24-year-old male who just moved to town for a new job presents to your office with a 2-week history of a rash. His previous medical records are not available. The physical examination reveals pink, scaling papules and plaques on the trunk and proximal aspect of the arms and legs. You suspect pityriasis rosea.

To complete the diagnostic evaluation you should order

- A) a fungal culture
  - B) heterophile antibody testing
  - C) a platelet count
  - D) a rapid plasma reagin (RPR) test
  - E) a TSH level
115. A 22-year-old male college student presents with 1–2 weeks of worsening tenesmus associated with frequent stools that are mixed with blood and mucus. He is afebrile and has no other signs of systemic illness. Initial blood and stool testing is normal.

Which one of the following would be most appropriate at this point to evaluate this patient for the presence of inflammatory bowel disease?

- A) Serum markers
  - B) Ultrasonography
  - C) CT of the abdomen and pelvis
  - D) Colonoscopy with biopsies
  - E) A barium enema
116. A 24-year-old gravida 2 para 1 presents to your office for her first prenatal visit at 7 weeks gestation. You review her vaccine records and note that she received Tdap 1 year ago.

When should you recommend that she get her next Tdap?

- A) Post partum
  - B) At this visit
  - C) Anytime after the first trimester
  - D) Between 27 and 36 weeks gestation
  - E) 10 years after the last dose
117. Which one of the following is the most likely cause of acute kidney injury in a patient with eosinophiluria?
- A) Rhabdomyolysis
  - B) Poststreptococcal glomerulonephritis
  - C) Acute interstitial nephritis
  - D) Ethylene glycol poisoning
  - E) Tumor lysis syndrome

118. Which one of the following patients with atrial fibrillation should be advised to use aspirin rather than warfarin (Coumadin) for stroke prevention?
- A) A 56-year-old male with type 2 diabetes mellitus and peripheral neuropathy
  - B) A 60-year-old female with heart failure and a 30-pack-year smoking history
  - C) A 62-year-old male with obesity and hyperlipidemia
  - D) A 66-year-old male with hypertension and depression
  - E) A 75-year-old female with hypothyroidism and osteoarthritis

119. A 77-year-old female is admitted to the critical care unit for acute respiratory failure and is on a ventilator for more than 48 hours. Stress ulcer prophylaxis is ordered.

This prophylaxis should be continued until

- A) venous thromboembolism prophylaxis is stopped
  - B) the patient is transferred out of the critical care unit
  - C) the patient is discharged from the hospital
  - D) the patient is discharged from a skilled care or rehabilitation care facility
  - E) 30 days after discharge from the hospital
120. A 29-year-old female presents with a 1-week history of a rash on her legs. A full review of systems is significant only for regular borderline-heavy periods that lasted for 7 days during her last two menstrual cycles. She has not had any recent illness or hospitalization, and takes no medications. Her examination shows nonblanching purple macules on her upper legs.

A comprehensive metabolic panel reveals normal renal function and liver enzyme tests, and a urine pregnancy test is negative. A CBC reveals a platelet count of  $27,000/\text{mm}^3$  (N 150,000–400,000) but is otherwise normal.

Which one of the following is the most likely cause of the rash?

- A) Acute leukemia
- B) Congenital thrombocytopenia
- C) Immune thrombocytopenic purpura
- D) Thrombotic thrombocytopenic purpura
- E) Henoch-Schönlein purpura

121. A 24-year-old male presents with a 1-week history of right eye redness. He says his eye hurts, especially with light exposure. He reports no history of trauma, but recalls his 2-year-old daughter having “pink eye” about a month ago. He has a previous history of ankylosing spondylitis.

On examination his conjunctiva appears injected and he has a sluggishly reacting pupil. No discharge is noted. Reduced anterior spine flexion is noted on examination of the back. Fluorescein staining of the cornea is negative.

Which one of the following is the most appropriate next step to manage this patient’s eye condition?

- A) Artificial tears
  - B) Ocular antibiotics
  - C) Ocular corticosteroids
  - D) Oral acetazolamide
  - E) Ophthalmic olopatadine (Patanol)
122. A 36-year-old male is diagnosed with midsubstance Achilles tendinopathy. He has had symptoms for approximately 8 weeks.

For this patient, which one of the following would be the first-line treatment?

- A) Tendon massage
  - B) Eccentric exercise
  - C) Iontophoresis
  - D) Therapeutic ultrasound
  - E) Electrical stimulation therapy
123. A 24-year-old female complains of irritability, anxiety, and feeling restless. These symptoms began 3 months ago after she was in a car accident in which two people died. She has become very socially withdrawn and when she tries to sleep she has flashbacks to the accident.

In addition to recommending trauma-focused psychotherapy, which one of the following medications would be most appropriate?

- A) Buspirone
- B) Clonazepam (Klonopin)
- C) Quetiapine (Seroquel)
- D) Topiramate (Topamax)
- E) Sertraline (Zoloft)

124. A 58-year-old female presents with a 6-month history of persistent intermittent unilateral rhinorrhea. The drainage is clear, and seems to be worse in the early morning when she first gets up. Her past medical history includes hypertension and controlled migraines. Her surgical history includes a total hysterectomy 5 years ago and septal deviation surgery 7 months ago. She has tried oral antihistamines and intranasal corticosteroids without relief.

The patient should undergo further evaluation for

- A) vasomotor rhinitis
  - B) allergic rhinitis
  - C) cerebrospinal fluid rhinorrhea
  - D) an intranasal tumor
125. A 25-year-old female reports the absence of menses for the past 6 months. She is currently not taking any medications. You confirm that she is not pregnant and order additional laboratory testing. TSH, LH, and FSH levels are normal but she has an elevated prolactin level.

Which one of the following would be most appropriate at this point to further evaluate her pituitary gland?

- A) A follow-up serum prolactin level in 4 weeks
  - B) A prolactin-stimulating hormone level
  - C) MRI of the pituitary
  - D) Head CT with intravenous contrast
126. A 36-year-old male who participates in his neighborhood basketball league visits your office with a 3-week history of heel pain. On examination he has pain over the medial plantar region of the right heel and the pain is aggravated by passive ankle dorsiflexion.

Which one of the following should you order to confirm the diagnosis?

- A) Plain films of the foot
  - B) Ultrasonography of the foot
  - C) CT of the foot
  - D) MRI of the foot
  - E) No diagnostic imaging
127. According to the U.S. Preventive Services Task Force, low-dose aspirin use in women is most effective for primary prevention of
- A) stroke, beginning at age 50
  - B) stroke, beginning at age 55
  - C) myocardial infarction, beginning at age 50
  - D) myocardial infarction, beginning at age 55
  - E) both myocardial infarction and stroke, beginning at age 50

128. A 6-year-old male is diagnosed with acute bacterial sinusitis. He has a previous history of a rash 5 days after beginning penicillin treatment.

Which one of the following medications is most appropriate for this patient?

- A) Amoxicillin/clavulanate (Augmentin)
  - B) Trimethoprim/sulfamethoxazole (Bactrim)
  - C) Cefuroxime (Ceftin)
  - D) Doxycycline
  - E) Azithromycin (Zithromax)
129. An 85-year-old male is brought to your office by his family because they are concerned that he may be depressed. Which one of the following is most likely in a depressed patient in this age group?
- A) Suicidal ideation
  - B) Somatic symptoms
  - C) Depressed mood
  - D) Preoccupation with guilt
130. A 72-year-old previously healthy male presents with a 3-week history of mild, intermittent chest pressure that occurs when he walks up a steep hill. Which one of the following EKG abnormalities would dictate the use of a pharmacologic stress test as opposed to an exercise stress test?
- A) First degree atrioventricular block
  - B) Left bundle branch block
  - C) Poor R-wave progression in leads V1 through V3
  - D) Q-waves in the inferior leads
  - E) Ventricular trigeminy
131. A 20-year-old college student who has been working in the woods on a forestry project presents with a 3- to 4-day history of a severely pruritic rash on his arms, hands, and face. There is erythema with multiple bullae and vesicles, some of which are in a streaked linear distribution on the arms. There are patches of erythema on his face with some vesicles. The itching is intense and he sleeps fitfully.
- In addition to cool compresses and antihistamines for the itching, which one of the following is the best treatment option for this patient?
- A) Triamcinolone, 20 mg intramuscularly as a single dose
  - B) A 6-day oral methylprednisolone (Medrol) dose pack, starting at 24 mg
  - C) A 7- to 10-day course of topical halobetasol propionate (Ultravate), 0.05% ointment
  - D) A 7- to 10-day course of topical mupirocin (Bactroban) 2%, after decompression of vesicles and bullae
  - E) A 10- to 14-day tapering course of oral prednisone, starting at 60 mg

132. While making rounds on the rehabilitation floor of your hospital, you see a 62-year-old female who was recently transferred from the acute-care section of the hospital where she was admitted for urosepsis. She is a liver-transplant recipient and her specialist has been tapering her immunosuppressive drug regimen for the last 2 months. According to the nursing staff the patient became hypoxic suddenly and had a low-grade fever and cough. You note that she looks ill and uncomfortable, and has an increased respiratory rate. A chest radiograph reveals diffuse bilateral interstitial infiltrates.

Which one of the following is the most likely diagnosis?

- A) Pneumococcal pneumonia
  - B) Staphylococcal pneumonia
  - C) Pneumocystis pneumonia
  - D) Pulmonary tuberculosis
  - E) Pneumothorax
133. A 45-year-old male is hospitalized for the management of alcohol withdrawal syndrome. His symptoms include tachycardia, diaphoresis, tremors, and visual hallucinations. His CIWA-Ar (Clinical Institute Withdrawal Assessment for Alcohol, Revised) score is 18, indicating moderate alcohol withdrawal.

Which one of the following medications has been shown to reduce the risk of developing seizures in this situation?

- A) Carbamazepine (Tegretol)
  - B) Lorazepam (Ativan)
  - C) Gabapentin (Neurontin)
  - D) Phenytoin (Dilantin)
  - E) Valproic acid (Depakene)
134. A 50-year-old female with significant findings of rheumatoid arthritis presents for a preoperative evaluation for planned replacement of the metacarpophalangeal joints of her right hand under general anesthesia. She generally enjoys good health and has had ongoing medical care for her illness.

Of the following, which one would be most important for preoperative assessment of this patient's surgical risk?

- A) Resting pulse rate
- B) Resting oxygen saturation
- C) Erythrocyte sedimentation rate
- D) Rheumatoid factor titer
- E) Cervical spine imaging



135. A 38-year-old female presents to the emergency department with an acute onset of fever, chills, and rapidly progressive right lower extremity redness. She reports being in her usual state of health until a few hours ago when she developed shaking chills and noted a fever of 103.0°F (39.4°C).

Shortly after she arrives she complains of right lower extremity pain and a bright red skin discoloration from her ankle to her right knee. She is also noted to have a heart rate of 123 beats/min and a WBC count of 22,000/mm<sup>3</sup> (N 4300–10,800). Her past medical history is significant for congenital arthritis, a recent bilateral hip replacement, and recurrent lower extremity cellulitis.

You admit the patient to the hospital. When selecting an empiric treatment for this patient, which one of the following organisms should you be most concerned about?

- A) *Candida albicans*
  - B) *Chlamydia trachomatis*
  - C) *Mycoplasma hominis*
  - D) Group A *Streptococcus*
  - E) *Trichophyton rubrum*
136. Which one of the following screening practices is recommended for the adolescent population by the U.S. Preventive Services Task Force?
- A) Lipid screening
  - B) Scoliosis screening
  - C) Testicular examination
  - D) Papanicolaou tests starting 3 years after first sexual intercourse
  - E) Chlamydia screening in sexually active females
137. A 75-year-old female presents with a complaint of paresthesias in her feet. On examination she has mild erythema of her tongue and decreased vibratory sensation in her feet. A CBC reveals a hemoglobin level of 11.1 g/dL (N 12.0–16.0) and a mean corpuscular volume of 105  $\mu\text{m}^3$  (N 78–102).

The patient takes the following over-the-counter drugs: aspirin, 81 mg/day; ranitidine (Zantac), 150 mg twice daily; and acetaminophen, 325 mg twice daily. Which one of the following prescription medications the patient takes is most likely causing her problem?

- A) Hydrochlorothiazide
- B) Lisinopril (Prinivil, Zestril)
- C) Amlodipine (Norvasc)
- D) Simvastatin (Zocor)
- E) Omeprazole (Prilosec)

138. A 52-year-old female with a history of well-controlled diabetes mellitus presents with right shoulder pain for 2 months. She cannot recall any injury. The pain is fairly constant, has a burning quality, and disturbs her sleep.

On examination the patient has no redness or swelling. Passive and active abduction are limited to 45°. There is some limitation of shoulder flexion and internal rotation, but it is less pronounced. No focal tenderness is found. Plain films are negative.

Which one of the following is the most likely diagnosis for this patient?

- A) Calcific tendinitis
- B) Diabetic neuropathy
- C) Partial rotator cuff tear
- D) Locked posterior dislocation
- E) Frozen shoulder

139. A 25-year-old male presents to your office after recently being diagnosed with HIV infection at the health department. You obtain blood work and note that his CD4+ count is 180 cells/mm<sup>3</sup>.

This patient should receive prophylaxis against which one of the following opportunistic infections?

- A) Histoplasma capsulatum
- B) Microsporidiosis
- C) Mycobacterium avium-intracellulare complex
- D) Pneumocystis
- E) Toxoplasma gondii

140. A 7-year-old female is brought to your office with a complaint of right hip pain and a limp with an insidious onset. There is no history of injury or repetitive use. Her vital signs are within normal limits and she has no history of fever or chills or other systemic symptoms. On examination you note that she cannot fully abduct her hip and she winces with pain on internal rotation. A FABER test is normal. Her right leg is 2 cm ( $\frac{3}{4}$  in) shorter than the left. Plain films reveal flattening and sclerosis of the proximal femur with joint space widening.

What is the most likely diagnosis in this patient?

- A) Iliopsoas bursitis
- B) Labral tear
- C) Legg-Calvé-Perthes disease
- D) Septic arthritis
- E) Stress fracture

141. A 23-year-old female presents with menstrual irregularity, increased facial hair, and acne. Your evaluation leads to a diagnosis of polycystic ovary syndrome.

Which one of the following is the first-line management for her constellation of symptoms?

- A) Clomiphene (Clomid)
- B) Hormonal contraceptives
- C) Metformin (Glucophage)
- D) Pioglitazone (Actos)
- E) Spironolactone (Aldactone)

142. A 47-year-old male is hospitalized for severe lower-extremity methicillin-resistant *Staphylococcus aureus* (MRSA) cellulitis. He is started on intravenous vancomycin and his home medications, which include metoprolol and escitalopram (Lexapro), are continued. On day 3, in preparation for discharge, he is transitioned to oral trimethoprim/sulfamethoxazole (Bactrim). Two hours after taking his first dose he reports severe swelling of his lips, wheezing, hoarseness, and hives. His blood pressure, which was previously normal, is now 84/62 mm Hg. You order emergent therapy with intramuscular epinephrine, 0.3 mg; intravenous methylprednisolone sodium succinate (Solu-Medrol), 125 mg; and intravenous diphenhydramine (Benadryl), 50 mg. However, no clinical improvement is noted after 15 minutes.

Which one of the following should you recommend now?

- A) Another dose of intramuscular epinephrine
- B) Another dose of intravenous methylprednisolone
- C) Another dose of intravenous diphenhydramine
- D) Intramuscular glucagon
- E) Intramuscular betamethasone sodium phosphate/betamethasone acetate (Celestone Soluspan)

143. In a woman whose group B *Streptococcus* status is unknown, which one of the following is a risk factor requiring empiric intrapartum antibiotic prophylaxis against early-onset group B streptococcal infection in her newborn?

- A) Fetal tachycardia
- B) Delivery at less than 35 weeks gestation
- C) Rupture of the membranes 12 hours before delivery
- D) Gestational diabetes during the pregnancy
- E) Use of vacuum extraction during delivery

144. A patient with advanced dementia is bed-bound and requires total assistance with all activities of daily living. She was treated recently for pneumonia, which has raised concerns that she is aspirating. Her oral intake has decreased and is not adequate for the patient's nutritional requirements. She does not have an advance directive. You schedule a family conference.

Which one of the following is your recommended approach to this problem?

- A) Clear liquids
  - B) Intravenous fluids
  - C) Hand feeding
  - D) Percutaneous endoscopic gastrostomy (PEG) tube feeding
  - E) Nasogastric tube feeding
145. The National Weight Control Registry includes individuals who have lost substantial weight without surgery, and have maintained the weight loss for an average of 5 years. Which one of the following behaviors is typical of these individuals?

- A) Eating breakfast every day
- B) Taking daily vitamin and mineral supplements
- C) Weighing themselves daily
- D) Being physically active > 2 hours a day
- E) Eating a low-protein diet

146. A 30-year-old male presents to the emergency department after spraining his ankle while playing basketball. He has pain over the lateral malleolus.

Radiographs of the ankle would be indicated if he has which one of the following?

- A) An inversion injury
  - B) Swelling over the lateral malleolus
  - C) Ecchymosis over the lateral malleolus
  - D) The inability to bear weight to walk since the injury
  - E) A previous history of ankle injury
147. During a preparticipation examination of a 5-year-old male for summer soccer camp, his mother states that he frequently awakens during the night with complaints of cramping pain in both legs, and that he seems to experience this after a day of heavy physical activity. She says that she has never noticed a definite limp. A physical examination of the hips, knees, ankles, and leg musculature is entirely normal.

Which one of the following would be the most appropriate next step in the evaluation and management of this patient?

- A) Reassurance, with no activity restrictions or treatment
- B) Recommending that he not participate in running sports
- C) Plain films of both hips and knees
- D) Serum electrolyte levels
- E) Referral to a pediatric orthopedist

148. A 28-year-old previously healthy male nonsmoker has a 3-day history of fever and a productive cough. He presents to the urgent care clinic for evaluation after developing pain in the right lower chest when breathing deeply. He has not sought medical care for over 5 years and has never been immunized for influenza.

On examination you note a temperature of 38.6°C (101.4°F), a blood pressure of 136/74 mm Hg, a pulse rate of 90 beats/min, an oxygen saturation of 93% on room air, and a respiratory rate of 20/min. The patient appears uncomfortable but is not in significant distress. The presence of crackles over the right lower anterior chest prompts an order for chest radiography, which reveals an air bronchogram and a patchy alveolar infiltrate involving the medial middle lobe.

Which one of the following treatment options would be most appropriate at this time?

- A) Outpatient treatment with oral azithromycin (Zithromax)
  - B) Outpatient treatment with oral ciprofloxacin (Cipro)
  - C) Outpatient treatment with oseltamivir (Tamiflu)
  - D) Inpatient treatment with intravenous ceftriaxone (Rocephin) and oral azithromycin
  - E) Inpatient treatment with intravenous ceftriaxone and ciprofloxacin
149. A 32-year-old male presents with a 1-year history of increasing fatigue, polyuria, and a gradual 30-lb weight loss. Serum chemistries reveal a bicarbonate level of 23 mEq/L (N 22–28), a corrected anion gap of 8 mEq/L (N 3–11), and a glucose level of 658 mg/dL (N 60–110). The patient is admitted to the hospital and his serum glucose drops to 174 mg/dL after he is given 2 L of intravenous normal saline and 10 units of regular insulin subcutaneously. He is observed overnight and further laboratory testing is done the next morning.

Which one of the following is more consistent with type 2 diabetes mellitus than with type 1 diabetes mellitus?

- A) The patient's history of weight loss
  - B) The patient's response to the initial dose of insulin
  - C) The time course of symptom onset
  - D) Morning laboratory studies showing a C-peptide level of < 1.1 ng/mL (N 1.1–4.4)
150. A 66-year-old male with known GOLD stage 3 COPD is admitted to the hospital with pneumonia. His pneumonia improves and he is discharged with home oxygen because of hypoxemia. He did not require home oxygen before this.

Which one of the following would be most appropriate regarding his future use of home oxygen?

- A) Reduce oxygen use to nighttime only
- B) Stop oxygen when his course of antibiotics and corticosteroids is completed
- C) Reassess the need for oxygen within 3 months
- D) Stop oxygen within 6 months
- E) Continue oxygen indefinitely

151. In the hospital setting, the use of atypical antipsychotics is most appropriate for which one of the following conditions?
- A) Hospital-associated insomnia
  - B) ICU-associated delirium
  - C) Resistance to care in a patient with dementia
  - D) Aggression in a patient with dementia

152. A 70-year-old female presents with a blotchy red rash on both of her legs and feet. The rash started 2 days ago and is associated with fatigue. Her past medical history is unremarkable except for acute cystitis treated with a 3-day course of an antibiotic last week. On examination her vital signs are normal, as is the remainder of her physical examination, with the exception of a palpable purpuric rash on her lower extremities, shown below. The patient's CBC, INR, and partial thromboplastin time are all normal.

Which one of the following is now indicated?

- A) Supportive care only
  - B) Antihistamines
  - C) Broad-spectrum antibiotics
  - D) Plasmapheresis
  - E) Platelet transfusion
153. A 65-year-old male comes to your office to establish care after hospitalization for an acute myocardial infarction. While reviewing his hospital record you see that he has normal renal function and had an echocardiogram showing a left ventricular ejection fraction of 40%. His current medications include metoprolol succinate (Toprol-XL), lisinopril (Prinivil, Zestril), atorvastatin (Lipitor), and aspirin. In your office today his blood pressure is 132/84 mm Hg and he is still feeling somewhat weak. He has 1+ pitting edema in his legs and mild dyspnea with exertion.

Which one of the following, when added to his current regimen, has evidence to support its use in preventing all-cause mortality?

- A) Chlorthalidone
- B) Spironolactone (Aldactone)
- C) Ezetimibe (Zetia)
- D) Losartan (Cozaar)
- E) Fish oil

154. A 44-year-old African-American female reports diffuse aching, especially in her upper legs and shoulders. The aching has increased, and she now has trouble going up and down stairs because of weakness. She has no visual symptoms, and a neurologic examination is normal except for proximal muscle weakness. Laboratory tests reveal elevated levels of serum creatine kinase and aldolase. Her symptoms improve significantly when she is treated with corticosteroids.

Which one of the following is the most likely diagnosis?

- A) Duchenne's muscular dystrophy
  - B) Myasthenia gravis
  - C) Amyotrophic lateral sclerosis
  - D) Aseptic necrosis of the femoral head
  - E) Polymyositis
155. A 24-year-old gravida 4 para 2 with mild chronic hypertension and an uncomplicated pregnancy has just delivered a vigorous male by spontaneous vaginal delivery. She is noted to have heavy vaginal bleeding and a bimanual examination reveals a soft, poorly contracted uterus. Her temperature is 37.1°C (98.8°F), blood pressure 158/92 mm Hg, pulse rate 105 beats/min, and oxygen saturation 95% on room air.

Which one of the following uterotonic agents is CONTRAINDICATED in the management of this patient's postpartum hemorrhage?

- A) Oxytocin (Pitocin)
  - B) Methylergonovine
  - C) Carboprost tromethamine (Hemabate)
  - D) Misoprostol (Cytotec)
156. A 30-year-old female presents to your office as a new patient and requests a refill of sulfasalazine (Azulfidine) tablets for maintaining remission of her ulcerative colitis. The initial presentation of her disease was in her teenage years and involved inflammation of the entire colon. She was then started on sulfasalazine, which has worked well for controlling her symptoms. She had one flare when she ran out of medicine 7 years ago. She has not seen a gastroenterologist for many years.

Which one of the following is an appropriate management plan for this patient?

- A) Refill her sulfasalazine and continue usual care unless symptoms recur
- B) Attempt to gradually discontinue the sulfasalazine
- C) Stop sulfasalazine and start azathioprine (Imuran)
- D) Continue sulfasalazine and arrange for colonoscopy to screen for colon cancer
- E) Refer to a colorectal surgeon to discuss colectomy

157. Tramadol (Ultram) should be avoided in patients with a history of which one of the following?
- A) Seizures
  - B) Heart failure
  - C) Ventricular dysrhythmias
  - D) Hypertension
158. You see a 58-year-old female whom you suspect has COPD and you recommend formal testing in order to confirm this diagnosis. The cutoff most often used for COPD diagnosis on a spirometry test performed while the patient is stable (not experiencing an acute exacerbation of symptoms) is a postbronchodilator FEV<sub>1</sub>/FVC ratio
- A) < 50% of predicted
  - B) < 70% of predicted
  - C) < 85% of predicted
  - D) > 70% of predicted
  - E) > 85% of predicted
159. For patients on lithium monotherapy for bipolar disease, monitoring should include periodic blood levels of lithium, creatinine, and
- A) calcium
  - B) hemoglobin A<sub>1c</sub>
  - C) lipids
  - D) testosterone
  - E) TSH
160. A 28-year-old healthy female calls your clinic with a 2-day history of dysuria, urgency, and frequency. She has not had a fever, back pain, nausea, or hematuria, and has not noticed any vaginal discharge or itching. She was seen for similar symptoms 3 months ago and was treated with a 3-day course of antibiotics, with full resolution of symptoms.
- Treatment for this patient should be based on
- A) her reported symptoms
  - B) the presence or absence of suprapubic tenderness on examination
  - C) the presence or absence of leukocyte esterase on a urine dipstick
  - D) findings from a mid-stream urine culture
  - E) findings from urine microscopy



161. A 44-year-old female with a history of type 2 diabetes mellitus that is well controlled with metformin (Glucophage) is noted to have mild anterior neck fullness during an annual physical examination. A review of systems is unremarkable. Ultrasonography of the neck shows a normal-sized thyroid gland with a 1.2-cm nodule in the right lobe. Her TSH level is normal.

Which one of the following is the most appropriate next step in the management of this patient's thyroid nodule?

- A) A repeat TSH level in 3 months
- B) A radionuclide uptake thyroid scan
- C) Noncontrast CT of the neck
- D) Fine-needle aspiration of the nodule
- E) No further workup

162. A 17-year-old female with a history of morbid obesity sees you to discuss contraceptive options. She is heterosexual and is currently sexually active with one male partner. She has heavy irregular periods and associated anemia and is interested in a contraceptive option that will both provide reliable birth control and decrease her menstrual blood loss. She recently had negative tests for HIV, gonorrhea, and Chlamydia at a local health department. Her examination is unremarkable except for a weight of 136 kg (300 lb) and a BMI of 50 kg/m<sup>2</sup>.

Which one of the following would be the best option for contraception for this patient?

- A) A diaphragm with spermicide
- B) The norelgestromin/ethinyl estradiol transdermal system (Ortho Evra)
- C) The levonorgestrel-releasing intrauterine system (Mirena IUD)
- D) Medroxyprogesterone acetate (Depo-Provera)

163. A 35-year-old otherwise healthy male who is not on any medications presents to your office complaining of 3–4 episodes of watery diarrhea beginning 2 days earlier. The diarrhea is accompanied by some nausea and abdominal cramping. He denies fever, dehydration, and bloody stool.

Which one of the following is indicated at this time?

- A) Testing for fecal leukocytes
- B) A stool culture
- C) A stool examination for ova and parasites
- D) A stool test for Clostridium difficile toxin
- E) No testing

164. A 60-year-old male is scheduled for coronary revascularization. Which one of the following would reduce his cardiovascular risk the most when given perioperatively?
- A)  $\beta$ -Blockers
  - B) Calcium channel blockers
  - C) Statins
  - D) Aspirin
  - E) Warfarin (Coumadin)

165. A 72-year-old white male requests treatment for moderate osteoarthritis pain of the hips and knees. He has not been treated for this problem previously and has been reluctant to take medication. He takes lisinopril (Prinivil, Zestril), 20 mg daily, for hypertension, and his blood pressure is under good control. He also has a known history of stage 3 kidney disease, with a serum creatinine level of 2.1 mg/dL (N 0.6–1.5) and a glomerular filtration rate of 36 mL/min/1.73 m<sup>2</sup>. The patient's renal function has been stable for the last 6 months. His CBC and chemistry panel are otherwise normal.

Which one of the following is the initial treatment of choice for this patient?

- A) Acetaminophen
  - B) Celecoxib (Celebrex)
  - C) Oxycodone (OxyContin)
  - D) Sulindac (Clinoril)
  - E) Tramadol (Ultram)
166. An anxious 30-year-old white female comes to the emergency department with shortness of breath, circumoral paresthesia, and carpopedal spasms. Which one of the following sets of blood gas values is most consistent with this clinical picture?
- A) pH 7.25 (N 7.35–7.45), pCO<sub>2</sub> 25 mm Hg (N 35–45), pO<sub>2</sub> 100 mm Hg (N 80–100)
  - B) pH 7.25, pCO<sub>2</sub> 50 mm Hg, pO<sub>2</sub> 80 mm Hg
  - C) pH 7.50, pCO<sub>2</sub> 25 mm Hg, pO<sub>2</sub> 100 mm Hg
  - D) pH 7.55, pCO<sub>2</sub> 50 mm Hg, pO<sub>2</sub> 80 mm Hg

167. A 30-year-old otherwise healthy female has concerns about her menses and fertility. Her last menstrual period was 8 months ago when she stopped taking oral contraceptive pills (OCPs). In her teens and early twenties she had irregular, sporadic periods. Four years ago she developed menometrorrhagia and resultant iron deficiency anemia; this was corrected with the use of OCPs. She is now interested in becoming pregnant. Her physical examination, including a gynecologic examination, is normal. A urine pregnancy test is negative and her TSH level is in the normal range.

Which one of the following is the most appropriate next step?

- A) A CBC and metabolic panel
- B) Serum LH and FSH levels
- C) Karyotype analysis
- D) Pelvic ultrasonography

168. In frail elderly patients, starvation can be distinguished from cachexia by which one of the following?
- A) An inflammatory response seen in starvation
  - B) A normal appetite in the early stages of cachexia
  - C) A rapid decrease in albumin in the early stages of starvation
  - D) A reversal of changes with refeeding in starvation

169. A 2-year-old female is brought in by her father for evaluation of a cough. Her cough started 10 days ago along with a runny nose and a low-grade fever. The runny nose and fever are no longer present but a dry-sounding cough persists.

On examination the patient appears well and has a normal heart rate and respiratory rate. You note no retractions and lung sounds are also normal.

Which one of the following would be an appropriate management option?

- A) Buckwheat honey
  - B) Albuterol (Proventil, Ventolin)
  - C) Azithromycin (Zithromax)
  - D) Dextromethorphan
  - E) Diphenhydramine (Benadryl)
170. A mother brings her 6-year-old son to your office for evaluation because she found a lump in his neck below the jaw on the right side. She first noted it a week ago, about a week after he had recovered from an upper respiratory infection. She reports that her son feels well and is back to full, unrestricted activity.

When you examine the child you find an enlarged lymph node in the right anterior cervical chain of nodes. It measures 2 cm in diameter and is somewhat firm, mobile, and nontender. The remainder of the examination is normal.

Which one of the following would be most appropriate at this point?

- A) Ultrasound evaluation of the lymph node
- B) A fine-needle biopsy of the node
- C) An excisional biopsy of the node
- D) A 10-day course of antibiotics
- E) Follow-up examination in 1 month

171. A 50-year-old female with no medical problems presents with a 2-day history of profuse bloody diarrhea, severe abdominal cramping, and fever. She has recently returned from a week-long trip to Thailand. Her stool culture is positive for *Campylobacter*.

Which one of the following is the treatment of choice?

- A) Amoxicillin
  - B) Azithromycin (Zithromax)
  - C) Ciprofloxacin (Cipro)
  - D) Metronidazole (Flagyl)
  - E) Rifaximin (Xifaxan)
172. Which one of the following NSAIDs is safest for patients with a previous history of myocardial infarction?
- A) Ibuprofen
  - B) Celecoxib (Celebrex)
  - C) Diclofenac (Zorvolex)
  - D) Meloxicam (Mobic)
  - E) Naproxen (Naprosyn)
173. A 21-year-old sexually active female comes to your office for a Papanicolaou (Pap) test and STD screening. Her Pap smear is normal but she tests positive for gonorrhea. Chlamydia testing is negative.

Which one of the following is the recommended treatment?

- A) Doxycycline
  - B) Azithromycin (Zithromax)
  - C) Ceftriaxone (Rocephin) plus azithromycin
  - D) Ofloxacin
  - E) Cefdinir plus levofloxacin (Levaquin)
174. A 6-month-old male is seen in the clinic for a cough, fever, and decreased feeding for the past 2 days. He has no medical problems and no known drug allergies, and has not had nausea or vomiting. On examination he is fussy but consolable and his mucous membranes are moist. His temperature is 38.8°C (101.8°F), pulse rate 92 beats/min, respirations 56/min, oxygen saturation 96% on room air, and blood pressure 90/50 mm Hg. He has mild intercostal retractions and crackles are heard at the right lung base. His heartbeat is regular without murmurs. Capillary refill is normal.

Which one of the following is the best initial treatment for this child?

- A) High-dose oral amoxicillin
- B) Oral azithromycin (Zithromax)
- C) Ceftriaxone (Rocephin) intravenously or intramuscularly every 24 hours
- D) Trimethoprim/sulfamethoxazole (Bactrim)
- E) Erythromycin

175. An 18-month-old white female is brought to your office by her father, who states that 8 days ago the child developed a temperature of 100.0°F with a mild sore throat, a runny nose, and loss of her voice. She is still symptomatic and the father is concerned about the longevity of this illness and requests antibiotic therapy.

On examination the patient is afebrile with normal tympanic membranes, moderate mucopurulent posterior pharyngeal drainage, and a normal cardiopulmonary examination. She appears alert and active in the office, with no signs of acute distress.

Which one of the following is the most appropriate management at this time?

- A) Reassurance and supportive care
  - B) Diphenhydramine (Benadryl)
  - C) Amoxicillin
  - D) Azithromycin (Zithromax)
  - E) Cefdinir
176. A 61-year-old female presents to your office with a sudden painless loss of vision in her right eye. Her past medical history includes both hypertension and type 2 diabetes mellitus.

Which one of the following would make you suspect retinal vein occlusion as the cause of her sudden visual loss?

- A) An afferent pupillary defect in the contralateral eye
  - B) Right eye redness
  - C) Tortuous retinal veins on funduscopic examination
  - D) Macular drusen on funduscopic examination
177. A 20-year-old African-American female asks if you can help eradicate an unsightly hypertrophic growth of skin that has developed in an area where she had a mole removed. She reports that this tissue has grown to become at least three times larger than the original lesion and that it is darkly pigmented, firm, and pruritic. On examination you note a firm, smooth, shiny, raised 1 × 4-cm plaque on the patient's chest that is darker than the surrounding skin.

Which one of the following is first-line therapy for this lesion?

- A) Silicone gel sheeting
- B) Topical imiquimod (Aldara)
- C) Intralesional corticosteroid injection
- D) Surgical excision
- E) Laser destruction

178. A 74-year-old female presents to the emergency department in respiratory distress with a slightly altered mental status. Her urine drug screen is positive for opioids. The patient and her family deny opioid use. You know this patient well and also doubt she is taking opioids. She has been taking dextromethorphan, guaifenesin, azithromycin (Zithromax), and pseudoephedrine.

Which one of these could be causing a false-positive test for opioids on her urine drug screen?

- A) Dextromethorphan
  - B) Guaifenesin
  - C) Azithromycin
  - D) Pseudoephedrine
179. A 12-year-old white male who lives in a household with several cats presents with axillary lymphadenopathy. Which one of the following is the best initial test for establishing a diagnosis of cat-scratch disease?

- A) Lymph node biopsy
- B) Blood cultures
- C) IgG testing for *Bartonella henselae*
- D) IgG testing for nontuberculous *Mycobacterium* species

180. A 49-year-old unemployed African-American male has multiple chronic conditions, including type 2 diabetes mellitus, chronic kidney disease, hypertension, obstructive sleep apnea, and lower extremity edema. He is on several medications, which he reports taking sporadically due to a lack of health insurance and a limited income. He has several abnormal laboratory values, including a serum creatinine level of 3.1 mg/dL, an increase from his usual levels, which have ranged from 1.2–1.6 mg/dL over the past 5 years. You calculate his glomerular filtration rate to be 27 mL/min/1.73 m<sup>2</sup>.

Which one of the following medications that he takes should be stopped at this time?

- A) Amlodipine (Norvasc)
  - B) Aspirin
  - C) Insulin
  - D) Metformin (Glucophage)
  - E) Metoprolol (Lopressor, Toprol-XL)
181. A 69-year-old patient presents with a 2-day history of wrist pain after sustaining a fall at home. On examination there is diffuse swelling and tenderness across the dorsal aspect of the wrist. Radiographs are shown below.

Which one of the following would be the most appropriate treatment?

- A) A long arm posterior splint
- B) A radial gutter splint
- C) A sugar-tong splint
- D) A thumb spica splint
- E) An ulnar gutter splint

182. Which one of the following has been shown to be LEAST effective in the treatment of irritable bowel syndrome?
- A) Fiber
  - B) Probiotics
  - C) Antispasmodics
  - D) Antidepressants

183. A 23-year-old female complains of lower abdominal and pelvic pain, increased vaginal discharge, and postcoital bleeding. Her pain worsens during intercourse, and is accompanied by occasional nausea and vomiting and a feverish feeling. She is sexually active with several male partners.

A physical examination is remarkable for an oral temperature of 38.6°C (101.5°F), cervical motion tenderness, adnexal tenderness without a mass, and a prominent cervical discharge. Office laboratory results include an elevated erythrocyte sedimentation rate and an elevated WBC count. Saline microscopy of vaginal secretions shows abundant numbers of WBCs but is negative for *Trichomonas vaginalis* and bacterial vaginosis. You order nucleic-acid amplification tests for *Chlamydia trachomatis* and *Neisseria gonorrhoeae*.

Which one of the following would be most appropriate at this point?

- A) Treatment based on clinical findings
  - B) Treatment when results of testing for *Chlamydia trachomatis* and *Neisseria gonorrhoeae* are available
  - C) Transvaginal ultrasonography
  - D) Pelvic CT
  - E) Laparoscopy
184. Which one of the following is associated with the use of stimulant medications for attention-deficit disorder in adults?
- A) Lower success rates compared to nonstimulant medications
  - B) Weight gain
  - C) A low risk of medication abuse
  - D) Serious adverse cardiovascular events
  - E) Increases in blood pressure

185. A 70-year-old male with a past medical history significant for long-standing diabetes mellitus and hypertension presents with a stroke. CT of the head shows mild atrophy, with no acute bleeding.

In the first 24 hours after his stroke, starting treatment to control his blood pressure is recommended if it reaches what threshold level?

- A) 150/90 mm Hg
- B) 160/100 mm Hg
- C) 180/100 mm Hg
- D) 200/110 mm Hg
- E) 220/120 mm Hg

186. The preferred site for an emergency airway is

- A) the thyrohyoid membrane
- B) the cricothyroid membrane
- C) immediately below the cricoid cartilage
- D) through the first and second tracheal rings
- E) at the level of the thyroid isthmus

187. An otherwise healthy 55-year-old female is diagnosed with hypertension, based on multiple measurements of systolic blood pressures ranging from 142 to 148 mm Hg and diastolic blood pressures in the range of 90–96 mm Hg over the past 4 months. You are now discussing medication options. The patient exercises regularly and conscientiously adheres to a very healthy diet, and has a BMI of 20 kg/m<sup>2</sup>. She is concerned with the potential long-term adverse side effects of medication in general, and asks if any agents have potential advantages.

Which one of the following medications has been shown to reduce bone loss and may reduce her risk of future hip fractures?

- A) Amlodipine (Norvasc)
- B) Hydrochlorothiazide
- C) Lisinopril (Prinivil, Zestril)
- D) Losartan (Cozaar)
- E) Metoprolol (Lopressor, Toprol-XL)

188. A 3-year-old male is carried into the office by his mother. Yesterday evening he began complaining of pain around his right hip. Today he has a temperature of 37.6°C (99.7°F), cries when bearing weight on his right leg, and will not allow the leg to be moved in any direction. A radiograph of the hip is normal.

Which one of the following would be most appropriate at this time?

- A) A CBC and an erythrocyte sedimentation rate
- B) A serum antinuclear antibody level
- C) Ultrasonography of the hip
- D) MRI of the hip
- E) In-office aspiration of the hip



189. Plan-Do-Check-Act (PDCA) describes which one of the following?
- A) The accreditation process to become a patient-centered medical home
  - B) One of the National Quality Forum's Safe Practices for Better Healthcare
  - C) The cycle of continuous quality improvement
  - D) Donabedian categories of quality measurement
  - E) The Chronic Care Model
190. A 44-year-old female presents with a 2-week history of postprandial right upper abdominal pain. Since yesterday her pain has worsened in intensity and she has been vomiting. The patient does not use tobacco or drink alcohol, and takes no medications. Laboratory findings include a serum lipase level of 105 IU/L (N 14–51), a serum amylase level of 155 U/L (N 36–128), a serum total bilirubin level of 1.5 mg/dL (N 0.0–1.0) and an alkaline phosphatase level of 200 IU/L (N 33–96).
- The recommended initial imaging in this situation is
- A) no routine imaging unless the clinical course becomes complicated
  - B) transabdominal ultrasonography
  - C) contrast-enhanced CT
  - D) magnetic resonance cholangiopancreatography (MRCP)
  - E) MRI
191. Which one of the following does the American College of Obstetricians and Gynecologists recommend as first-line treatment for nausea and vomiting in pregnancy?
- A) Doxylamine (Unisom) and pyridoxine (vitamin B<sub>6</sub>)
  - B) Ondansetron (Zofran)
  - C) Prochlorperazine
  - D) Promethazine (Phenergan)
  - E) Metoclopramide (Reglan)
192. A 69-year-old female is unable to obtain adequate calcium from dietary sources. She is on long-term therapy with pantoprazole (Protonix) for peptic ulcer disease.
- Which one of the following would be the most appropriate calcium supplement for this patient?
- A) Oyster shell calcium
  - B) Calcium carbonate
  - C) Calcium lactate
  - D) Calcium gluconate
  - E) Calcium citrate

193. A 55-year-old male is brought to the emergency department because of confusion and seizures. He has a history of hypertension and obstructive sleep apnea due to obesity. He is unconscious on arrival and no other history is available. An examination shows no focal neurologic findings, but a general examination is limited because of his size. Breath sounds are diminished, and heart sounds are difficult to hear. He has venous insufficiency changes on his lower extremities, with brawny-type edema. Vital signs include a pulse rate of 90 beats/min, a blood pressure of 140/90 mm Hg, and an oxygen saturation of 96%.

Laboratory testing reveals a glucose level of 120 mg/dL and a sodium level of 110 mEq/L (N 135–145), with normal renal function tests and liver enzyme levels. A chest radiograph shows mild cardiomegaly.

Which one of the following is the treatment of choice for this patient?

- A) Valsartan (Diovan)
  - B) Furosemide
  - C) Vasopressin (Pitressin)
  - D) Hypertonic saline
  - E) Conivaptan (Vaprisol)
194. A 58-year-old female consults you about smoking cessation. She has been intolerant of varenicline (Chantix) but tells you her sister was able to stop smoking with the use of bupropion (Wellbutrin).

A history of which one of the following would be a relative contraindication to the use of bupropion?

- A) Coronary artery disease
  - B) Depression
  - C) Eczema
  - D) Hypothyroidism
  - E) Seizures
195. The leading type of injury in adults age 65 and older is
- A) automobile accidents
  - B) falls
  - C) gunshot wounds
  - D) fire-related injuries
  - E) hypothermia

196. A 69-year-old female with coronary artery disease, diabetes mellitus, and chronic asthma presents to your office for follow-up. During the visit she expresses concerns about recent reports of unsafe air quality in your region.

Which one of the following is reasonable counseling regarding the health risks of ambient air pollution for this patient?

- A) Ambient air pollution has not been clearly shown to increase complications of her chronic diseases
  - B) She should take her normal vigorous daily walk outside despite air quality alerts because the health benefits of exercise outweigh the risks
  - C) She should avoid areas near busy roads, which are major sources of multiple outdoor air pollutants
  - D) Use of air conditioning will likely make her indoor air quality worse
  - E) Ozone pollution usually peaks in the winter months
197. A 45-year-old male who is being treated for chronic alcohol dependence with monthly injections of naltrexone (Vivitrol) presents with significant pain due to a fractured ankle, and intravenous pain medication is required. Which one of the following medications would be most useful in this situation?

- A) Fentanyl
- B) Hydromorphone (Dilaudid)
- C) Ketorolac
- D) Meperidine (Demerol)
- E) Morphine

198. A 56-year-old female with a history of poorly controlled type 2 diabetes mellitus presents with a complaint of progressive loss of sensation and weakness in both legs over the past 2 days and low back pain that is nonradiating. She also reports that she is unable to feel bowel movements or urination. She says she has not had any fever or chills.

On examination she has a low-grade fever with a blood pressure of 142/84 mm Hg. She has no sensation to pinprick or vibration from the T9 level down, bilaterally. She is unable to move her legs voluntarily or resist gravity, and no reflexes are elicited in the lower extremities. Her WBC count is 12,700/mm<sup>3</sup> (N 4000–10,000) and her erythrocyte sedimentation rate is 127 mm/hr (N 1–25).

Which one of the following would be most appropriate at this point?

- A) Antiplatelet therapy
- B) Intravenous corticosteroids
- C) Thoracic spine films
- D) MRI of the thoracic spine

199. A 60-year-old white female is admitted to the hospital with a submassive pulmonary embolism. Which one of the following is most effective for assessing right ventricular dysfunction in this situation?

- A) Echocardiography
- B) Physical examination
- C) 12-Lead electrocardiography
- D) Contrast-enhanced CT of the chest

200. You are caring for a 42-year-old female with symptoms and physical findings consistent with chronic fatigue syndrome. Her CBC, metabolic panel, TSH level, C-reactive protein level, rheumatoid factor test, antinuclear antibody test, and phosphorus level are all normal. You have assessed her for comorbid diagnoses of chronic pain, depression, and sleep disturbance, which are all negative.

The best evidence-based initial treatment would be

- A) hydrocortisone
- B) methylphenidate (Ritalin)
- C) melatonin
- D) cognitive-behavioral therapy
- E) white fluorescent light therapy

201. A 38-year-old female presents with an itchy rash she says has been present for the past several months. She has been using over-the-counter hydrocortisone cream with no improvement. On examination she has an oval 12-cm erythematous plaque on her buttocks. The plaque is covered with silvery scales.

Which one of the following would be the best initial treatment for her rash?

- A) Clobetasol 0.05% cream (Temovate) applied twice daily
- B) Clotrimazole 1% cream applied twice daily
- C) Diclofenac 3% gel applied twice daily
- D) Mupirocin 2% ointment (Bactroban) applied twice daily
- E) Salicylic acid 2% gel applied twice daily

202. A 66-year-old male sees you for follow-up after a recent hospitalization for his second episode of diverticulitis in the past 3 years. He is currently in excellent health and takes no daily medications except for occasional acetaminophen for arthritis pain. His physical examination is unremarkable except for a BMI of 19.0 kg/m<sup>2</sup>. He asks you about preventing further recurrences of his diverticulitis.

You suggest that he do which one of the following?

- A) Lose weight
- B) Increase his dietary fiber intake
- C) Stop acetaminophen use
- D) Avoid eating nuts, corn, or popcorn
- E) Avoid high-impact aerobic exercise

203. A 23-year-old male presents to your office with a 2-day history of dull, achy, right testicular pain. He reports that the pain began gradually, reaching a peak last night. He does not recall any trauma and denies any urethral complaints.

Your examination reveals an extremely tender right testis with some tenderness extending to the epididymis. A preliminary report from a stat ultrasound examination shows an enlarged, heterogeneous right testis with increased color flow.

Which one of the following is the preferred management?

- A) Watchful waiting
- B) Repeat ultrasonography in 24 hours
- C) Antibiotic treatment
- D) Emergent urology referral

204. A 21-year-old male college student presents to the emergency department with a 2-day history of fever, severe muscle and joint pain, nausea, and vomiting. He spent his winter break traveling in South America and returned 4 days ago. On examination he has a temperature of 39.4°C (103.0°F), gingival bleeding, lower extremity non-pitting edema, right upper quadrant tenderness, a diffuse maculopapular rash, muscle tenderness, and petechiae on his extremities.

WBCs.....	3100/mm <sup>3</sup> (N 4300–10,800)
Neutrophils.....	40% (N 45–75)
Lymphocytes.....	50% (N 16–46)
Bands.....	1% (N 0–5)
Hematocrit.....	50.0% (N 37.0–49.0)
Platelets.....	75,000/mm <sup>3</sup> (N 150,000–350,000)
Thick and thin blood smear.....	negative
AST (SGOT).....	100 U/L (N 10–40)
ALT (SGPT).....	120 U/L (N 7–30)
Total bilirubin.....	1.0 mg/dL (N 0.0–1.0)
Albumin.....	3.5 g/dL (N 3.1–4.3)
Creatine phosphokinase.....	500 U/L (N 60–400)

Which one of the following is the most likely diagnosis?

- A) Hepatitis A
- B) Yellow fever
- C) Dengue fever
- D) Typhoid fever
- E) Influenza

205. A 25-year-old female with asthma uses her albuterol (Proventil, Ventolin) inhaler only before running, but reports waking up short of breath four times per month. She went to the emergency department recently for increased dyspnea during peak ragweed season and remained overnight until her symptoms improved.

Which one of the following is the best treatment option now?

- A) Oral prednisone as needed
- B) Inhaled albuterol daily
- C) Inhaled cromolyn sodium daily
- D) Inhaled salmeterol (Serevent Diskus) daily
- E) Inhaled fluticasone (Flovent) daily

206. Stretching has NO demonstrable benefit for which one of the following?

- A) Hamstring strain
- B) Chronic neck pain
- C) Joint contracture
- D) Osteoarthritis
- E) Rehabilitation post knee replacement

207. A 3-week-old male is brought to your office because of a fever and increasing fussiness. He had a rectal temperature at home earlier today of 101.5°F (38.6°C). The mother reports that he is not breastfeeding as often as usual and has had fewer wet diapers. He has no nasal congestion and no cough. There are no recent sick contacts or known exposures.

On examination you note a fever of 39.2°C (102.5°F) and a pulse rate of 200 beats/min. The remainder of his examination is normal. You order a full sepsis workup and admit him to the hospital.

Which one of the following is the best intravenous antibiotic regimen for empiric coverage at this point?

- A) Ampicillin and cefotaxime (Claforan)
- B) Ampicillin and clindamycin (Cleocin)
- C) Ciprofloxacin (Cipro)
- D) Gentamicin
- E) Vancomycin

208. Which one of the following is most appropriate in the management of frostbite?

- A) Complete surgical debridement of hemorrhagic blisters
- B) Rapid rewarming with dry heat and warm blankets
- C) Withholding analgesics to ensure accurate assessment
- D) Vigorously rubbing affected tissues to restore circulation
- E) Leaving simple, non-tense areas of clear blistering intact

209. A 32-year-old female comes to your office because she has had increasing difficulty performing her daily tasks for the past 6 months. She says she worries excessively about routine events every day and constantly feels tense, restless, jittery, “on edge,” irritable, and unable to relax. She also reports that sometimes her heart pounds and races, her hands feel sweaty and clammy, and her mouth feels like it is “full of cotton.” She reports difficulty concentrating and falling asleep at night. A recent TSH level was normal. During your examination you note frequent sighing, a fine tremor in her hands, bitten nails, and clammy hands.

Based on her symptoms and examination, which one of the following pharmacologic agents for managing her condition is supported by the best available evidence?

- A) Alprazolam (Xanax)
  - B) Buspirone
  - C) Hydroxyzine
  - D) Escitalopram (Lexapro)
  - E) Quetiapine (Seroquel)
210. A 6-year-old male is brought to your office for a well child check. His vital signs are normal; he is 117 cm (46 in) tall and weighs 19 kg (42 lb). The patient has grown out of his car seat, and his mother recently was told by a friend that he can now sit in the front seat of a car. She asks you if this is true.

According to recommendations from the American Academy of Pediatrics, which one of the following is true for this patient?

- A) He should be using a rear-facing child safety seat in the back seat of the car
  - B) He should be using a belt-positioning booster seat in the back seat of the car
  - C) He should be using a belt-positioning booster seat and can ride in the front or back seat of the car
  - D) He no longer needs a safety seat but should always ride in the back seat of the car
  - E) He no longer needs a safety seat and can ride in the front or back seat of the car
211. A 40-year-old male is admitted to the hospital with a generalized rash consistent with Stevens-Johnson syndrome. His previous medical problems include obesity, gout, hypertension, type 2 diabetes mellitus, and depression. His medications include lisinopril (Prinivil, Zestril), allopurinol (Zyloprim), colchicine (Colcris), metoprolol succinate (Toprol-XL), metformin (Glucophage), and venlafaxine (Effexor XR).

Which one of these medications is most likely to be the cause of his Stevens-Johnson syndrome?

- A) Allopurinol
- B) Colchicine
- C) Lisinopril
- D) Metformin
- E) Venlafaxine

212. A 72-year-old male with dyslipidemia and coronary artery disease sees you for a routine evaluation. He asks if he should take fish oil supplements.

You advise the patient that good evidence shows that supplementation with omega-3 fatty acids decreases

- A) triglycerides
  - B) LDL-cholesterol
  - C) cardiovascular events
  - D) total mortality
213. A 76-year-old female presents with a history of bilateral shoulder pain for the past month. She reports stiffness in the morning for about 1 hour and also reports difficulty getting up when seated in a chair. Acetaminophen is ineffective for her pain. Her erythrocyte sedimentation rate is 65 mm/hr (N 1–25).

Which one of the following is the best initial treatment for this condition?

- A) Oral dexamethasone, 8 mg twice a day
  - B) Oral methylprednisolone (Medrol Dosepak), taper 24 mg to 0 mg over 7 days
  - C) Oral prednisolone (Orapred), 60 mg daily
  - D) Oral prednisone, 15 mg/day
  - E) Intravenous methylprednisolone, 120 mg every 6 hours
214. You are caring for a 60-year-old female with Crohn's disease that is well controlled by infliximab (Remicade). As your staff updates her immunization status, which one of the following should be kept in mind?
- A) Hepatitis A vaccine is contraindicated
  - B) Pneumococcal vaccine is contraindicated
  - C) Tetanus toxoid is contraindicated
  - D) Zoster vaccine is contraindicated
  - E) All routine immunizations are considered safe

215. Which one of the following is a common cause of prerenal acute kidney injury?

- A) Acute tubular necrosis
- B) Diuretic overuse
- C) Glomerulonephritis
- D) Neurogenic bladder
- E) Prostate hypertrophy



216. A 2-month-old female is brought to your office with tachypnea and a staccato cough. She is afebrile. A chest radiograph shows hyperinflation and bilateral infiltrates, and a CBC reveals eosinophilia.

Which one of the following is the most likely etiologic agent?

- A) Chlamydia trachomatis
- B) Listeria pneumoniae
- C) Streptococcus pneumoniae
- D) A gram-negative bacteria
- E) Respiratory syncytial virus

217. A 45-year-old male with Down syndrome is brought to your office because of complaints of increased aggression toward the staff and peers at his group home. He is usually pleasant and compliant but he has been acting out for the last 2½ weeks. He is not considered to be a danger to himself or others at this point. He is minimally verbal and unable to give a history for himself. Staff members report no change in appetite or urination, and no signs of outward illness. His vital signs in your office are within normal limits.

Which one of the following would be most appropriate at this point?

- A) A complete history, physical examination, and basic laboratory tests
- B) CT of the head
- C) Risperidone (Risperdal)
- D) Sertraline (Zoloft)
- E) Valproic acid (Depakene)

218. Which one of the following tests is recommended for the detection and diagnosis of gestational diabetes mellitus?

- A) Hemoglobin A<sub>1c</sub>
- B) Fasting blood glucose
- C) 2-hour postprandial glucose
- D) An oral glucose tolerance test
- E) A fasting insulin/glucagon ratio

219. CT imaging for which one of the following conditions is best done without contrast?

- A) Acute appendicitis
- B) Diverticulitis
- C) Pulmonary embolism
- D) Nephrolithiasis

220. A 46-year-old perimenopausal female complains of hot flashes, which are very troubling to her. She would like treatment for these symptoms, but has a history of deep vein thrombosis while taking oral contraceptives.

Which one of the following treatments has evidence of benefit for her symptoms with the least potential for causing deep vein thrombosis?

- A) Vaginal estradiol
- B) Oral estradiol combined with progestin
- C) Oral phytoestrogens such as soy protein
- D) Oral venlafaxine (Effexor XR)
- E) Topical bio-identical hormones

221. A 72-year-old white female is admitted to the hospital with her first episode of acute heart failure. She has a history of hypertension treated with a thiazide diuretic. An echocardiogram reveals no evidence of valvular disease and no segmental wall motion abnormalities. Left ventricular hypertrophy is noted, and her ejection fraction is 55%. Her pulse rate is 72 beats/min.

The most likely cause of her heart failure is

- A) systolic dysfunction
- B) diastolic dysfunction
- C) hypertrophic cardiomyopathy
- D) high-output failure

222. A 54-year-old female concert pianist presents to your office with a 9-month history of searing pain and bilateral paresthesias in the distribution of her median nerve. She says that the pain frequently radiates as far as her shoulder, and that her fingers feel swollen even though they look normal. She states that she has worsening paresthesias at night and often finds herself flicking her wrist in an attempt to alleviate her symptoms.

The patient's symptoms are reproducible with wrist flexion and she exhibits mild weakness of the abductor pollicis brevis on examination. She has been wearing neutral wrist splints at night for the last 8 weeks and has also been taking oral NSAIDs, resulting in only minimal relief. She is in the middle of her concert season and is unable to take time off for a surgical procedure.

Which one of the following therapies will provide this patient with the longest symptom relief?

- A) Full rest for 8 weeks
- B) Full-time cock-up splinting for 8 weeks
- C) Physical therapy
- D) Oral corticosteroids
- E) Local corticosteroid injection

223. In a patient with chronic, severe, noncancer pain, which one of the following would be most appropriate for initial opioid therapy?

- A) Buprenorphine (Buprenex)
- B) Transdermal fentanyl (Duragesic)
- C) Hydromorphone (Dilaudid)
- D) Methadone (Dolophine)
- E) Morphine

224. In which one of the following cardiac emergency cases should atropine be used?

- A) Symptomatic Mobitz type II atrioventricular block
- B) Cardiac arrest with pulseless electrical activity
- C) Asystolic cardiac arrest
- D) Acute cardiac ischemia and a heart rate < 60 beats/min
- E) Sinus bradycardia with hypotension

225. Staff members in your practice often complain about one of your patients. He exhibits odd behaviors and beliefs, and is always very anxious about his visit and about when he will be seen, despite long familiarity with your practice.

Which one of the following personality disorders best fits the description of this patient?

- A) Antisocial
- B) Borderline
- C) Dependent
- D) Narcissistic
- E) Schizotypal

226. A 45-year-old male who has been complaining of dyspnea undergoes pulmonary function testing. The results show an FEV<sub>1</sub>/FVC ratio of 85% and an FVC below the lower limits of normal.

Based on these results, which one of the following possible causes of dyspnea is most likely?

- A) Asthma
- B) Bronchiectasis
- C)  $\alpha_1$ -Antitrypsin deficiency
- D) COPD
- E) Idiopathic pulmonary fibrosis

227. A 62-year-old female presents to your office with diarrhea and signs and symptoms of dehydration. She has a temperature of 38.6°C (101.5°F) and a WBC count of 17,000/mm<sup>3</sup> (N 5300–10,800). You admit her to the hospital, and a *Clostridium difficile* toxin assay is positive. Because of the severity of her infection, you initiate oral vancomycin (Vancocin), 125 mg 4 times daily. She has a poor clinical response and you decide to alter the antibiotic regimen to include intravenous coverage.

Which one of the following intravenous antibiotics would be most appropriate?

- A) Ciprofloxacin (Cipro)
- B) Imipenem/cilastatin (Primaxin)
- C) Meropenem (Merrem)
- D) Metronidazole
- E) Vancomycin

228. Which one of the following is NOT a risk factor for stillbirth?

- A) Smoking
- B) Advanced maternal age
- C) Congenital anomalies
- D) Vigorous exercise
- E) BMI > 30 kg/m<sup>2</sup>

229. A 72-year-old female who remains very active and engaged in the community comes to your office concerned by urinary symptoms that disrupt her life. She reports that she often has a strong, abrupt desire to void that frequently causes her to leak urine involuntarily. She also reports occasional episodes of urinary frequency and nocturia.

Which one of the following is the first-line treatment for her condition?

- A) Anticholinergic drugs such as oxybutynin or solifenacin (Vesicare)
- B)  $\beta$ -Adrenergic agonists such as mirabegron (Myrbetriq)
- C) Duloxetine (Cymbalta)
- D) Bladder training
- E) A pessary

230. A 13-year-old male presents with a 3-week history of left lower thigh and knee pain. There is no history of a specific injury, and his past medical history is negative. He has had no fevers, night sweats, or weight loss, and the pain does not awaken him at night. He tried out for his school's basketball team but had to quit because of the pain, which was worse when he tried to run.

Which one of the following physical examination findings would be pathognomonic for slipped capital femoral epiphysis?

- A) Excessive forward passive motion of the tibia with the knee flexed
  - B) Lateral displacement of the patella with active knee flexion
  - C) Limited internal rotation of the flexed hip
  - D) Reduced hip abduction with the hip flexed
  - E) An inability to extend the hip past the neutral position
231. A 54-year-old male presents with hearing loss associated with tinnitus. Which one of the following additional characteristics would be an indication for MRI of the brain to assess for an intracranial tumor?

- A) A rapid onset of symptoms
- B) Unilateral symptoms
- C) Association with pain and otorrhea in the affected ear
- D) Exposure to loud noise shortly before the symptoms began

232. A 65-year-old male comes to your office with symptoms consistent with intermittent claudication in both lower extremities. These symptoms are making it difficult for him to walk any significant distance and to manage his daily activities. He has smoked one pack of cigarettes per day for the past 40 years and has moderate hypertension, an elevated LDL-cholesterol level, and a low HDL-cholesterol level.

On examination you note that the skin on the patient's lower legs is cool and shiny, with sparse hair. Distal pulses are not palpable and capillary refill is prolonged. His ankle-brachial index is 0.85 (N 1.0–1.4). His cardiac examination is normal, with no evidence of heart failure.

Which one of the following pharmacologic options for improving this patient's claudication symptoms is supported by the best available evidence?

- A) Aspirin
- B) Warfarin (Coumadin)
- C) Clopidogrel (Plavix)
- D) Pentoxifylline
- E) Cilostazol (Pletal)

233. A 54-year-old male presents to your office with a 10-day history of increasing cough. A physical examination reveals coarse crackles in the left lower lobe. You make a diagnosis of pneumonia. The patient's only current medication is simvastatin (Zocor).

Which one of the following is CONTRAINDICATED in this patient?

- A) Amoxicillin/clavulanate (Augmentin)
  - B) Azithromycin (Zithromax)
  - C) Clarithromycin (Biaxin)
  - D) Doxycycline
  - E) Levofloxacin (Levaquin)
234. A previously healthy 50-year-old male presents with a heart rate of 156 beats/min and a blood pressure of 126/84 mm Hg. An EKG shows a regular, narrow-complex tachycardia. Vagal maneuvers have no effect, and the patient appears anxious.

Administration of which one of the following medications is the best initial treatment?

- A) Vasopressin (Pitressin)
  - B) Verapamil (Calan)
  - C) Diltiazem
  - D) Adenosine (Adenocard)
  - E) Digoxin
235. A 52-year-old male with diabetes mellitus reports that he ran out of insulin a week ago. He is drowsy but responds to your verbal commands, and the remainder of his examination is unremarkable.

#### Laboratory Findings

Blood glucose. . . . .	625 mg/dL
Serum sodium. . . . .	128 mEq/L (N 135–145)
Serum potassium. . . . .	5.9 mEq/L (N 3.5–5.0)
Serum bicarbonate. . . . .	12 mEq/L (N 22–26)
BUN. . . . .	52 mg/dL (N 8–25)

Which one of the laboratory abnormalities is an indication that he has severe diabetic ketoacidosis?

- A) Glucose
- B) Sodium
- C) Potassium
- D) Bicarbonate
- E) BUN

236. A 51-year-old female has resistant hypertension, and you decide to test her for primary hyperaldosteronism. Which one of the following is the preferred initial test for this condition?
- A) A morning serum cortisol level
  - B) A morning serum renin to aldosterone ratio
  - C) A morning urinary potassium level
  - D) A salt suppression test
  - E) Abdominal MRI

237. As part of routine care for a 31-year-old female you obtain a Papanicolaou (Pap) test for cervical cancer screening. The cytology results are normal, and the sample is positive for the presence of HPV but negative for serotypes 16 and 18.

Which one of the following is the most appropriate management for this patient?

- A) Immediate colposcopy
  - B) Repeat Pap and HPV testing in 3 months
  - C) Repeat Pap and HPV testing in 6 months
  - D) Repeat Pap and HPV testing in 1 year
  - E) Repeat Pap and HPV testing in 3 years
238. A 34-year-old female with a history of type 2 diabetes mellitus requests your advice regarding influenza vaccine. She is concerned because 6 months ago she developed hives after ingesting eggs and another physician suggested that she avoid influenza vaccine. She has not experienced wheezing, vomiting, or swelling in her throat after ingesting eggs.

Which one of the following would be the best strategy for this patient?

- A) Avoid giving influenza vaccine
  - B) Administer the live-attenuated influenza vaccine and observe for 30 minutes
  - C) Administer trivalent inactivated vaccine and observe for 30 minutes
  - D) Have the patient take prednisone, 20 mg for 3 days, then administer the live-attenuated influenza vaccine and observe for 30 minutes
  - E) Have the patient take prednisone, 20 mg for 3 days, and then administer the trivalent inactivated vaccine and observe for 30 minutes
239. A 45-year-old male with diabetes mellitus sees you for the first time. If the patient has not previously received it, which one of the following vaccines is recommended for him by the Advisory Committee on Immunization Practices?
- A) Hepatitis A
  - B) Hepatitis B
  - C) Meningococcal
  - D) Varicella zoster

240. Which one of the following nutritional management strategies is associated with better outcomes in patients with mild acute pancreatitis whose pain and nausea have resolved?
- A) Waiting until lipase has normalized before beginning oral intake
  - B) Early initiation of a clear liquid diet
  - C) Early initiation of a low-fat diet
  - D) Early initiation of tube feeding
  - E) Early initiation of total parenteral nutrition