

American Board of Family Medicine



IN-TRAINING EXAMINATION

1. A 67-year-old male sees you for a Medicare annual wellness visit. He tells you that his best friend had a stroke and he asks about his risk for stroke. He has no history of stroke, TIA, or neurologic symptoms. He has a family history of cardiovascular disease in his father, who had a myocardial infarction at age 65 and died from a thrombotic stroke at age 71. The patient exercises regularly and has a BMI of 27 kg/m². His only current medical condition is hyperlipidemia, and his cholesterol level is at goal on rosuvastatin (Crestor), 10 mg daily. He also takes aspirin, 81 mg daily. His blood pressure is 125/78 mm Hg.

Based on U.S. Preventive Services Task Force guidelines, which one of the following would be most appropriate at this time?

- A) No additional testing for stroke risk
 - B) Auscultation for carotid bruits
 - C) Carotid duplex ultrasonography
 - D) Magnetic resonance angiography
 - E) CT angiography of the carotid arteries
2. A 28-year-old female presents for evaluation of nasal congestion, sneezing, watery eyes, and postnasal drip. This has been an intermittent issue for her every spring and she would like to manage it more effectively.

Which one of the following treatments has been shown to be the most effective and best tolerated first-line therapy for this patient's condition?

- A) A leukotriene receptor antagonist
 - B) Intranasal corticosteroid monotherapy
 - C) Intranasal corticosteroids plus an oral antihistamine
 - D) Inhaled corticosteroids
 - E) Annual triamcinolone injections
3. A 68-year-old female presents with a 2-month history of watery diarrhea. She has not had any blood or pus in her stools, and the stools are not oily. She has not had any history of fever, chills, or weight loss, and has not traveled recently. She smokes one pack of cigarettes per day. Her medications include ibuprofen, sertraline (Zoloft), and pantoprazole (Protonix). A CBC, metabolic panel, C-reactive protein level, IgA anti-tissue transglutaminase level, total IgA level, and stool guaiac test are all normal.

Which one of the following tests would be most likely to yield a diagnosis?

- A) *Clostridioides (Clostridium) difficile* toxin
- B) Colonoscopy
- C) Fecal calprotectin
- D) A stool culture
- E) Stool examination for ova and parasites

4. A 23-year-old male with opioid use disorder requests buprenorphine therapy. He is still actively using immediate-release oxycodone (Roxicodone) and he took a dose 2 hours ago.

This patient should begin buprenorphine induction

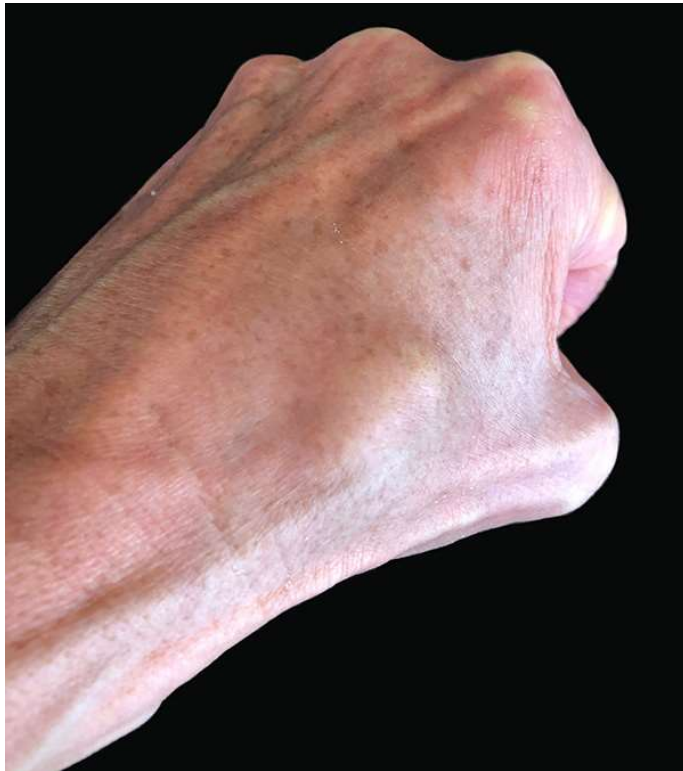
- A) now
 - B) in 2 hours
 - C) 8–12 hours after his last opioid use
 - D) 24 hours after his last opioid use
 - E) 1 week after his last opioid use
5. A 45-year-old left hand–dominant female presents to your office with a lump on her hand. She first noticed the lump 2 weeks ago and thinks it has gotten bigger. She does not recall any injury. She has not had any numbness, weakness, or tingling. She has minimal discomfort when she presses on the lump, and it does not affect her activity. On examination her left wrist is neurovascularly intact. You note the volar wrist mass shown below.

Which one of the following management options would you recommend?

- A) Re-examination if she develops numbness, weakness, or increased pain
 - B) Immobilization of the wrist for 6 weeks and then re-examination
 - C) Aspiration of the lesion
 - D) Aspiration and injection of the lesion with a corticosteroid
 - E) Referral for excision of the lesion
6. A 57-year-old female with diabetes mellitus comes to your office for a routine follow-up. Her current medications include metformin (Glucophage), 1000 mg twice daily. She tells you that she does not exercise regularly and finds it difficult to follow a healthy diet. A hemoglobin A_{1c} today is 7.5%. She does not want to add medications at this time, but she does want to get her hemoglobin A_{1c} below 7%, which is the goal that was previously discussed.

Which one of the following would be the most effective way to improve glucose control for this patient?

- A) Discuss the components of a healthy diabetic diet and encourage her to follow it more closely
- B) Discuss the importance of regular exercise and encourage her to exercise 30–45 minutes daily
- C) Recommend that she check her glucose level 1–3 times daily to help determine what adjustments need to be made
- D) Start her on an additional medication
- E) Refer her to a diabetes educator for medical nutrition therapy



Item #5

7. During a newborn examination the patient's mother asks what she can do to decrease the risk of food allergies in her newborn son. She tells you that there is no family history of atopic dermatitis or asthma but she has a cousin with a peanut allergy. The remainder of the examination is unremarkable.

You tell her that food allergy risk can be reduced by

- A) breastfeeding for at least 1 year
 - B) using soy-based formula instead of cow's milk-based formula
 - C) introducing peanut-containing foods when solids are started
 - D) avoiding all house pets
 - E) avoiding a day care setting
8. Which one of the following antihypertensive medications is LEAST likely to exacerbate erectile dysfunction?
- A) Clonidine (Catapres)
 - B) Doxazosin (Cardura)
 - C) Hydrochlorothiazide
 - D) Losartan (Cozaar)
 - E) Metoprolol
9. You are providing end-of-life care for a 53-year-old female with end-stage colon cancer. Her family reports that she is having significant abdominal pain, nausea, and vomiting, and she is not able to tolerate oral intake. You suspect a malignant bowel obstruction.
- Which one of the following interventions would be most likely to significantly improve her symptoms?
- A) Medical cannabis
 - B) Dexamethasone
 - C) Morphine
 - D) Octreotide (Sandostatin)
 - E) Polyethylene glycol (MiraLAX)
10. A 3-year-old male has developed multiple large areas of bullous impetigo on the legs, buttocks, and trunk after being bitten numerous times by ants. Which one of the following would be the most appropriate treatment?

- A) Topical mupirocin ointment
- B) Oral azithromycin (Zithromax)
- C) Oral tetracycline
- D) Oral trimethoprim/sulfamethoxazole (Bactrim)
- E) Intramuscular penicillin G benzathine (Bicillin L-A)

11. A 60-year-old male with diabetes mellitus and hypertension sees you for routine follow-up. He has no acute health concerns during today's visit. His current medications include metformin (Glucophage), lisinopril (Prinivil, Zestril), and hydrochlorothiazide. He smokes cigarettes and has a 40-pack-year smoking history. His vital signs and a physical examination are normal. An in-office dipstick urinalysis reveals 1+ blood and trace protein but is otherwise normal.

Which one of the following would be the most appropriate follow-up?

- A) Repeat dipstick urinalysis in 3 months
 - B) Microscopic urinalysis
 - C) Renal ultrasonography
 - D) CT urography
 - E) Referral for cystoscopy
12. A 33-year-old gravida 2 para 1 presents to the hospital at 35 weeks estimated gestation with premature rupture of membranes. A decision is made to manage the pregnancy expectantly and delay delivery unless signs of infection or fetal distress are noted.

Based on current evidence, expectant management rather than immediate delivery increases the risk of which one of the following complications?

- A) Cesarean delivery
 - B) Antepartum or postpartum maternal hemorrhage
 - C) Time spent in the neonatal intensive-care unit
 - D) Neonatal sepsis
 - E) Perinatal or infant mortality
13. Which one of the following represents a CONTRAINDICATION to statin use?
- A) Current pregnancy
 - B) Chronic hepatitis C infection
 - C) End-stage renal disease
 - D) Myositis associated with a creatine kinase level five times the upper limit of normal
 - E) Transaminitis due to nonalcoholic steatohepatitis

14. A 2-year-old female is brought to the urgent care clinic because of a fever. On examination she has a temperature of 39.7°C (103.5°F). Within a short period of time while at the clinic she develops a barking cough and respiratory distress, and you note rapid deterioration of her condition.

Which one of the following is the most likely diagnosis?

- A) Bacterial tracheitis
- B) Epiglottitis
- C) Foreign body aspiration
- D) Peritonsillar abscess

15. A 13-year-old baseball player who is right-hand dominant is brought to your office because of a 3-week history of pain in the right shoulder. He recalls no specific injury but has been pitching at least weekly for the past 3 months. He has moderate tenderness about the anterior and lateral deltoid.

In addition to radiographic studies, the best initial management would include

- A) complete rest from throwing activities
 - B) a sling and swathe
 - C) sugar-tong splints both proximal and distal to the elbow
 - D) physical therapy
16. A 24-year-old female comes to your office with a 1-day history of the gradual onset of nonradiating worsening right lower quadrant abdominal pain, nausea, emesis, and chills. Her symptoms are minimally relieved with ibuprofen, 400 mg. Her menstrual period 2 weeks ago was normal. She has not had any dysuria, vaginal discharge, or change in bowel habits. Her past medical and surgical histories are notable only for dysmenorrhea managed with an anti-inflammatory medication as needed.

An examination reveals a temperature of 38.1°C (100.6°F), discomfort with position change, right lower quadrant abdominal tenderness and guarding, and diminished bowel sounds. Point-of-care testing shows an elevated WBC count, and a urinalysis and pregnancy test are negative.

Which one of the following would you recommend at this time?

- A) A plain film of the abdomen
 - B) Abdominal ultrasonography
 - C) Pelvic ultrasonography with transvaginal ultrasonography if needed
 - D) CT of the abdomen and pelvis
 - E) MRI of the abdomen and pelvis
17. A 45-year-old female comes to your office for an annual health maintenance visit. She has a family history of type 2 diabetes in her mother and a personal history of obesity for many years.

If verified with a second test, which one of the following would confirm a diagnosis of diabetes mellitus?

- A) A hemoglobin A_{1c} of 6.4%
- B) A 2-hour plasma glucose level of 190 mg/dL on an oral glucose tolerance test
- C) A random glucose level of 190 mg/dL
- D) A fasting plasma glucose level of 130 mg/dL

18. A 57-year-old male recently diagnosed with acute lymphoblastic leukemia presents to the emergency department with intractable nausea, vomiting, and myalgias. His first chemotherapy infusion was administered earlier in the day.

Which one of the following electrolyte disturbances would be consistent with tumor lysis syndrome?

- A) Hypocalcemia
- B) Hypokalemia
- C) Hyponatremia
- D) Hypophosphatemia
- E) Hypouricemia

19. Which one of the following is needed to calculate the number needed to treat (NNT)?

- A) Number needed to harm
- B) Pretest probability
- C) Absolute risk reduction
- D) Relative risk reduction
- E) Likelihood ratio

20. A 30-year-old male comes to your office for evaluation of hand weakness. On examination you detect weakness when he tries to bring his thumb and index finger together. For confirmation you ask him to try to hold on to a piece of paper between his thumb and index finger while you try to pull it away. He is unable to resist when you pull on the paper.

The most likely explanation for these findings is an injury to the

- A) brachial plexus
- B) median nerve
- C) musculocutaneous nerve
- D) radial nerve
- E) ulnar nerve

21. A 30-year-old male is diagnosed with hereditary hemochromatosis. Periodic therapeutic phlebotomy may be appropriate to prevent

- A) chronic liver disease
- B) chronic renal disease
- C) encephalopathy
- D) myelofibrosis
- E) Wilson disease

22. A 14-year-old male is brought to your office by his parents, who are concerned about his behavior. Recently he was caught shoplifting video games. He started smoking cigarettes at age 10, and he has a history of truancy from school for the past 2 years. His parents report that they have caught him starting fires outside of their home, and he often teases the family dog, whom he has injured on several occasions.

The most likely diagnosis is

- A) antisocial personality disorder
 - B) attention-deficit/hyperactivity disorder (ADHD)
 - C) avoidant personality disorder
 - D) conduct disorder
 - E) substance abuse
23. A 70-year-old female sees you for a Medicare annual wellness visit. Her past medical history includes hypertension treated with enalapril (Vasotec). She states that she “couldn't be better” and says that she has no new symptoms or health concerns. She has a blood pressure of 159/90 mm Hg, a temperature of 36.7°C (98.1°F), a heart rate of 76 beats/min, a respiratory rate of 17/min, and an oxygen saturation of 98% on room air. On examination you note a new harsh systolic murmur that is heard best at the second right intercostal space and can also be heard over the right carotid artery. A transthoracic echocardiogram reveals severe aortic stenosis.
- Which one of the following should you recommend for this patient?
- A) Antibiotic prophylaxis for dental procedures
 - B) Transesophageal echocardiography
 - C) Repeat echocardiography in 6 months
 - D) Referral for aortic valve replacement
24. A 4-month-old female is brought to your office by her mother for a well child visit. The mother tells you about some red patches on the child's cheeks and legs that do not seem to bother the infant. She says that the patches sometimes appear very irritated and improve with occasional lotion use but keep coming back. The mother has not noticed any signs of illness. An examination reveals a well appearing infant with normal growth, development, and vital signs. You note slightly rough erythematous patches on both cheeks and her chin, as well as on her thighs.

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

- A) Twice-daily application of a fragrance-free moisturizer with a high lipid-to-water ratio
- B) Twice-daily application of a low-potency topical corticosteroid
- C) Application of a topical calcineurin inhibitor for the facial lesions and a low-potency topical corticosteroid for the other areas
- D) Allergy testing
- E) Referral to a dermatologist

25. After a thorough history and examination you determine that a 30-year-old male has an upper respiratory infection with a persistent cough. He is afebrile and is otherwise healthy.

The best treatment for symptomatic relief of his persistent cough would be intranasal

- A) antibiotics
- B) antihistamines
- C) corticosteroids
- D) ipratropium (Atrovent)
- E) saline

26. A 30-year-old female presents for evaluation of chronic abdominal bloating, cramping, diarrhea, and recent weight loss. An abdominal examination is unremarkable, and stool guaiac testing is negative. She requests testing for celiac disease.

Which one of the following would be most likely to cause a false-negative result on serologic testing for celiac disease?

- A) A recent increase in dietary wheat consumption
- B) Recent use of loperamide (Imodium A-D)
- C) A skin rash consistent with dermatitis herpetiformis
- D) IgA deficiency
- E) Iron deficiency anemia

27. A 20-year-old male presents with a painful second finger after his right hand was stepped on 3 days ago while he was playing basketball. He has marked pain as well as numbness of the distal finger. There are no open wounds and the skin color and nail appear normal other than moderate edema of the fingertip. A radiograph reveals a distal phalanx fracture.

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

- A) Treat symptomatically with ice and an anti-inflammatory medication
- B) Tape the first and second digits together until symptoms resolve
- C) Splint the affected digit for 2–4 weeks
- D) Remove the nail to evaluate for a nail bed injury
- E) Refer to a hand surgeon

28. A 72-year-old female with a history of type 2 diabetes and hypertension presents to your clinic because of fatigue and depression for the last 5–6 months. She has gained about 7 kg (15 lb) and now has a BMI of 32 kg/m². A physical examination is otherwise unremarkable. Laboratory studies reveal a TSH level of 8.2 μ U/mL (N 0.4–4.0). A repeat test 1 month later shows a TSH level of 7.4 μ U/mL and a free T₄ level of 1.6 ng/dL (N 0.8–2.8).

Treatment of this patient with L-thyroxine

- A) has no proven benefit
 - B) can increase grip strength
 - C) can increase her energy level
 - D) can help improve depression symptoms
 - E) can reduce her BMI
29. A 58-year-old male is brought to your office by his wife for follow-up after an urgent care clinic visit 3 days ago where he was diagnosed with pneumonia based on a chest radiograph. He has been taking his antibiotics as prescribed. He had shaking chills last night, and this morning at home he had a fever and has been very fatigued and slightly confused. He has a blood pressure of 110/70 mm Hg, a respiratory rate of 27/min, and a temperature of 38.7°C (101.7°F). Laboratory studies reveal elevated WBCs and elevated creatinine and lactate levels.

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

- A) Adjust his antibiotic therapy to cover health care–associated pneumonia
 - B) Obtain intravenous access and begin fluid resuscitation
 - C) Order a procalcitonin level
 - D) Order repeat chest radiography
 - E) Order CT of the chest
30. Which one of the following is most appropriate for the initial management of volume overload due to an acute exacerbation of heart failure with preserved ejection fraction?
- A) Carvedilol (Coreg)
 - B) Furosemide (Lasix)
 - C) Lisinopril (Prinivil, Zestril)
 - D) Sacubitril/valsartan (Entresto)
 - E) Spironolactone (Aldactone)

31. A 62-year-old male was hospitalized for an upper gastrointestinal (GI) bleeding episode and the gastroenterologist arranges for you to provide follow-up care. The patient's medications include atorvastatin (Lipitor), metformin (Glucophage), lisinopril/hydrochlorothiazide (Zestoretic), citalopram (Celexa), and omeprazole (Prilosec).

Which one of the following medications in his current regimen increases the risk of an upper GI bleeding episode?

- A) Atorvastatin
- B) Citalopram
- C) Lisinopril/hydrochlorothiazide
- D) Metformin
- E) Omeprazole

32. A 55-year-old female with diabetes mellitus and hypertension sees you because of a 3-month history of a persistent nonproductive cough. Two weeks after the cough began she presented to a local urgent care center with additional symptoms of sinus pressure, rhinorrhea, and subjective wheezing. A lung examination and chest radiograph performed at that visit were unremarkable. She was diagnosed with acute bronchitis and prescribed benzonatate (Tessalon). Since then, her sinus-related symptoms have abated, although her cough has not improved. Her current medications include metformin (Glucophage), lisinopril (Prinivil, Zestril), and hydrochlorothiazide, all of which were initiated 6 months ago. She has no known allergies and has never smoked. A physical examination today is unremarkable.

Which one of the following is the most likely cause of her cough?

- A) Chronic lung disease
- B) Infection
- C) Malignancy
- D) A medication side effect
- E) A psychogenic habit

33. A 72-year-old male with a history of hypertension, heart failure, and chronic kidney disease sees you for evaluation of gradually worsening lumbar pain. The pain worsens with walking but improves when he sits. He says that the pain radiates to the buttocks and down the right leg, especially with activity. He has not had any fevers, chills, or new urinary symptoms. MRI indicates severe degenerative changes resulting in moderate to severe canal stenosis at the L4-L5 level.

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

- A) Oral diclofenac, 75 mg twice daily
- B) Oral pregabalin (Lyrica), 75 mg twice daily
- C) Physical therapy
- D) Referral to an orthopedic surgeon for elective surgical resolution
- E) Referral to a neurosurgeon for urgent surgical resolution

34. A 42-year-old female presents to your office to discuss bariatric surgery and its potential complications. Her BMI is 40 kg/m² and she has hypertension, type 2 diabetes, and osteoarthritis of both knees.

If she opts to have a sleeve gastrectomy, which one of the following complications is most likely in the first 6 months?

- A) Cholelithiasis
- B) Dumping syndrome
- C) GERD
- D) Leaking at the surgical site
- E) Small bowel obstruction

35. A 14-year-old female is brought to your office for a well child check and a sports physical examination. During the substance abuse screening she says that she does not drink alcohol or smoke marijuana or traditional cigarettes, but occasionally uses e-cigarettes with her friends.

Which one of the following statements describing e-cigarettes is true?

- A) E-cigarettes do not contain heavy metals
- B) The nicotine in e-cigarettes is not addictive
- C) Teens who use e-cigarettes are less likely to use marijuana
- D) More teens use traditional cigarettes than e-cigarettes
- E) E-cigarette use among teens increases the likelihood of cigarette smoking

36. An otherwise healthy 58-year-old female presents with several noduloulcerative lesions ascending up her arm from a lesion on her index finger. A fungal culture of drainage from one of the lesions reveals *Sporothrix schenckii*.

Which one of the following would be the most appropriate initial management strategy?

- A) Observation for spontaneous resolution for 1 month
- B) Local application of heat
- C) Oral itraconazole (Onmel)
- D) Oral saturated solution of potassium iodide
- E) Intravenous liposomal amphotericin B (AmBisome)

37. During a quality improvement project you notice significant variations in the ordering patterns of physicians in your group when checking for proteinuria. Some physicians routinely order spot protein/creatinine ratios while others order spot albumin/creatinine ratios.

When comparing these two options, one advantage of spot albumin/creatinine ratios is that they are

- A) more convenient for the patient
- B) unaffected by exercise
- C) unaffected by menstruation
- D) elevated only in patients with diabetes mellitus
- E) able to detect lower levels of proteinuria

38. A 72-year-old female with a history of type 2 diabetes presents with a 4-month history of a burning sensation along her tongue. Her diabetes is currently well controlled with metformin (Glucophage). Her other medications include atorvastatin (Lipitor) and lisinopril (Prinivil, Zestril). Her past medical history is otherwise unremarkable. An examination reveals a smooth, glossy, erythematous tongue (shown below).

A laboratory evaluation should include which one of the following tests?

- A) Angiotensin converting enzyme
 - B) Antineutrophil cytoplasmic antibody
 - C) Serotonin
 - D) TSH
 - E) Vitamin B₁₂
39. A 52-year-old male with known hypertension and hyperlipidemia comes to your office for a follow-up visit. His last visit was more than a year ago. He was unemployed for several months and lost his health insurance. Two months ago he ran out of his medications, which included amlodipine (Norvasc), hydrochlorothiazide, and atorvastatin (Lipitor). He says that he feels fine and has not had any chest pain, changes in vision, difficulty breathing, or lower extremity edema. He is a nonsmoker, and he does not drink alcohol or use illicit drugs. He drinks one cup of coffee daily. He does not take any over-the-counter medications.

On examination his vital signs include a blood pressure of 190/120 mm Hg, a pulse rate of 80 beats/min, and an oxygen saturation of 96% on room air. You recheck his blood pressure after he sits quietly for 30 minutes and there is no significant change. A physical examination, including funduscopy, is normal.

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

- A) Administer clonidine (Catapres), 0.1 mg orally, and recheck his blood pressure in 30 minutes
- B) Administer nifedipine (Procardia), 60 mg orally, and recheck his blood pressure in 30 minutes
- C) Order laboratory studies to look for end-organ damage, and tell him to restart his previous medications
- D) Admit him to the intensive-care unit for intravenous treatment to lower his blood pressure
- E) Call 911 and have him transported to the emergency department



Item #38

40. A 28-year-old female presents with a depressed mood and sleep disturbance. She tells you that this has occurred for the past 4 years but only during the winter months. Her past medical history and a physical examination are unremarkable.

Which one of the following interventions has the strongest evidence for preventing recurrence of her condition?

- A) Exercise
- B) Light therapy
- C) Cognitive-behavioral therapy
- D) Bupropion (Wellbutrin XL)
- E) Fluoxetine (Prozac)

41. A 69-year-old male sees you for a routine examination and asks about lung cancer screening. He smoked one pack of cigarettes per day for about 35 years but quit 11 years ago.

According to the U.S. Preventive Services Task Force and the American College of Chest Physicians, which one of the following should you recommend?

- A) No screening
- B) An annual history and examination focusing on lung symptoms
- C) Annual chest radiography
- D) Annual low-dose chest CT

42. A 34-year-old female presents with a 1-month history of increasing foot pain. She does not have any significant past musculoskeletal history, and she started a new exercise program 6 weeks ago. She has pain in the lateral side of her heel that is present both with activity and at rest. On examination you note tenderness below the lateral malleolus extending to the midfoot.

Which one of the following is the most likely diagnosis?

- A) Calcaneal apophysitis (Sever's disease)
- B) Calcaneal stress fracture
- C) Peroneal tendinopathy
- D) Plantar fasciitis
- E) Tarsal tunnel syndrome

43. A 30-year-old female with type 2 diabetes and obesity sees you for follow-up. She has experienced several episodes of symptomatic hypoglycemia, and because of this she stopped all of her medications except metformin (Glucophage). Her hemoglobin A_{1c} has increased to 8.4%.

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

- A) Basal insulin (Lantus)
- B) Rapid-acting insulin (Humalog)
- C) Exenatide (Byetta)
- D) Glipizide (Glucotrol)
- E) Repaglinide

44. Polypharmacy increases the risk of adverse health outcomes. According to the Choosing Wisely campaign, adding to a threshold of how many medications in a patient's regimen should prompt a thorough review to determine if any of the medications can be discontinued?

- A) 3
- B) 5
- C) 7
- D) 10

45. An 18-month-old female is brought to your office for a well child check. During the examination you note that she is unable to say any words. She can follow a one-step command and point to three body parts. She does wave goodbye and babble, and she appears to have normal comprehension, emotional relationships, and fine and gross motor movements.

Which one of the following is the most likely diagnosis based on this patient's speech development?

- A) Autism spectrum disorder
- B) Cerebral palsy
- C) Congenital hearing loss
- D) Developmental speech and language delay
- E) Receptive language disorder

46. A 43-year-old female comes to your clinic for a routine health maintenance examination. She has a past medical history of diarrhea-predominant irritable bowel syndrome (IBS-D), recurrent urinary tract infections (UTIs), and bacterial vaginosis. She has no new health concerns today. She does not take any medications on a regular basis, and states that she prefers natural supplements to prescription medications. She says that she has heard that oral probiotics are beneficial and asks if they might be the right choice for her.

Which one of the following is the best evidence-based approach to counseling her about oral probiotics?

- A) There is no evidence that they will improve her IBS
- B) There is no evidence that they will decrease the risk of *Clostridioides (Clostridium) difficile* diarrhea when she is treated for a UTI
- C) There is strong evidence that they will decrease the risk of antibiotic-associated diarrhea when she is treated for a UTI
- D) There is strong evidence that they will decrease the risk of UTI recurrence
- E) There is strong evidence that they will decrease the risk of bacterial vaginosis recurrence

47. An 86-year-old male is brought to your office by his daughter for follow-up of hypertension. His blood pressure is well controlled on amlodipine (Norvasc), 5 mg daily. His daughter is concerned about the safety of her father driving because he has become confused on several occasions. He tells you that he only drives short distances to familiar places during the daytime, and he is somewhat agitated that his daughter mentioned this topic. He has no cognitive deficits noted on a 3-item recall or a clock drawing test. Neurologic and musculoskeletal examinations reveal no deficits.

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

- A) No further interventions
 - B) Discontinuing amlodipine
 - C) Reinforcing safe driving practices with education on age-related changes that may affect safe driving
 - D) Recommending that he stop driving and surrender his license
48. A 70-year-old female with a history of coronary artery disease, a femorofemoral bypass 3 years ago, and hypertension sees you for a follow-up visit. She has intermittent right arm pain that is worse with exercise. The pain increases with all arm exercises and improves with rest. The patient's blood pressure is 140/70 mm Hg in the left arm and 120/64 mm Hg in the right arm.

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

- A) Radiographs of the right shoulder
 - B) Arterial duplex ultrasonography of the upper extremities
 - C) MR angiography
 - D) No imaging, and referral to physical therapy
49. A 2-year-old female is brought to your office by her mother because of a cough and fever. The mother also tells you that the child has had a reduced appetite but she is drinking fluids normally. The child was born at term and has previously been healthy.

On examination the child appears alert and happy. She has a temperature of 37.2°C (99.0°F), a pulse rate of 100 beats/min, a respiratory rate of 30/min, and an oxygen saturation of 98% on room air. An HEENT examination reveals clear rhinorrhea. Auscultation of the lungs reveals mild expiratory wheezing throughout with no crackles, and you note no signs of respiratory distress such as retractions or use of accessory muscles of respiration.

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

- A) Reassurance only
- B) A nasal swab for respiratory syncytial virus
- C) A chest radiograph
- D) Nebulized albuterol
- E) Oral amoxicillin

50. A 19-year-old female presents with a 4-year history of intermittent facial acne. She tells you that her acne has never completely resolved, and it worsens during her menstrual period. She has tried various over-the-counter facial cleansers although she does not recall what they contained. On examination she has scattered open and closed comedones, and pustules on her forehead and around her mouth.

Which one of the following treatments would you recommend?

- A) Topical adapalene (Differin)
 - B) Topical clindamycin (Cleocin T)
 - C) Oral doxycycline
 - D) Oral isotretinoin (Absorica)
51. Which one of the following has been shown to be an appropriate therapeutic intervention for nonspecific low back pain?
- A) Bed rest
 - B) A lumbar brace
 - C) Muscle relaxants
 - D) Shoe insoles
 - E) Yoga
52. A 79-year-old male presents to your primary care clinic as a new patient. He is unaccompanied and tells you that he has no acute concerns and takes no regular medications, but just “needed a doctor.” He is a retired lawyer and states that he lives alone. He has no significant past medical history but you are able to access his electronic medical records and note that he has a history of diabetes mellitus and hypertension, and has been to the local emergency department (ED) twice in the last 4 months for headaches. A workup from the ED was notable only for moderately elevated blood pressure. When asked, he does not appear to recall these visits.

His vital signs are notable only for a blood pressure of 165/90 mm Hg. A physical examination reveals a thin but well appearing older adult who is mildly disheveled in appearance, with no other abnormalities.

Which one of the following would be the most appropriate next step in the care of this patient?

- A) A cognitive assessment
- B) Immediate referral to adult protective services
- C) Immediate referral to a neurologist
- D) Immediate referral to a psychiatrist

53. An otherwise healthy 21-year-old male sees you for follow-up after a hospitalization for pneumonia. This was his second pneumonia infection of the year. He reports a history of multiple sinus infections and upper respiratory infections over the years that were treated with antibiotics on an outpatient basis. Laboratory studies reveal a normal CBC and a decreased IgA level. A trial of pneumococcal polysaccharide vaccine (PPSV23, Pneumovax 23) reveals no measurable response.

This presentation is most consistent with

- A) selective IgA deficiency
 - B) common variable immunodeficiency
 - C) severe combined immunodeficiency
 - D) DiGeorge syndrome
 - E) Wiskott-Aldrich syndrome
54. Which one of the following vitamins is a well established therapy for the treatment of nausea and vomiting in pregnancy?

- A) Vitamin A
- B) Vitamin B₆
- C) Vitamin B₁₂
- D) Vitamin C
- E) Vitamin E

55. A 62-year-old female sees you for a routine health maintenance visit and asks for your advice regarding vitamin D supplementation. She is healthy and active, and jogs 1–2 hours three times weekly.

Which one of the following would be the most appropriate advice regarding vitamin D supplementation in this patient?

- A) It is not recommended because she is asymptomatic
 - B) It will reduce the risk of certain cancers
 - C) It will reduce the risk of depression
 - D) It will reduce the risk of diabetes mellitus
 - E) It will reduce the risk of fractures
56. A 35-year-old male with type 1 diabetes asks you what his hemoglobin A_{1c} goal should be. His blood pressure and lipids are well controlled and he has not had any episodes of hypoglycemia. He recently saw an ophthalmologist and a podiatrist.

You advise him that based on current American Diabetes Association recommendations his goal should be to keep his hemoglobin A_{1c} below a threshold value of

- A) 6.0%
- B) 7.0%
- C) 8.0%
- D) 9.0%

57. You diagnose major depressive disorder in a 69-year-old male. He has benign prostatic hyperplasia and is treated with prazosin (Minipress) for nocturia but he is otherwise healthy. He agrees to cognitive-behavioral therapy and starting an antidepressant but is concerned about side effects, especially falls.

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

- A) Amitriptyline
 - B) Duloxetine (Cymbalta)
 - C) Escitalopram (Lexapro)
 - D) Paroxetine (Paxil)
 - E) Phenelzine (Nardil)
58. A 27-year-old soccer player presents with anterior hip pain along with a clicking sensation in the hip when he runs or attempts lateral movements. The flexion, adduction, and internal rotation (FADIR) test and the flexion, abduction, and external rotation (FABER) test both elicit pain. You suspect a labral tear.

The most accurate imaging test for the suspected diagnosis is

- A) a standing radiograph of the hip
 - B) anteroposterior and frog-leg lateral radiographs of the hip
 - C) CT of the hip
 - D) a bone scan
 - E) MR arthrography
59. A 74-year-old male with type 2 diabetes, severe peripheral artery disease, and a history of tobacco use is admitted to the hospital with wet gangrene of his right foot that does not improve with appropriate wound care and antibiotics. His vascular surgeon recommends a below-the-knee amputation of the right leg but the patient has not given his consent.

Which one of the following would suggest that this patient lacks capacity to make this decision?

- A) He has a fear of having surgery
 - B) He wants to consult with his family first
 - C) He consistently believes that his foot will improve
 - D) He understands that he may die if he forgoes the amputation
 - E) He states that his brother had the same surgery and died a week later
60. The most common symptom of obstructive sleep apnea is
- A) cough
 - B) excessive sleepiness
 - C) leg swelling
 - D) palpitations
 - E) weight gain

61. A 56-year-old male who has heart failure with reduced ejection fraction sees you for follow-up. He is stable but over the past year has noted an increase in dyspnea with moderate activity. His blood pressure is well controlled today. His current medications include carvedilol (Coreg), losartan (Cozaar), and escitalopram (Lexapro).

Which one of the following additions to his current medication regimen has the best evidence for reducing his risk of mortality from heart failure?

- A) Aspirin
- B) Atorvastatin (Lipitor)
- C) Furosemide (Lasix)
- D) Hydrochlorothiazide
- E) Spironolactone (Aldactone)

62. Chronic kidney disease is defined by abnormal kidney structure or function lasting a minimum of

- A) 2 months
- B) 3 months
- C) 6 months
- D) 12 months
- E) 24 months

63. A 55-year-old female with type 2 diabetes sees you because of early satiety, nausea, vomiting, bloating, and postprandial fullness that is sometimes accompanied by upper abdominal pain. Since these symptoms have developed she has also noted increasing difficulty with blood glucose control.

Which one of the following would be the best study for confirming the most likely diagnosis?

- A) Gastric emptying scintigraphy with a solid meal
- B) Hepatobiliary scintigraphy (HIDA)
- C) An upper gastrointestinal series with small-bowel follow-through
- D) Abdominal ultrasonography
- E) Abdominal CT

64. The administrator in your practice recently attended a quality improvement conference. He would like to start a clinic-wide program to focus on lead screening in asymptomatic children 5 years of age and younger.

After reviewing U.S. Preventive Services Task Force guidelines, which one of the following should you tell the practice administrator?

- A) There is insufficient evidence to recommend for or against lead screening in children 5 years of age and younger
- B) All children 5 years of age and younger should undergo lead screening
- C) All children who live in housing built before 1978 should undergo lead screening
- D) There are accurate and reliable screening questionnaires to guide lead screening

65. A 60-year-old male who has type 2 diabetes comes to your office with an acute onset of fever, chills, and malaise. He says that he is feeling progressively worse. His temperature is 40°C (104°F). An examination reveals redness, tenderness, and swelling of the penis, scrotum, and perineal area.

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

- A) Dapagliflozin (Farxiga)
 - B) Exenatide (Byetta)
 - C) Insulin glargine (Lantus)
 - D) Pioglitazone (Actos)
 - E) Sitagliptin (Januvia)
66. A 70-year-old male presents with a 2-year history of gradually progressive exertional dyspnea associated with a dry cough and fatigue. A physical examination reveals bilateral basilar fine inspiratory crackles on lung auscultation and acrocyanosis. A chest radiograph demonstrates hazy opacities and reticular infiltrates of both lower lung fields. You suspect interstitial lung disease.

Assuming that no underlying connective tissue disease is identified on serologic testing, which one of the following additional studies could confirm a diagnosis of idiopathic pulmonary fibrosis for this patient, potentially preventing the need for a subsequent lung biopsy?

- A) Spirometry
 - B) High-resolution chest CT
 - C) Polysomnography
 - D) Echocardiography
 - E) Right heart catheterization
67. A 47-year-old female presents with a 2-month history of generalized left shoulder pain. She does not have any ongoing illnesses. On examination you note generally impaired range of motion in the shoulder, but a radiograph of the shoulder is normal. You diagnose adhesive capsulitis.

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

- A) Antinuclear antibody
- B) Erythrocyte sedimentation rate
- C) Hemoglobin A_{1c}
- D) IgA tissue transglutaminase
- E) MRI without contrast

68. A 3-year-old male is brought to your office by his mother because he stepped on a large wooden splinter that broke off at the surface of his left foot and since then he has been avoiding walking on that foot. On examination the bottom of the left heel is red and inflamed.

Which one of the following would be most appropriate initially to visualize the splinter?

- A) Radiography
- B) Fluoroscopy
- C) Ultrasonography
- D) CT
- E) MRI

69. A 55-year-old male sees you because of a second flare of gout. He has also had an elevated blood pressure at the last few visits to your clinic and is hypertensive again today.

In addition to treating his gout flare, which one of the following would be the most appropriate agent to treat his hypertension in light of his presenting problem?

- A) Atenolol (Tenormin)
- B) Hydralazine
- C) Hydrochlorothiazide
- D) Lisinopril (Prinivil, Zestril)
- E) Losartan (Cozaar)

70. A 60-year-old male comes to your office with a 1-year history of the gradual onset of mild fatigue and dyspnea. There are no symptom triggers. He has a 20-pack-year history of cigarette smoking but stopped at age 35. An examination is significant only for a BMI of 30 kg/m². Office spirometry reveals a decreased FVC and a normal FEV₁/FVC ratio, and there are no changes after bronchodilator administration.

Which one of the following would you recommend at this point?

- A) The 6-minute walk test
- B) Bronchoprovocation testing such as a methacholine challenge test
- C) Full pulmonary function testing
- D) Bronchoscopy
- E) A ventilation-perfusion scan

71. Which one of the following is the preferred method of diagnosing lymphoma in a 60-year-old male who presents with weight loss, unexplained fever, and axillary adenopathy?

- A) CT of the chest, pelvis, and abdomen pre- and post-contrast
- B) A PET-CT scan
- C) A bone scan
- D) A bone marrow aspiration and biopsy
- E) An open lymph node biopsy

72. Which one of the following types of complementary/integrative therapy is a form of mental training that requires calming of thoughts with the goal of achieving a state of detached observation?
- A) Aerobic exercise
 - B) Cognitive-behavioral therapy
 - C) Mindfulness-based meditation
 - D) Tai chi and qi gong
 - E) Yoga
73. To determine compliance with prescribed medications and detect use of illicit substances, your clinic uses urine drug screening with an immunoassay qualitative point-of-care test to monitor patients who are on long-term opioid therapy. Which one of the following is most likely to result in a false-negative result and require confirmatory testing for detection?
- A) Cannabis
 - B) Cocaine
 - C) Codeine
 - D) Morphine
 - E) Oxycodone (OxyContin)
74. A 3-year-old male undergoes surgery for intestinal malrotation (volvulus). A preoperative comprehensive metabolic panel was normal. The patient's postoperative potassium level is 4.6 mEq/L (N 3.4–4.7).

In addition to maintenance potassium, which one of the following fluids should be administered in the postoperative period?

- A) 0.2% NaCl with 5% dextrose
 - B) 0.45% NaCl with 5% dextrose
 - C) 0.9% NaCl with 5% dextrose
 - D) 3% saline
 - E) 5% dextrose in water
75. A 60-year-old female with a BMI of 24 kg/m² presents with bilateral knee pain that is greater in the left knee. She has no morning stiffness but the pain sometimes prevents her from completing normal activities such as grocery shopping. You perform an evaluation and diagnose osteoarthritis of the knee. She does not want to take prescription medications and asks you if supplements or other treatments would be helpful.
- Which one of the following would you recommend?
- A) Lateral wedge insoles
 - B) Vitamin D supplements
 - C) Glucosamine and chondroitin supplements
 - D) Hyaluronic acid injections
 - E) Physical therapy

76. A 30-year-old female who is an established patient calls your office to request a test for COVID-19. The patient spent several hours inside the home of another individual who just received a positive COVID-19 test result. She states that her sense of taste seems diminished, but she has no respiratory symptoms and otherwise feels well.

Which one of the following is the typical incubation period for COVID-19?

- A) 1 day
- B) 5 days
- C) 14 days
- D) 30 days

77. A 45-year-old female with a 4-year history of type 2 diabetes is taking only metformin (Glucophage) and maintaining a hemoglobin A_{1c} of 6.6%. Her LDL-cholesterol level is 94 mg/dL. She has no complications related to diabetes and her medical history is otherwise unremarkable.

Which one of the following should be added to her current medication regimen?

- A) A DPP-4 inhibitor
- B) An SGLT2 inhibitor
- C) A low-intensity statin
- D) A moderate-intensity statin
- E) A high-intensity statin

78. A 70-year-old male is brought to your office by a family member. The patient is concerned about a tremor, which is most noticeable at rest and seems to get better with voluntary movements. On examination his vital signs are unremarkable. He blinks infrequently during the examination, his face seems to be relatively immobile, and he feels rigid. He has some difficulty rising from a chair and he walks with small, shuffling steps. The remainder of the neurologic examination is normal. You note some seborrhea of the scalp. A recent comprehensive laboratory evaluation is unremarkable.

Which one of the following is necessary to confirm the diagnosis?

- A) No diagnostic testing
- B) CT of the brain
- C) MRI of the brain
- D) EEG
- E) A lumbar puncture

79. A 45-year-old female presents with a lesion on her mid-back (shown below) that measures 1.2 mm in diameter. A punch biopsy confirms nodular basal cell carcinoma. She is otherwise healthy and does not take any daily medications. She is concerned about the cosmetic appearance after treatment.

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

- A) No further management
- B) Topical fluorouracil 5% (Efudex)
- C) Cryotherapy
- D) Curettage and electrodesiccation
- E) Standard excision with 4-mm margins

80. A 23-year-old primigravida comes to your office for her initial obstetric visit. She is at 13 weeks gestation based on the dates of her last menstrual period. She is a nonsmoker and does not drink alcohol or use illicit substances. Her vital signs are remarkable for a blood pressure of 142/92 mm Hg and a BMI of 32 kg/m². She says that she has been diagnosed with hypertension in the past but has not taken any medications for it.

In addition to a prenatal vitamin, which one of the following would you recommend for her?

- A) No additional medications
- B) Aspirin
- C) Ferrous sulfate
- D) Folic acid
- E) Labetalol (Trandate)

81. A 68-year-old female comes to your office for a follow-up visit for diabetes mellitus. Her home glucose monitor record shows a range of 68–125 mg/dL. Her medications include atorvastatin (Lipitor), 40 mg daily; metformin (Glucophage), 750 mg twice daily; and insulin glargine (Lantus), 10 U nightly. Laboratory studies are remarkable for a hemoglobin A_{1c} of 5.8% and a creatinine level of 0.98 mg/dL (N 0.6–1.1). She maintains healthy lifestyle behaviors such as walking 30 minutes 5 days per week and avoiding sweetened beverages.

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

- A) Continue the current medication regimen
- B) Increase the insulin glargine dosage
- C) Increase the metformin dosage
- D) Discontinue insulin glargine
- E) Discontinue metformin



Item #79

82. A 70-year-old female comes to your office for a routine health maintenance examination. Her past medical history is notable for well controlled hypertension and right knee osteoarthritis, and she underwent total knee replacement 1 year ago with an uncomplicated postoperative course. She mentions that she has an appointment to have a tooth filled and asks for your advice on antibiotics to prevent infection in her prosthetic joint. She has no medication allergies, has no previous history of joint infection, and is not immunocompromised.

Which one of the following would be the most appropriate recommendation regarding antibiotic prophylaxis for her upcoming dental procedure?

- A) No antibiotic treatment
- B) A single dose of oral amoxicillin
- C) A 3-day course of oral amoxicillin
- D) A single dose of oral clindamycin (Cleocin)
- E) A single dose of intravenous cefazolin

83. A 78-year-old male with terminal lung cancer and long-standing COPD is admitted to a regular medical-surgical care unit pending transfer to the hospice unit within the next day. You are called about worsening anxiety and dyspnea. The patient is alert and anxious. He has a blood pressure of 150/94 mm Hg, a pulse rate of 96 beats/min, a respiratory rate of 24/min, and an oxygen saturation of 93 % on 2 L/min of oxygen via nasal cannula.

Which one of the following would be most effective in this situation?

- A) 40 % oxygen by venti-mask
- B) Dexamethasone
- C) Hyoscyamine (Anaspaz)
- D) Lorazepam (Ativan)
- E) Morphine sulfate

84. A 34-year-old female with asthma sees you for routine follow-up. She tells you that she uses her short-acting β -agonist (SABA) approximately twice a week.

Which one of the following management strategies would you recommend for prevention of exacerbations?

- A) Continued use of a SABA as needed
- B) An inhaled corticosteroid (ICS)/long-acting β -agonist (LABA) as needed
- C) A daily maintenance ICS/LABA
- D) A daily maintenance ICS plus a SABA as needed
- E) A daily maintenance ICS plus a daily leukotriene receptor antagonist

85. A 55-year-old male presents to your office to establish care. He has a history of hypertension, hypercholesterolemia, and coronary artery disease. He had a non-ST-elevation myocardial infarction (NSTEMI) 3 years ago. An echocardiogram at that time was normal and he received a single drug-eluting stent. He has not seen a cardiologist since then and would prefer not to see one unless it is necessary, due to his high insurance copayments for specialist visits.

His current medications include clopidogrel (Plavix), aspirin, atorvastatin (Lipitor), lisinopril (Prinivil, Zestril), and carvedilol (Coreg). A review of systems is negative. His vital signs include a blood pressure of 120/72 mm Hg, a heart rate of 80 beats/min, and a respiratory rate of 12/min. A physical examination is unremarkable, a basic metabolic panel is normal, and his hemoglobin A_{1c} is 5.7%. His LDL-cholesterol level is 60 mg/dL, his HDL-cholesterol level is 49 mg/dL, and his total cholesterol level is 147 mg/dL.

The patient would like to reduce the number of medications he takes because of the cost. Which one of the following medications in his current regimen would be most appropriate to discontinue at this time?

- A) Aspirin
 - B) Atorvastatin
 - C) Carvedilol
 - D) Clopidogrel
 - E) None of his current medications
86. A 42-year-old female sees you because of intermittent right upper abdominal pain that occurs after eating. The episodes have been gradually worsening and now last up to an hour. She has tried over-the-counter antacids, ibuprofen, and acetaminophen, which have not helped. She tells you that the last episode occurred earlier this week and the pain was so severe that it woke her up and she went to the emergency department (ED). A comprehensive metabolic panel, CBC, and lipase level performed in the ED were all normal. Right upper quadrant abdominal ultrasonography today is negative for gallstones but notable for increased echogenicity of the liver.

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

- A) Plain radiography of the abdomen
- B) CT of the abdomen
- C) Hepatobiliary scintigraphy (HIDA)
- D) Magnetic resonance cholangiopancreatography (MRCP)
- E) Endoscopic retrograde cholangiopancreatography (ERCP)

87. A 6-month-old male is brought to your office by his mother for a well child examination. The mother does not have any concerns. Interactions between the mother and child are appropriate and the child appears well.

Which one of the following screenings is recommended at this visit?

- A) Autism
- B) Iron deficiency
- C) Maternal depression
- D) Otoacoustic emissions (OAE) testing

88. A 42-year-old female presents to your office with heavy menstrual periods and pelvic pressure. Her symptoms began several years ago and have gradually worsened. Laboratory findings are notable for a mild microcytic anemia. Pelvic ultrasonography identifies a 7-cm submucosal mass. She wants to avoid a hysterectomy but desires a treatment that will provide symptom relief, decrease the volume of the mass, and have a sustained effect.

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

- A) Expectant management
- B) A GnRH agonist
- C) A selective estrogen receptor modulator
- D) A levonorgestrel-releasing IUD (Mirena)
- E) Uterine artery embolization and occlusion

89. A 65-year-old female sees you because of increased irritability and confusion. She has a history of major depression, essential hypertension, and type 2 diabetes. Her medications include sertraline (Zoloft), 100 mg daily; lisinopril (Prinivil, Zestril), 20 mg daily; and metformin (Glucophage), 500 mg twice daily. She recently sustained a right distal radius fracture as a result of a fall, and she has been taking tramadol, 50 mg, every 6 hours for pain control.

On examination the patient has a temperature of 38.2°C (100.8°F), a pulse rate of 96 beats/min, a respiratory rate of 16/min, and a blood pressure of 124/78 mm Hg. She appears confused and you note a bilateral tremor in the upper extremities, brisk reflexes, and two beats of clonus on a bilateral foot examination. The examination is otherwise normal. A CBC, comprehensive metabolic panel, chest radiograph, and CT of the head are all within normal limits.

Which one of the following is the most likely cause of this patient's symptoms?

- A) Acute cerebral infarction
- B) Meningitis
- C) Sepsis syndrome
- D) Serotonin syndrome

90. A 13-year-old male is brought to your office for evaluation of back pain. Plain radiography would be indicated at this time if the patient has
- A) pain that awakens him at night
 - B) pain that is localized to the midthoracic spine
 - C) pain that is increased with flexion
 - D) intermittent pain that has persisted for 2 weeks
 - E) a recent history of an upper respiratory infection
91. The U.S. Preventive Services Task Force recommends one-time screening for abdominal aortic aneurysm in
- A) men 55–75 years of age who have ever smoked
 - B) men 65–75 years of age who have ever smoked
 - C) men and women 65–75 years of age who have ever smoked
 - D) men and women 65–75 years of age who currently smoke
92. A 67-year-old female who is a retired teacher presents with generalized itching. She tells you that she is convinced that she has acquired a skin infestation from small mites. She gives you a matchbox containing what appears to be crusts, dried blood, and bits of skin as evidence of this problem. A previous physician had obtained a CBC, comprehensive metabolic panel, TSH level, chest radiograph, and drug screen, which were all normal. An examination today reveals excoriations on her arms, abdomen, and legs in easily reached areas. Her skin is not dry and there are no lesions in her axillae or web spaces.

Which one of the following medications would be most likely to help this patient?

- A) Cholestyramine (Questran)
 - B) Hydroxyzine (Vistaril)
 - C) Ivermectin (Stromectol)
 - D) Olanzapine (Zyprexa)
 - E) Prednisone
93. A 6-year-old female who recently moved to the United States from India requires a physical examination prior to entering the public school system. Her immunizations are up to date, including bacillus Calmette-Guérin vaccine at birth. Her family history is positive for her paternal grandfather being treated for latent tuberculosis infection. Her past medical history and a physical examination are otherwise unremarkable.

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

- A) An interferon-gamma release assay (IGRA, QuantiFERON-TB Gold)
- B) A nucleic acid amplification test
- C) A tuberculin skin test, and follow-up in 72 hours
- D) Three acid-fast bacilli sputum samples and N95 mask use
- E) A chest radiograph

94. A 30-year-old female presents with episodes of severe vertigo lasting 4–5 hours and associated with tinnitus, nausea, and vomiting. On examination the Dix-Hallpike maneuver is negative. She has no focal weakness, numbness, or paresthesia. She does not take any medications and her medical history is remarkable only for frequent headaches and seasonal allergies. Audiometry is abnormal due to low- and high-frequency hearing loss in her right ear, with preservation of the midrange.

Which one of the following is the most likely diagnosis?

- A) Benign paroxysmal positional vertigo
- B) Meniere's disease
- C) Multiple sclerosis
- D) Vestibular migraines
- E) Vestibular schwannoma

95. A 6-year-old female is brought to your office by her parents for a routine well child visit. On examination the patient's height is 121 cm (48 in), which is the 91st percentile for her age, and her weight is 27 kg (59 lb), which is the 92nd percentile for her age. Her parents ask you about the recommended car safety restraints.

Which one of the following would be an appropriate recommendation regarding vehicular safety for this child?

- A) She should use a rear-facing car seat
- B) She may use either a booster seat or a car seat
- C) She can safely wear a seatbelt without a booster seat when she reaches 127 cm (50 in)
- D) She should not use a car seat because her height exceeds the limit of common car seats
- E) She may sit in the front seat once she turns 11 years of age

96. A 58-year-old male with a history of a neurogenic bladder comes to your office as a new patient. He recently elected to have placement of a chronic indwelling urethral catheter rather than performing intermittent catheterization at home, and he asks how to reduce his risk of urinary tract infections (UTIs). His last UTI was approximately 1 year ago and required intravenous antibiotics.

Which one of the following is most effective for preventing UTIs in patients with chronic indwelling urethral catheters?

- A) Routine daily hygiene of the meatal surface with soap and water
- B) Daily periurethral cleaning with iodine
- C) Daily oral antibiotics based on prior urine culture sensitivities
- D) Routine instillation of an antimicrobial solution into the drainage bag
- E) Regularly scheduled catheter exchanges at fixed intervals

97. A 68-year-old male presents with a burn on his lower leg after trying to light a bonfire with kerosene. Examination of the affected leg reveals the presence of blistering, along with a denuded central area that does not blanch with pressure. The underlying fat and connective tissue are not involved.

Which one of the following is the proper classification of this burn?

- A) Superficial burn
- B) Superficial partial-thickness burn
- C) Deep partial-thickness burn
- D) Full-thickness burn

98. A 63-year-old female sees you for follow-up after an emergency department (ED) visit. CT performed in the ED confirmed diverticulitis and she was treated as an outpatient. The discharge paperwork and radiology reports also indicate that she has a left superior adrenal nodule measuring 1.2 cm.

Which one of the following concurrent conditions should prompt a hormonal workup?

- A) Hyperlipidemia
- B) Hypertension
- C) Renal cell carcinoma
- D) Rheumatoid arthritis
- E) Type 2 diabetes

99. A 39-year-old male with no significant past medical history presents to your office to establish care. He does not take any medications. A review of systems is negative. He has a BMI of 22 kg/m² and a blood pressure of 141/82 mm Hg.

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

- A) Ambulatory blood pressure monitoring
- B) Recommending a weight loss of 5 lb
- C) Hydrochlorothiazide, 25 mg daily
- D) Lisinopril (Prinivil, Zestril), 10 mg daily
- E) Metoprolol tartrate (Lopressor), 25 mg twice daily

100. A 4-month-old female is brought to your office by her parents as a new patient for a well child visit. The infant is healthy and the parents have no concerns. You have records from her previous physician that indicate the parents refused all vaccinations other than hepatitis B at birth.

Which one of the following communication strategies is recommended to promote vaccine acceptance?

- A) Emphasize the benefits and downplay the risks of vaccines
- B) Clarify specific concerns and provide factual information
- C) Avoid future discussions with the family about vaccines
- D) Dismiss the family from the practice

101. A 71-year-old female with a history of well controlled hypertension, diabetes mellitus, and osteoporosis presents with a 2-day history of fever, chills, and a productive cough. She lives at home with her husband, who has not noted any confusion but says she has been weak and unable to bathe herself.

On examination the patient has a temperature of 38.2°C (100.8°F), a blood pressure of 110/68 mm Hg, unlabored respirations at a rate of 22/min, and an oxygen saturation of 94% on room air. You note that she has good air entry, there are no abnormal breath sounds, and there is no egophony or increased fremitus. The cardiovascular examination is unremarkable.

Laboratory Findings

WBCs	14,000/mm ³ (N 4500–11,000)
Hemoglobin	12.5 g/dL (N 14.0–17.5)
Platelets	250,000/mm ³ (N 150,000–350,000)
Creatinine	1.0 mg/dL (N 0.6–1.2)
BUN	14 mg/dL (N 8–23)

Posteroanterior and lateral chest radiographs show an infiltrate in the right middle lobe.

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

- A) Azithromycin (Zithromax)
- B) Amoxicillin plus metronidazole (Flagyl)
- C) Amoxicillin/clavulanate (Augmentin) plus azithromycin
- D) Azithromycin plus levofloxacin
- E) Clindamycin (Cleocin) plus doxycycline

102. An 8-year-old female is brought to your office because of left arm pain after she fell down on the sidewalk while roller skating. She has pain, swelling, and a mild deformity of her distal forearm over the radius. Posteroanterior and lateral radiographs confirm an incomplete compression fracture of the distal radius.

In addition to a short arm splint, which one of the following would be appropriate management of this fracture?

- A) Ultrasonography in 3 weeks
- B) Repeat radiography in 4 weeks
- C) Return to activity in 4 weeks if she is pain free
- D) Follow-up and reevaluation in 6 weeks
- E) Referral to an orthopedist

103. While on rounds in the newborn nursery, you receive a call about a 2-day-old infant born at 39 weeks gestation. According to the American Academy of Pediatrics standard treatment guidelines for infants at high risk of bilirubin encephalopathy, the infant has an elevated total serum bilirubin level that is approaching the threshold for initiating phototherapy.

Which one of the following additional factors would be the strongest indication for phototherapy in this infant?

- A) East Asian ethnicity
- B) Exclusive breastfeeding
- C) A positive direct antibody titer (Coombs test)
- D) A sibling with a history of neonatal jaundice
- E) Untreated maternal group B streptococcal colonization

104. An obese 32-year-old male is admitted to the hospital with a new onset of acute pancreatitis. A lipid panel reveals a triglyceride level of 1150 mg/dL and an HDL-cholesterol level of 30 mg/dL. Other laboratory studies are normal. His 10-year risk of atherosclerotic cardiovascular disease is <5%. His family history is positive for recurrent pancreatitis in his father and paternal grandfather.

In addition to lifestyle modifications, which one of the following would be most appropriate for this patient after he is discharged?

- A) Atorvastatin (Lipitor)
- B) Colesevelam (Welchol)
- C) Ezetimibe (Zetia)
- D) Fenofibrate (Tricor)
- E) Omega-3-acid ethyl esters (Lovaza)

105. A 23-year-old gravida 1 para 1 who is a single mother of a 3-day-old infant comes to your office for a newborn follow-up. She reports some sleep disturbance, mild depression without suicidal ideation, and financial concerns. Her past medical history is significant for persistent depressive disorder.

The U.S. Preventive Services Task Force recommends which one of the following to help prevent perinatal depression in patients such as this?

- A) Exercise
- B) Amitriptyline
- C) Sertraline (Zoloft)
- D) Referral for cognitive-behavioral therapy

106. A 34-year-old male sees you because he was recently informed that a partner he had unprotected sex with last month has been diagnosed with HIV. You would advise this patient to initiate ongoing antiretroviral therapy

- A) immediately, because HIV testing is not necessary prior to initiation
- B) at the time of diagnosis of HIV infection
- C) when his CD4 cell count drops to <200 cells/ μL
- D) when his CD4 cell count drops to <500 cells/ μL
- E) when he develops an AIDS-defining illness

107. An 82-year-old female with atrial fibrillation treated with digoxin is started on verapamil sustained-release capsules (Calan SR) for hypertension and angina. Although she initially tolerates the medication and has a good clinical response, when you see her 1 month later she has lost 3 kg (7 lb) and reports persistent anorexia and nausea over the past 2–3 weeks. A serum chemistry profile, TSH level, and CBC are normal. Her serum digoxin level is 1.4 ng/mL (therapeutic range 0.8–1.5). Her vital signs are stable and a physical examination is notable only for rate-controlled atrial fibrillation.

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

- A) Prescribe a therapeutic trial of an H_2 -blocker
- B) Order an upper gastrointestinal contrast study
- C) Withhold digoxin for several days and reinstitute at a lower dosage if necessary
- D) Order imaging to look for a central nervous system abnormality

108. In a patient with persistent respiratory symptoms, which one of the following pulmonary function abnormalities after bronchodilator administration is required for the diagnosis of COPD?

- A) Low residual volume
- B) Low total lung capacity
- C) An FEV_1/FVC ratio <0.70
- D) An $\text{FEV}_1 < 85\%$ of predicted
- E) A peak flow $<90\%$ of predicted

109. A 58-year-old male sees you for evaluation of left ankle pain after he slipped on some ice in his driveway last night. He felt immediate pain over the lateral ankle, which started swelling over the next hour. He elevated his foot, applied ice, and took ibuprofen. This morning the ankle remains swollen and also appears bruised. He is able to walk on it with some pain. On examination you note typical findings of an ankle sprain. He asks you for medication to manage his pain.

Which one of the following medications has the best evidence for providing pain relief while also minimizing side effects?

- A) Topical diclofenac gel (Pennsaid)
- B) Topical menthol gel
- C) Oral hydrocodone/acetaminophen (Lortab)
- D) Oral ibuprofen
- E) Oral tramadol

110. A 7-year-old male is brought to the urgent care clinic with a 2-day history of fever and sore throat, with no associated cough. His temperature is 38.3°C (100.9°F) and a rapid antigen test confirms a group A β -hemolytic *Streptococcus* infection. A prescription for penicillin is sent to the pharmacy, but the medication is never picked up due to a lack of transportation. The patient is brought to your office 2 weeks later with a fever, joint pain, shortness of breath, and chest pain. His vital signs are significant for a temperature of 38.8°C (101.8°F) and a heart rate of 118 beats/min.

On examination the patient's affect is appropriate, he has a 3/6 holosystolic murmur heard best over the apex, and he has tenderness and swelling of his knees bilaterally and of his left ankle. An antistreptolysin O titer is positive, his erythrocyte sedimentation rate is 124 mm/hr (N < 10), and a chest radiograph is significant for cardiomegaly.

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

- A) Hydroxychloroquine (Plaquenil)
 - B) Methylprednisolone acetate (Depo-Medrol)
 - C) Naproxen
 - D) Intravenous immunoglobulins
 - E) Plasmapheresis
111. A 60-year-old male is referred to you by his dermatologist for additional workup of a symmetric vesicular rash that was diagnosed as dermatitis herpetiformis. This rash is associated with
- A) food allergy
 - B) gluten sensitivity
 - C) HIV infection
 - D) immunodeficiency
 - E) internal malignancy
112. A 51-year-old female presents with concerns about a change in her cognition. She says she has difficulty retrieving words, loses her train of thought, and goes into a room and forgets why she came there. She also has had more frequent hot flashes and sleep disturbances. She still menstruates but has noticed a change from her previous pattern. A physical examination is unremarkable, and recent laboratory tests were all normal, including vitamin B₁₂ and thyroid studies. Cognitive testing is normal.

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

- A) Reassurance only
- B) CT of the head
- C) MRI of the brain
- D) Hormone therapy
- E) Referral to a neurologist

113. An otherwise healthy 46-year-old female presents with a 10-day history of recurring pain in the right cheek and gums. She says the pain feels like electric shocks lasting a few seconds and recurring “hundreds of times a day.” She says that smiling and brushing her teeth can trigger the pain. She does not have a history of recent dental work, trauma, fever, or myalgia. She feels well aside from the facial pain. She has tried over-the-counter analgesics without relief. Her vital signs and an HEENT examination are normal. There is no pain with dental percussion, and the skin and mucous membranes of the nose and mouth are unremarkable.

Which one of the following would be the most appropriate treatment for this patient’s condition?

- A) Carbamazepine (Tegretol), 200 mg twice daily
- B) Prednisone, 40 mg daily
- C) Sumatriptan (Imitrex), 6 mg subcutaneously
- D) Valacyclovir (Valtrex), 1000 mg three times daily
- E) High-flow oxygen for 20 minutes

114. An asymptomatic 55-year-old female sees you for the first time. She asks for advice about laboratory results from a health maintenance examination performed last month by her previous physician. These results included a TSH level of 0.2 $\mu\text{U/mL}$ (N 0.4–4.2). Other laboratory results, including free T_4 and free T_3 levels, were normal. Her past medical history and a physical examination today, including a thyroid examination, are unremarkable.

Which one of the following would you recommend at this time?

- A) Observation only
- B) A thyroglobulin level
- C) Thyroid antibody studies
- D) Thyroid ultrasonography
- E) A thyroid uptake scan with radioactive iodine

115. An exclusively breastfed 2-month-old male is brought to your office by his mother for a routine well child visit. His mother indicates that the infant received all recommended care at birth, is feeding well, and is meeting expected developmental milestones. Growth parameters are consistent with previously charted data. A physical examination is unremarkable except for bruising of the right lateral arm and left anterior thigh. When questioned about these findings, the mother states that she is not overly concerned, as he is “quite an active little kicker” when he is lying in his crib. She says that his 4-year-old and 6-year-old brothers are both physically active and bruise easily as well.

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

- A) Reassurance that bruising of the extremities is common in this age group
- B) A serum vitamin D level
- C) A serum vitamin K level
- D) Abdominal ultrasonography
- E) Immediate referral for a child abuse investigation

116. A 73-year-old female sees you because of a 2-month history of the gradual onset of bilateral swelling of several metacarpophalangeal joints with associated joint stiffness, which lasts for about 1 hour each morning. Her past medical history and an examination are otherwise unremarkable.

Elevation of which one of the following would provide the most support for a specific diagnosis of her new arthritis symptoms?

- A) Anti-citrullinated protein antibody
- B) C-reactive protein
- C) Erythrocyte sedimentation rate
- D) Leukocyte count and differential
- E) Rheumatoid factor

117. A 68-year-old male with a history of COPD, hypertension, and hyperlipidemia presents with a worsening cough and dyspnea with exertion over the past 3 months. His symptoms were previously well controlled with tiotropium (Spiriva) daily and albuterol (Proventil, Ventolin) as needed, and he has not had any COPD exacerbations in the past year until these symptoms began. He has not had any change in sputum production. Recently he has been using his albuterol inhaler several times a day to help relieve his shortness of breath with exertion.

A physical examination reveals a temperature of 37.0°C (98.6°F), a heart rate of 78 beats/min, a respiratory rate of 16/min, a blood pressure of 144/82 mm Hg, and an oxygen saturation of 95% on room air. A cardiac evaluation reveals a regular rate and rhythm and he has no peripheral edema or cyanosis. His lungs are clear with no wheezes or crackles, and there is a mild prolonged expiratory phase.

According to current GOLD guidelines, which one of the following would be the most appropriate next step in the management of this patient's symptoms?

- A) Add azithromycin (Zithromax)
- B) Add inhaled fluticasone (Flovent)
- C) Add inhaled salmeterol (Serevent)
- D) Add inhaled fluticasone/salmeterol (Advair)
- E) Discontinue tiotropium and start inhaled fluticasone

118. A 45-year-old male comes to your office for a routine health maintenance examination. He reports frequently drinking five 12-oz beers per day despite trying to cut down. He tells you that he had an abnormal liver profile in the past and sometimes drives under the influence of alcohol. He asks for your help to decrease his alcohol consumption.

Which one of the following medications would be most likely to help this patient decrease his alcohol use?

- A) Baclofen intrathecal (Lioresal)
- B) Disulfiram (Antabuse)
- C) Naltrexone (Vivitrol)
- D) Pregabalin (Lyrica)
- E) Sertraline (Zoloft)

119. A 60-year-old female sees you for evaluation of a recent syncopal episode. She tells you that she recently fainted during a routine walk with a friend, who told her that everything seemed fine and suddenly the patient fell to the ground and was unresponsive. The patient does not recall having any symptoms before the episode. She did not have any associated symptoms, abnormal movement, or incontinence and was not injured in the fall. The episode lasted a few seconds and then she regained consciousness, stood, and finished the walk without difficulty. She has not had any similar episodes before this. Her past medical history and family history are unremarkable. She has been in good health and takes no medications except a multivitamin each day. An examination is normal and an EKG shows normal sinus rhythm with no other abnormalities.

Which one of the following would most likely help confirm the diagnosis?

- A) Orthostatic blood pressure measurements
 - B) An external cardiac event monitor
 - C) Ultrasonography of the carotid arteries
 - D) CT of the head
 - E) MRI of the brain
120. A 69-year-old male presents with a several-week history of difficulty swallowing that has gradually worsened. At first he noted trouble with passing larger boluses of food through his mid-chest area. Now he states that even ice cream is a problem. He has a past history of GERD that he has treated with omeprazole (Prilosec) intermittently over the past several years. He also takes enteric-coated aspirin, 81 mg daily, for his heart. There is no history of tobacco use. He drinks about six beers a week. On examination you note a 5-kg (11-lb) weight loss over the past 3 months but the remainder of the examination is normal.

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

- A) A trial of omeprazole, 40 mg daily, for 8 weeks
 - B) Chest CT with and without contrast
 - C) Barium esophagography
 - D) High-resolution esophageal manometry
 - E) Esophagogastroduodenoscopy
121. A 5-year-old female is brought to your office by her mother because she has not wanted to eat or drink anything since she woke up this morning. She has also had a temperature of 100.2°F for the last 2 days. She usually attends day care 3 days a week but has been kept at home because of the fever. She is up to date on all age-appropriate recommended immunizations. On examination you notice several oral ulcerations that are painful to palpation, and several erythematous, vesicular lesions on the patient's palms.

Which one of the following is the most likely diagnosis?

- A) Erythema multiforme
- B) Hand-foot-and-mouth disease
- C) Herpetic gingivostomatitis
- D) Oral candidiasis
- E) Varicella

122. A 38-year-old female presents with a 1-week history of pain in her left heel. The pain started abruptly while she was playing tennis and she was unable to finish the game. She has been applying ice, taking ibuprofen, and wearing an ankle brace without improvement. She walks with a limp.

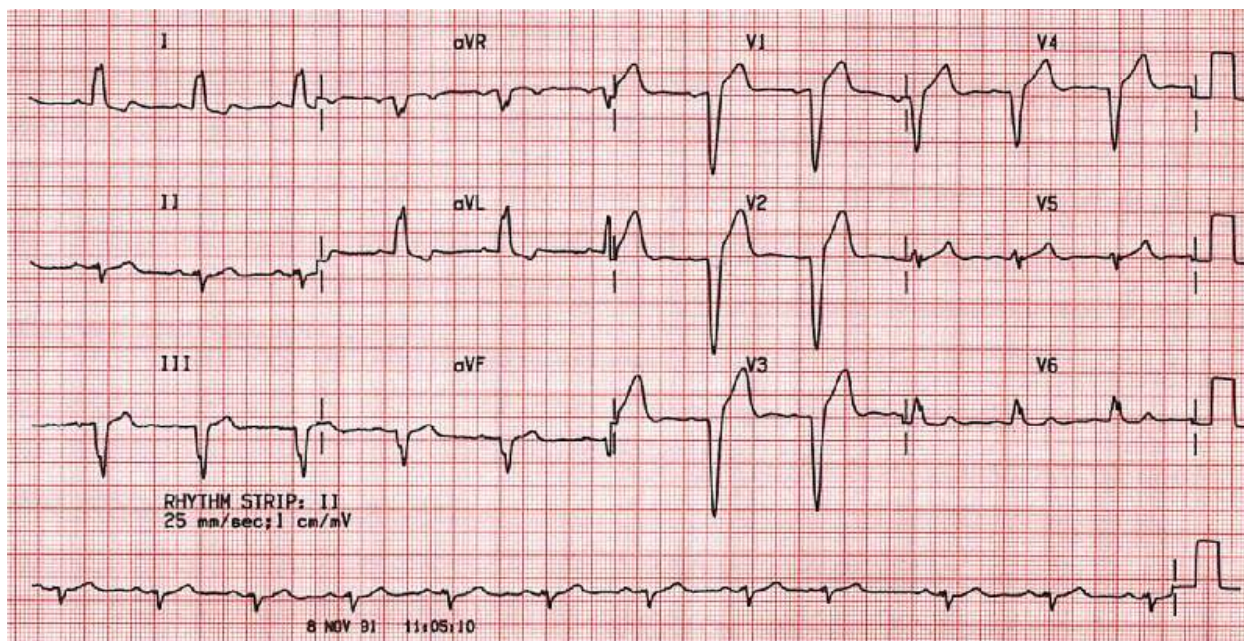
An examination is significant for localized tenderness over the left posterior leg approximately 3 cm above the calcaneus. The Thompson test (squeezing the calf) is significant for the absence of plantar flexion of the left foot. Her strength is decreased with plantar flexion of the left ankle. There is normal passive range of motion, as well as normal pulses and sensation in the left foot.

Which one of the following is the most likely cause of her pain?

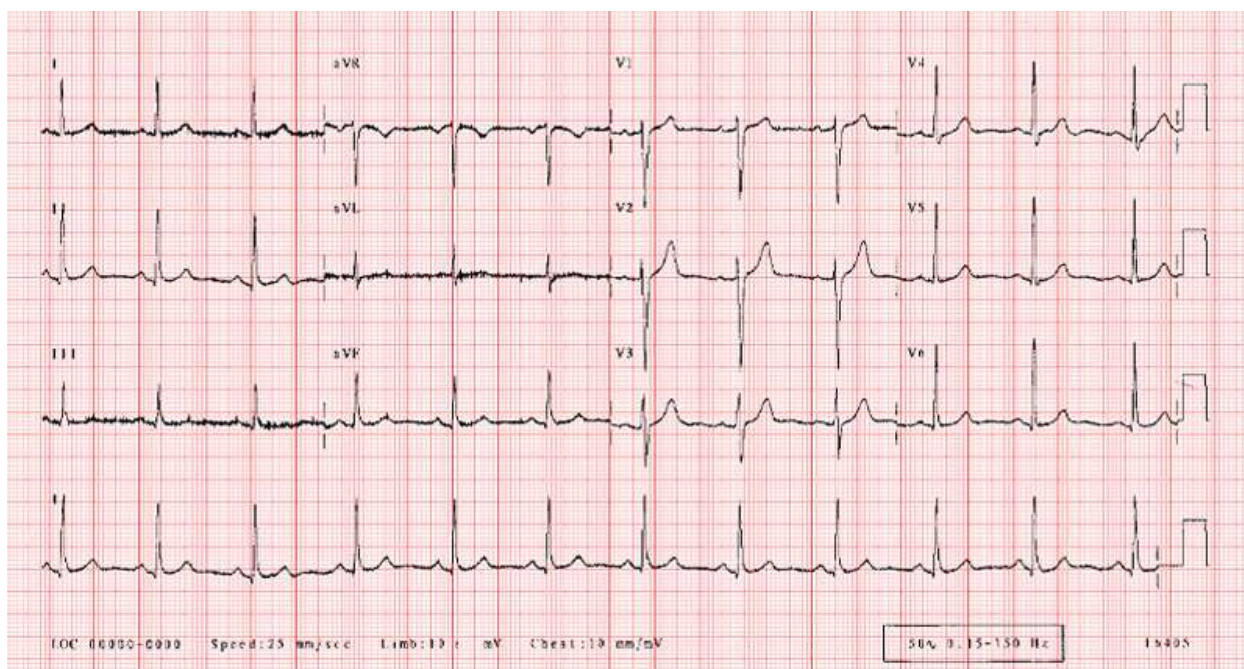
- A) Achilles tendon rupture
 - B) Plantar fasciitis
 - C) Proximal fifth metatarsal fracture
 - D) Stress fracture of the fibula
 - E) Syndesmosis injury (high ankle sprain)
123. A 5-year-old female has acute, severe bacterial sinusitis. Which one of the following would be most appropriate for this patient?
- A) Amoxicillin/clavulanate (Augmentin)
 - B) Cephalexin
 - C) Clarithromycin (Biaxin)
 - D) Doxycycline
 - E) Levofloxacin
124. A 45-year-old male presents to your office with intermittent chest pain for the past few days, although he is currently pain free after taking aspirin at home. He tells you that while running this morning he had pain every time he ran uphill. The pain is a dull ache on his left chest wall. He has no other associated symptoms and no significant past medical history or family history. His vital signs are stable and a physical examination is unremarkable. An EKG performed at this visit is shown below, along with a previous EKG.

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

- A) An exercise stress test
- B) Stress echocardiography
- C) Coronary CT angiography
- D) Referral to a cardiologist
- E) Transportation via ambulance to the emergency department



Current EKG



Previous EKG

Item #124

125. A 15-year-old male presents to the emergency department after falling on his bicycle and hitting his head while not wearing a helmet. He was dropped off by a friend's father because he was unable to reach his parents. The patient tells you that he has a headache and slight nausea but otherwise feels fine. The triage nurse is also unable to reach a parent or guardian.

While continuing to try to reach the child's parent or guardian, which one of the following would be most appropriate regarding care for this patient?

- A) Observe him in the waiting room until his parent or guardian can be reached
 - B) Complete the initial screening and provide any emergent treatment
 - C) Ask two physicians to document an intent to treat prior to any screening or emergent treatment
 - D) Contact a court official to obtain an emergency consent for medical treatment prior to any screening or emergent treatment
 - E) Contact the child protective services agency and arrange for emergency guardianship prior to any screening or emergent treatment
126. A 32-year-old male comes to your office for a follow-up visit after spontaneously passing a renal stone. This is his third such episode. Analysis of a previous stone showed that it was composed of calcium oxalate. After the first episode he increased his fluid intake and is drinking more than 3 L of water daily. He does not take any medications. An examination is unremarkable.

Which one of the following should you recommend at this time?

- A) A very-low-calcium diet
 - B) Furosemide (Lasix)
 - C) Potassium citrate
 - D) Probenecid
127. An asymptomatic 53-year-old female recently underwent a right breast lumpectomy and radiation therapy with curative intent. Over the next 5 years routine surveillance should include
- A) annual unilateral left breast mammography
 - B) annual bilateral mammography
 - C) annual bilateral mammography and radionuclide bone scans
 - D) biannual bilateral mammography
 - E) biannual bilateral mammography and annual radionuclide bone scans

128. A 42-year-old transgender male comes to your office for a routine health maintenance examination. The patient's current medications include testosterone enanthate (Xyosted), 100 mg subcutaneously every 7 days, for gender affirmation, and medroxyprogesterone acetate (Depo-subQ Provera 104), 104 mg subcutaneously every 12 weeks, for contraception. The patient has no current chronic health conditions and no current sexual partners, but he has previously been sexually active with men and women.

Which one of the following health conditions is more likely to occur in this patient compared to a female cisgender patient?

- A) Anemia
 - B) Cervical cancer
 - C) Dyslipidemia
 - D) Kidney disease
 - E) Venous thromboembolism
129. In a patient diagnosed with major depressive disorder, which one of the following factors should raise suspicion for a bipolar disorder?
- A) Diminished interest in almost all activities
 - B) Fatigue or loss of energy
 - C) Feelings of worthlessness or inappropriate guilt
 - D) A parent diagnosed with a bipolar disorder
 - E) Psychomotor retardation
130. A 33-year-old female presents with palpitations and excessive sweating. A physical examination is normal. Laboratory findings include a TSH level of 0.02 $\mu\text{U/mL}$ (N 0.40–4.00) and a free T_4 level of 3.9 ng/dL (N 0.7–1.9). Radionuclide scanning reveals no uptake.

Which one of the following would explain these findings?

- A) Thyroid hormone resistance
 - B) Graves disease
 - C) A toxic nodular goiter
 - D) Excess thyroid hormone intake
 - E) A thyrotropin-secreting pituitary tumor
131. A 72-year-old female presents with pain, swelling, and decreased range of motion in her right great toe for several months. There is no history of injury or overuse. On examination the metatarsophalangeal joint is swollen and mildly tender, but not red. Dorsiflexion and plantar flexion are approximately 30°. A radiograph shows joint space narrowing and a small bone spur.

Recommended management at this time would be

- A) stretching and strengthening exercises
- B) a rigid shoe insert
- C) ibuprofen
- D) a corticosteroid injection
- E) surgical referral

132. A 12-year-old male with type 1 diabetes is brought to your office for routine follow-up. Laboratory work performed prior to the appointment shows an LDL-cholesterol level of 120 mg/dL.

In addition to counseling the patient on a heart-healthy diet and daily physical activity, which one of the following would you recommend?

- A) No additional measures
- B) Fish oil supplements
- C) Atorvastatin (Lipitor)
- D) Ezetimibe (Zetia)
- E) Gemfibrozil (Lopid)

133. You are reviewing and updating your routine health care examination electronic health record templates to include formal recommendations from the U.S. Preventive Services Task Force. You also consider age-specific causes of mortality in order to create corresponding preventive strategies.

Which one of the following is the leading cause of mortality among people 45–64 years of age?

- A) Accidents
- B) Diabetes mellitus
- C) Heart disease
- D) Malignancy
- E) Suicide

134. A 64-year-old female presents to the emergency department with a 10-day history of increasing shortness of breath and mild tachycardia. On examination she has an oxygen saturation of 75% on room air.

Which one of the following additional findings would suggest a diagnosis of acute respiratory distress syndrome (ARDS)?

- A) Improved oxygen saturation with supplemental oxygen
- B) Improvement of her symptoms with diuretic therapy
- C) Bilateral airspace opacities seen on a chest radiograph
- D) A flattened diaphragm seen on a chest radiograph
- E) A right lower lobe infiltrate seen on a chest radiograph

135. A 61-year-old female comes to your office for a routine health maintenance visit. She brings in laboratory results from a local blood donation facility. She donated blood for the first time in several years but was informed afterward that she is ineligible and should follow up with her primary care physician. She feels well and is asymptomatic. She does not recall receiving the hepatitis B immunization series. The letter she received included the following hepatitis B test results:

Anti-HBc screening test	positive
HBsAg screening test	negative
HBV nucleic acid test (NAT)	negative

You order additional hepatitis B testing, with the following notable results:

Anti-HBs	56 mIU/mL (N < 10)
Anti-HBc IgM	nonreactive

Which one of the following is the most likely explanation of these laboratory results?

- A) These results indicate a false positive
 - B) She was never infected with hepatitis B
 - C) She has an acute hepatitis B infection
 - D) She has a chronic hepatitis B infection
 - E) She has recovered from a past hepatitis B infection
136. A 6-week-old female is brought to your office by her parents to establish care after the family recently moved from out of state. The infant was born at term after an uncomplicated normal spontaneous vaginal delivery but failed her initial newborn hearing screen in the right ear only. Both parents are confident that she is able to hear out of both ears because she turns her head toward their voices regardless of where they are standing. A physical examination is within normal limits.

Which one of the following would be the most appropriate next step in response to this patient's abnormal hearing screen?

- A) No further testing
- B) A bilateral audiology evaluation before 3 months of age
- C) A bilateral audiology evaluation at 6 months of age
- D) A bilateral audiology evaluation at 12 months of age
- E) A bilateral audiology evaluation immediately before entering kindergarten

137. A previously healthy 38-year-old female with a normal BMI has a few warts at the base of her great toe on the plantar surface. She noticed them a few years after she started to run regularly for exercise but has not tried any at-home treatments. They are minimally raised and rarely painful but occasionally cause irritation and she would like to get rid of them.

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

- A) Over-the-counter salicylic acid
- B) *Candida* injections
- C) Application of duct tape
- D) Manual paring and extraction
- E) Laser treatment

138. Which one of the following best explains the pathophysiology of cytokine storm?

- A) Anaphylaxis
- B) Immune dysregulation
- C) Immunodeficiency
- D) Normal physiologic response
- E) Serum sickness

139. A 44-year-old male with diabetes mellitus, hypertension, obesity, and chronic pain is on chronic opiate therapy. He comes to your office because of a lack of sex drive, decreasing strength, low overall energy levels, and hot flashes. After ruling out other causes you confirm that he has a low total testosterone level on two separate early morning laboratory tests. He would like to start testosterone therapy.

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

- A) Order a PSA level and perform a digital rectal examination
- B) Order LH and FSH levels
- C) Order chromosomal studies
- D) Discuss risks and benefits of testosterone replacement therapy and start low-dose replacement
- E) Inform him that testosterone replacement therapy would not be beneficial for him because of its high risk

140. A 42-year-old female who owns a bakery presents with a several-month history of gradually worsening pain, swelling, and paresthesia affecting her entire right arm whenever she has to blend ingredients by hand. She says that her “arm veins pop out” and her arm develops a deep aching pain if she has to stir mixes for very long. The pain and swelling have become so severe that she is no longer able to make wedding cakes and is concerned she will be unable to continue running her business. She does not recall any trauma and has no swelling in her left arm. She has a history of essential hypertension that is treated with losartan (Cozaar). On examination the patient has full active range of motion and the Neer and Hawkins impingement tests of the shoulder are negative.

Based on this patient’s history and the physical examination findings, which one of the following is the most likely diagnosis?

- A) Carpal tunnel syndrome
 - B) Cervical radiculopathy
 - C) Complex regional pain syndrome
 - D) Raynaud’s disease
 - E) Thoracic outlet syndrome
141. A patient’s office spirometry results demonstrate an obstructive pattern. This would be seen with which one of the following?
- A) Asbestosis exposure
 - B) Cystic fibrosis
 - C) Idiopathic pulmonary fibrosis
 - D) Nitrofurantoin exposure
 - E) Sarcoidosis
142. The mother of a 6-month-old infant is concerned that her child’s feet are “deformed.” On examination the heel bisector line is between the third and fourth digits on the right foot and on the third digit on the left foot. You attempt to flex the feet, and both appear to be rigid.

Which one of the following would you recommend as a corrective intervention?

- A) Night splints
- B) Adjustable orthotic shoes
- C) Braces
- D) Physical therapy
- E) Surgical correction

143. You admit a 68-year-old female with an acute stroke to the hospital. She has no other acute cardiovascular conditions. CT rules out a hemorrhagic event. You have determined that the patient is not a candidate for reperfusion therapy with alteplase or thrombectomy.

You advise the nursing staff that you will be initiating antihypertensive therapy if the patient's blood pressure rises above a threshold of

- A) 120/80 mm Hg
- B) 140/90 mm Hg
- C) 160/100 mm Hg
- D) 180/110 mm Hg
- E) 220/120 mm Hg

144. A patient begins to cry when you tell her that the mammogram she had yesterday shows an abnormality requiring further imaging. The most appropriate response at this time is to

- A) tell her there is no need to cry
- B) quickly reassure her that this is most likely benign
- C) reassure her that most breast cancers have a long survival rate
- D) wait to specifically address her emotional response until after you have given her more complete information
- E) stop giving information and address her apparent sadness prior to continuing

145. Which one of the following is an indication for a radionuclide thyroid uptake scan for a patient with a single thyroid nodule confirmed by ultrasonography?

- A) The presence of antithyroid antibodies
- B) A low TSH level
- C) An elevated TSH level
- D) A normal TSH level and a tender nodule
- E) The presence of the thyroid nodule regardless of other findings

146. A 15-year-old female is brought to your office by her parents for evaluation because they are concerned about her restrictive eating patterns and weight loss. The patient is unconcerned about these issues and says that she feels well and does not need any evaluation. Her parents tell you that for the past 6 months she has had an increasingly restricted diet to the point that she now drinks only water and eats only vegetables and roasted chicken or turkey. They report that she looks much thinner now than she did 6 months ago, but they are uncertain how much weight she has lost. She says that she does not feel depressed or anxious and she is doing well in school.

On examination she has a height of 163 cm (64 in) and a weight of 43 kg (95 lb), with a BMI of 16 kg/m². She has a pulse rate of 52 beats/min and a blood pressure of 102/68 mm Hg while seated and 84/58 mm Hg while standing. Evaluation of her teeth shows significant erosion of the enamel.

When considering the psychotherapy aspect of care for this patient, which one of the following is preferred for treatment of her condition?

- A) Cognitive-behavioral therapy
 - B) Dialectical behavioral therapy
 - C) Family therapy
 - D) Interpersonal therapy
 - E) Psychodynamic therapy
147. According to the Ottawa knee rule, a radiograph would be indicated for a patient presenting with an acute knee injury if the examination reveals tenderness to palpation over the
- A) fibular head
 - B) lateral joint line
 - C) medial joint line
 - D) tibial tubercle
 - E) upper medial aspect of the tibia
148. In patients diagnosed with COPD, testing should be considered for which one of the following underlying conditions?
- A) α_1 -Antitrypsin deficiency
 - B) Cystic fibrosis
 - C) Hemochromatosis
 - D) Williams syndrome
 - E) Wilson's disease

149. A 4-year-old male is brought to your office by his mother because of a 2-day history of watery diarrhea and vomiting and you diagnose acute gastroenteritis. On examination his mucous membranes are sticky and he has decreased tear production, but his overall appearance is normal and his eyes are not sunken. Using the Clinical Dehydration Scale, you estimate that he has mild (3%–6%) dehydration.

Which one of the following should you recommend?

- A) Water as tolerated
 - B) Half-strength apple juice followed by preferred fluids
 - C) The bananas, rice, applesauce, and toast (BRAT) diet
 - D) Intravenous fluids
 - E) Metoclopramide (Reglan)
150. A 50-year-old male has an acute upper respiratory infection and cough that has improved but has not resolved completely. He presents to your office today with a 2-day history of chest pain that began gradually. The pain is worse when he is supine, takes deep breaths, or coughs, and he says the pain is relieved when he leans forward while sitting. He is afebrile and his vital signs are normal. An EKG confirms your impression of acute pericarditis, a troponin level is normal, and he does not appear acutely ill. You treat him as an outpatient with ibuprofen, 600 mg three times daily, and omeprazole (Prilosec) for gastrointestinal protection.

The patient returns for follow-up 7 days later and tells you that the pain is somewhat improved but still present. He remains afebrile and his other vital signs are normal. On examination he still has a pericardial friction rub but no gallops or murmurs, and his lungs are clear.

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

- A) Continue his current medications and add colchicine (Colcrys)
 - B) Continue his current medications and add prednisone
 - C) Discontinue his current medications and start aspirin
 - D) Discontinue his current medications and start indomethacin
 - E) Admit him to the hospital and consult a cardiologist
151. An 18-year-old female comes to the urgent care clinic because of worsening nausea and vomiting, itching, and a dry cough that began about 30 minutes after she ate lunch at a nearby restaurant. She tells you that she did not experience any choking while eating her lunch, and she has not had any dysphagia, rash, or diarrhea. She takes no medications, and her past medical history is significant only for a severe nut allergy. She says that she was feeling well before today. An examination is notable only for a blood pressure of 88/60 mm Hg, mildly labored breathing, and bilateral expiratory wheezes.

At this point you would administer

- A) albuterol (Proventil, Ventolin)
- B) diphenhydramine (Benadryl)
- C) epinephrine
- D) hydroxyzine (Vistaril)
- E) methylprednisolone (Medrol)

152. A premenopausal 48-year-old female comes to your office because of a 3-month history of increased frequency and volume of vaginal bleeding. She typically menstruates every 24 days but now has bleeding every 10–14 days and notes an increased volume of blood as well. She feels well otherwise. Her cervical cancer screening is current. A bimanual examination reveals blood at the cervical os. Otherwise the cervix appears normal, the uterus is normal to palpation, and there are no adnexal masses.

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

- A) Reassurance that irregular menses are common in the perimenopausal period
- B) HPV testing
- C) CT of the pelvis with and without contrast
- D) An endometrial biopsy

153. An 18-month-old female develops immune thrombocytopenic purpura following MMR administration in your clinic. She requires hospitalization and extensive treatment. The child does not have any health insurance coverage.

The child's family could be eligible for compensation by the

- A) clinic's malpractice insurance
- B) vaccine manufacturer's liability coverage
- C) Countermeasures Injury Compensation Program
- D) National Vaccine Injury Compensation Program

154. A 55-year-old female presents with swelling and some redness in the area of her right ankle that had a gradual onset over the past week. She has not had any injury, fever, or other signs of systemic illness and has no pain. Her past medical history is significant for type 2 diabetes with polyneuropathy that is moderately well controlled, hypertension, hyperlipidemia, and a BMI of 35 kg/m².

On examination her right ankle and foot are slightly larger than the left, exhibit faint erythema, and feel slightly warmer than the left. No pain is noted with palpation, and her ankle ligaments appear to be intact. Pedal pulses are 2+ bilaterally and she has no calf pain or swelling.

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

- A) Reassure her that the lack of pain indicates the absence of a serious disease process
- B) Prescribe antibiotics for presumed cellulitis
- C) Recommend compression stockings, leg elevation, and monitoring
- D) Provide an ankle stabilizing brace
- E) Obtain bilateral weight-bearing foot radiographs

155. The American Thoracic Society/Infectious Diseases Society of America guidelines recommend which one of the following for the diagnosis and initial management of non-severe community-acquired pneumonia in adults?

- A) Use of a validated clinical prediction rule to determine the need for hospitalization
- B) Urine antigen testing for *Legionella*
- C) Blood and sputum cultures to guide therapy
- D) Procalcitonin to determine the need for antibacterial therapy
- E) Coverage for methicillin-resistant *Staphylococcus aureus* (MRSA)

156. You diagnose nonvalvular atrial fibrillation in a 54-year-old male. His CHA₂DS₂-VASc score is 2.

Which one of the following should you recommend as first-line therapy for stroke prevention?

- A) No antithrombotic therapy
- B) Aspirin
- C) A direct oral anticoagulant
- D) Low molecular weight heparin
- E) A vitamin K antagonist

157. A 1-month-old infant is brought to your office by her parents for routine follow-up. The infant was born at 35 weeks and 5 days gestation by normal vaginal delivery after induction of labor for maternal preeclampsia with severe features. The infant was discharged with the mother on the third day of life. There were no additional complications noted. Today the parents report exclusive breastfeeding and tell you the infant spits up after longer feedings. Voiding and stooling are as expected and the infant's development is normal. The weight at birth was at the 20th percentile, and today's weight is at the 25th percentile.

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

- A) Caloric supplementation in addition to breastfeeding
- B) Iron supplementation
- C) Vitamin E supplementation
- D) Referral for early intervention

158. A 34-year-old male began a sexual relationship with a woman 3 months ago and the relationship ended on friendly terms last week. He received a call yesterday from the woman, who said she had developed a rash that resulted in a diagnosis of syphilis and that he should be evaluated and treated if appropriate. He has no symptoms and a serologic test for syphilis is negative. He has no known drug allergies.

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

- A) Daily self-inspection of the penis to identify a chancre
- B) Observation with a repeat serologic test for syphilis in 6 weeks
- C) Azithromycin (Zithromax), 2 g orally as a single dose
- D) Penicillin G benzathine (Bicillin L-A), 2.4 million units intramuscularly as a single dose
- E) Penicillin G benzathine, 2.4 million units intramuscularly once weekly for 3 weeks

159. An 85-year-old male with hypertension and coronary artery disease comes to your office for a routine wellness visit. He is accompanied by his wife, who notes that the patient's memory has been worsening over the last few years. His current medications include carvedilol (Coreg), losartan (Cozaar), hydrochlorothiazide, and aspirin.

A brief screening test is positive for cognitive impairment. The Saint Louis University Mental Status (SLUMS) examination places the patient in the dementia category. You order further testing, including a TSH level, a CBC, a comprehensive metabolic panel, and a vitamin B₁₂ level.

Which one of the following should also be included in the workup?

- A) The Geriatric Depression Scale
- B) Apolipoprotein E epsilon 4 allele testing
- C) An EEG
- D) A PET scan
- E) Cerebrospinal fluid analysis

160. A 66-year-old male presents to your office with a 1-week history of dyspnea with minimal exertion but no chest pain. He has had mild hemoptysis. An examination reveals a pulse rate of 100 beats/min but no other remarkable findings. A chest radiograph, CBC, and metabolic panel are normal, but his D-dimer level is elevated at 750 ng/mL (N < 500).

Which one of the following would be the next step in the evaluation?

- A) A BNP level
- B) CT pulmonary angiography
- C) An EKG
- D) Pulmonary arteriography
- E) A ventilation-perfusion scan

161. An 80-year-old male is considering a cardiac procedure. As part of the evaluation for the procedure he is found to meet the criteria for being at risk of frailty (prefrail).

Which one of the following would be the most effective management of this patient's prefrail status?

- A) Nutritional supplementation
- B) Vitamin D supplementation
- C) Testosterone supplementation
- D) A physical activity program
- E) Cognitive-behavioral therapy

162. You see a 55-year-old female for preoperative clearance prior to a cholecystectomy. When you examine the patient she asks you to also look at the lesion on her foot (shown below).

Which one of the following is the most likely etiology of the lesion?

- A) Arterial
- B) Venous
- C) Infectious
- D) Neuropathic
- E) Pressure

163. A 50-year-old male with newly diagnosed type 2 diabetes asks how to reduce his risk of diabetic retinopathy progression. You tell him that in addition to maintaining good glycemic control, the risk can be reduced by

- A) corticosteroid eye drops
- B) an ACE inhibitor
- C) aspirin therapy
- D) blood pressure control
- E) lipid management

164. A 48-year-old runner presents with anterior knee pain. He says that the pain developed insidiously and is worse at the beginning of a run and immediately following a run. There is no history of injury. An examination suggests patellar tendinopathy.

Which one of the following treatment modalities has the best evidence of long-term effectiveness in improving this condition?

- A) NSAIDs
- B) Eccentric quadriceps exercises
- C) Corticosteroid injection of the infrapatellar bursa
- D) Injection of the tendon with a sclerosing agent
- E) Surgical excision of the tendon

165. Which one of the following would be most important for reducing the risk of recurrence after a single mild episode of diverticulitis?

- A) Increasing dietary fiber
- B) Permanently eliminating nuts, seeds, and corn from the diet
- C) Treating the initial episode with appropriate broad-spectrum antibiotics
- D) CT imaging early in the episode to detect complications
- E) Colonoscopy 4–6 weeks after the episode has resolved



Item #162

166. A 52-year-old female with no history of cigarette smoking is admitted to the hospital because of chest pain and shortness of breath. After an extensive evaluation you make a diagnosis of Takotsubo syndrome.

Findings are most likely to be normal on which one of the following with this diagnosis?

- A) A CK-MB level
- B) A troponin level
- C) An EKG
- D) Echocardiography
- E) Coronary angiography

167. The U.S. Preventive Services Task Force currently recommends hepatitis C screening for

- A) high-risk adults only, regardless of age
- B) only high-risk adults born between 1945 and 1965
- C) adults born between 1945 and 1965 regardless of risk, and other adults only if they are at high risk
- D) adults born between 1945 and 1980 regardless of risk, and other adults only if they are at high risk
- E) all adults <80 years of age, regardless of risk

168. You receive a call from the home health nurse who is caring for a bedridden 57-year-old male with progressive multiple sclerosis. She is concerned that he has a weak cough reflex and may not be swallowing safely. She has not witnessed an aspiration event. He was hospitalized for pneumonia 4 months ago.

While awaiting the results of a full swallow evaluation, which one of the following is the most appropriate intervention to prevent recurrent pneumonia in this patient?

- A) The use of chlorhexidine mouthwashes
- B) A mechanical soft diet with thickened liquids
- C) Swallowing exercises
- D) Antibiotic therapy for 24 hours
- E) Placement of a nasogastric tube

169. Which one of the following is the most common cause of koilonychia (spoon-shaped nails)?

- A) Chronic pulmonary disease
- B) Hyperthyroidism
- C) Iron deficiency anemia
- D) Onychomycosis
- E) Psoriasis

170. A 22-year-old gravida 1 para 0 was recently diagnosed with gestational diabetes. Her fasting blood glucose levels have consistently been 120–130 mg/dL since she began following nutrition and exercise recommendations.

Based on guidelines from the American Diabetes Association and the American College of Obstetricians and Gynecologists, which one of the following would be preferred at this point?

- A) No change in management
- B) Loosening the calorie restrictions
- C) Adding glyburide
- D) Adding insulin
- E) Adding metformin (Glucophage)

171. An otherwise healthy 72-year-old male presents with a 4-week history of catching and triggering of his right middle finger. When he awakens in the morning the finger is locked in flexion at the proximal interphalangeal joint and he has to manually extend the finger. He enjoys playing golf and painting, both of which are compromised by the triggering of his finger. He has not had any pain or numbness.

Which one of the following would you tell him regarding his treatment options for this condition?

- A) Less than 15% of cases spontaneously resolve by 1 year
- B) Splinting of the affected finger can result in complete resolution
- C) NSAID injections have been found to be more effective than corticosteroid injections
- D) Surgical release is the most cost-effective treatment

172. A 62-year-old male with hypertension and metabolic syndrome sees you for follow-up. A fasting triglyceride level is 300 mg/dL. You address lifestyle and other potential causes of his elevated triglycerides, including his current medications.

If included in his current regimen, which one of the following hypertension medications would be most likely to contribute to his hypertriglyceridemia?

- A) Amlodipine (Norvasc)
- B) Diltiazem (Cardizem)
- C) Lisinopril (Prinivil, Zestril)
- D) Metoprolol

173. A 2-year-old male with a barking cough is brought to the urgent care clinic by his parents. He is noted to have stridor when agitated and mild retractions. He has a normal level of consciousness, good air entry, and no evidence of cyanosis.

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

- A) Dexamethasone
- B) Heliox
- C) Humidified air inhalation
- D) Nebulized epinephrine
- E) Oxygen

174. A 29-year-old male tells you that several years ago he was physically assaulted while walking home from work. Since the assault he has experienced insomnia, anhedonia, irritability, and vivid flashbacks and intrusive thoughts about the assault.

Using a screening tool and structured interview you make a diagnosis and discuss treatment. Which one of the following would be the best evidence-based recommendation for initial treatment?

- A) Alprazolam (Xanax)
- B) Clonazepam (Klonopin)
- C) Escitalopram (Lexapro)
- D) Dialectical behavioral therapy
- E) Individual trauma-focused psychotherapy

175. A sexually active 45-year-old female who has been using oral contraceptives for years without experiencing any problems asks how much longer she should continue contraception. She is happy with her current low-dose estrogen combined oral contraceptive and would like to continue this if possible. She asks if the health risks are high enough to warrant a change to another option. She does not smoke and is in excellent health.

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

- A) Continue her current oral contraceptive
- B) Discontinue contraception
- C) Obtain FSH and LH levels today and discontinue contraception only if the results confirm infertility
- D) Replace the oral contraceptive with a barrier method

176. A 42-year-old female presents with a several-month history of fatigue, arthralgias in her knees and hips, myalgias, hair loss, and a recent episode of gross hematuria diagnosed at an urgent care center as a urinary tract infection. She has no urinary tract symptoms at this time. A friend of hers who had similar symptoms for months was recently diagnosed with systemic lupus erythematosus (SLE), and the patient asks whether she might have SLE.

Which one of the following would be most helpful in reassuring her that the likelihood of her having SLE is low?

- A) Absence of the typical malar rash
- B) Absence of RBC casts on microscopic urinalysis
- C) A negative serum antinuclear antibody
- D) Normal levels of complement C3, C4, and CH50
- E) Joint pain limited to large joints

177. A 14-year-old female is brought to your office after a school screening program identified possible scoliosis. She plays basketball at school and has no history of recent injuries. She is feeling well today and a review of systems is negative. A physical examination reveals an elevated right rib on the forward bend test. Radiography demonstrates a Cobb angle of 15°.

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

- A) Observation only
- B) Suspension of sports participation
- C) Bracing
- D) Physical therapy
- E) Surgical evaluation

178. You practice in a community with a significant number of Laotian immigrants. A 53-year-old male comes to your office accompanied by his adult daughter for follow-up of hypertension. His primary language is Lao and he has limited proficiency in English.

According to Title VI of the Civil Rights Act, which one of the following is the correct way to approach this situation?

- A) Continue without an interpreter unless he asks for one
- B) Ask the patient's daughter to interpret
- C) Ask a nurse who speaks Lao to interpret
- D) Offer a trained interpreter
- E) Speak loudly and slowly and give him written instructions

179. A 46-year-old male comes to your office for a routine health maintenance examination. He had elevated AST and ALT levels on previous laboratory testing. He reports consuming only one alcoholic drink twice a month. He does not take any medications, including over-the-counter medications. A physical examination is normal except for a BMI of 32 kg/m². Laboratory testing shows an AST level of 72 U/L (N 10–59) and an ALT level of 96 U/L (N 13–40). A hepatitis panel, serum ferritin level, serum iron level, lipid profile, and fasting glucose level are all within normal limits. Ultrasonography of the right upper quadrant shows fatty infiltration of the liver.

Which one of the following would be the first-line treatment of this condition?

- A) Biguanides such as metformin (Glucophage)
- B) GLP-1 analogs such as liraglutide (Victoza)
- C) Thiazolidinediones such as pioglitazone (Actos)
- D) Weight loss with diet and exercise
- E) Bariatric surgery

180. A 25-year-old primigravida presents to your office in her second trimester with a 24-hour history of fever, cough, and myalgias. A nasal swab is positive for influenza A. She has a temperature of 38.6°C (101.5°F), a heart rate of 100 beats/min, a respiratory rate of 15/min, a blood pressure of 100/64 mm Hg, and an oxygen saturation of 98% on room air. On examination the patient is warm to the touch with mild cervical lymphadenopathy and moist mucous membranes. Her lungs are clear to auscultation bilaterally without wheezes, crackles, or rhonchi. A cardiovascular examination reveals a regular rate and rhythm without murmurs, rubs, or gallops. An abdominal examination is normal.

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

- A) Baloxavir marboxil (Xofluza)
- B) Oseltamivir (Tamiflu)
- C) Peramivir (Rapivab)
- D) Zanamivir (Relenza)

181. A healthy 50-year-old male with no significant past medical history comes to your office for a health maintenance examination. He does not take any medications and does not smoke cigarettes or drink alcohol. He tells you that a friend who is his age recently had an acute myocardial infarction and he would like testing to help decrease his own risk. On examination he has a BMI of 30 kg/m².

In addition to checking his lipid profile and hemoglobin A_{1c}, evidence supports which one of the following to assess his risk of cardiovascular disease?

- A) No further testing
- B) An ankle-brachial index
- C) A high-sensitivity C-reactive protein level
- D) A coronary artery calcium score
- E) A PLAC test for lipoprotein-associated phospholipase A₂ activity

182. A 48-year-old male with a 5-year history of diabetes mellitus comes to your office for a 6-month follow-up. His diabetes is finally under better control. His most recent hemoglobin A_{1c} is 7.1 % but his urine albumin excretion is 250 mg/24 hr (N < 80), which is confirmed with two different readings. He is currently taking amlodipine (Norvasc), 5 mg daily, for blood pressure control. He previously took lisinopril (Prinivil, Zestril) but discontinued it after developing a bothersome dry cough.

Which one of the following agents would be most appropriate to add to this patient's regimen?

- A) Diltiazem (Cardizem)
- B) Hydralazine
- C) Hydrochlorothiazide
- D) Metoprolol
- E) Olmesartan (Benicar)

183. A 63-year-old male presents for advice on smoking cessation. He was recently hospitalized with acute coronary syndrome and is highly motivated to quit smoking. He says that he has quit several times in the past but never for an extended period of time. He currently smokes 10 cigarettes per day. In addition to behavioral support resources such as 1-800-QUIT-NOW, you decide to prescribe a nicotinic receptor partial agonist.

Which one of the following belongs to this class of medications?

- A) Acamprosate
- B) Bupropion (Wellbutrin SR)
- C) Clonidine (Catapres)
- D) Naltrexone
- E) Varenicline (Chantix)

184. A 44-year-old female sees you for evaluation of frequent, disabling headaches. She describes the headaches as throbbing, usually left-sided, and associated with nausea. Her headaches worsen with sound and movement, and they last for 48 hours nearly every week. She has not had any aura, weakness, numbness, or speech disturbance.

Based on current evidence, which one of the following medications would have the greatest potential for reducing the number of headache days for this patient?

- A) Fluoxetine (Prozac)
- B) Gabapentin (Neurontin)
- C) Lisinopril (Prinivil, Zestril)
- D) Propranolol
- E) Verapamil (Calan)

185. A 62-year-old male is scheduled for CT of the chest with intravenous contrast in the next 48 hours. He has a long-standing history of degenerative joint disease in the right knee, coronary artery disease, and type 2 diabetes. His current medications are low-dose aspirin, metformin (Glucophage), and naproxen.

In addition to discontinuing metformin prior to the procedure, which one of the following would you recommend for prevention of contrast-induced nephropathy?

- A) Discontinue aspirin
- B) Discontinue naproxen
- C) Start acetylcysteine
- D) Start mannitol (Osmitrol)

186. A 34-year-old male sees you via your clinic's electronic portal because of a rash. The rash, which he first noticed 3 days ago, was a large red patch on his upper leg at that time. He uploads an image of the rash (shown below) as it appears today. He started feeling feverish last night with chills, nausea, headache, and fatigue. He lives in Wisconsin and spends much of his free time hiking in the woods near his home. He removed two ticks from his legs last week.

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

- A) Anaplasmosis
- B) Babesiosis
- C) Ehrlichiosis
- D) Lyme disease
- E) Tularemia

187. A 65-year-old female is diagnosed with osteoporosis based on a screening DXA scan. After a shared decision-making discussion you decide to initiate treatment with alendronate (Fosamax).

Which one of the following would you recommend for the duration of pharmacologic treatment?

- A) 1 year
- B) 3 years
- C) 5 years
- D) 10 years
- E) Lifelong treatment



Item #186

188. A 59-year-old male presents with difficulty breathing during exercise. He says that his symptoms have gradually worsened over the past year and he has had to discontinue his morning walks. He reports mild lower extremity edema and weight gain. He has a blood pressure of 115/79 mm Hg, a heart rate of 88 beats/min, and an oxygen saturation of 92% on room air. A physical examination is notable for mild jugular venous distention and 1+ bilateral lower extremity edema. Examination of the heart reveals a normal rate and rhythm with an S₃ heart sound. The lungs are clear to auscultation. You order a CBC, a comprehensive metabolic panel, an EKG, a chest radiograph, and echocardiography.

While awaiting the results you consider the differential diagnosis. Which one of the following conditions is the most common cause of pulmonary hypertension?

- A) Chronic thromboembolism
 - B) COPD
 - C) Idiopathic pulmonary arterial hypertension
 - D) Left heart disease
 - E) Sleep-disordered breathing
189. A 53-year-old female with diabetes mellitus presents to the emergency department with a 4-day history of nausea and vomiting. Her vital signs include a blood pressure of 142/93 mm Hg, a temperature of 36.5°C (97.7°F), a heart rate of 93 beats/min, a respiratory rate of 18/min, and an oxygen saturation of 98% on room air. A potassium level is 6.8 mEq/L (N 3.5–5.1) and a fingerstick blood glucose level is 120 mg/dL. The patient has chronic kidney disease with a baseline glomerular filtration rate of 32 mL/min/1.73 m² and today it is 18 mL/min/1.73 m².

Which one of the following EKG findings would you expect?

- A) Atrial fibrillation
 - B) Diffuse ST-segment elevation
 - C) Peaked P waves
 - D) Peaked T waves
 - E) Sinus tachycardia
190. An 84-year-old female presents with dryness and irritation in her eyes. Her optometrist recently diagnosed her with dry eye.

Which one of the medications in this patient's current regimen is most likely causing her dry eye?

- A) Amitriptyline
- B) Empagliflozin (Jardiance)
- C) Levothyroxine (Synthroid)
- D) Liraglutide (Victoza)
- E) Metformin (Glucophage)

191. You are covering a weekend shift in the local intensive-care unit. When providing care for a very ill adult patient with hypoproliferative thrombocytopenia who is not currently bleeding, prophylactic platelet transfusion should be considered if the platelet count is below a threshold of

- A) 10,000/ μ L
- B) 20,000/ μ L
- C) 25,000/ μ L
- D) 50,000/ μ L
- E) 100,000/ μ L

192. A 15-year-old female is brought to your office for a routine wellness check. Her only concerns are that she has never menstruated and she is not growing as fast as her peers. She is very active and plays volleyball on a travel team. An examination reveals that her height is now at the 25th percentile, although it was at the 90th percentile when she was 8 years old. She has breast buds that do not extend beyond the areola and her pubic hair is fine and sparse. Laboratory findings include a negative pregnancy test and a normal CBC, metabolic panel, TSH level, and prolactin level. She has an estradiol level of 12 pg/mL (N 25–75), an LH level of 40 mIU/mL (N 5–20), and an FSH level of 50 mIU/mL (N 3–20).

The most likely diagnosis is

- A) congenital adrenal hyperplasia
- B) constitutional delay of puberty
- C) pituitary adenoma
- D) polycystic ovary syndrome
- E) primary ovarian insufficiency

193. A 42-year-old male presents with a 3-month history of epigastric pain, bloating, and occasional vomiting after eating. He has not had any weight loss, blood in the stools, or difficulty swallowing. He does not report any significant acid reflux symptoms.

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

- A) Implement lifestyle changes and follow up in 3 months
- B) Test for *Helicobacter pylori* and treat if positive
- C) Initiate a 2-month trial of proton pump inhibitor therapy
- D) Order esophagogastroduodenoscopy
- E) Order a barium swallow

194. A 56-year-old female with a history of stage III non-small cell lung cancer who is currently receiving radiation treatment and chemotherapy sees you because of a poor appetite and a 4.5-kg (10-lb) weight loss in the past month. She requests medication to improve her appetite and you consider prescribing megestrol (Megace).

Which one of the following is a possible side effect associated with the use of megestrol in this patient?

- A) Hirsutism
- B) Hypoglycemia
- C) Improved libido
- D) Thrombocytopenia
- E) A venous thromboembolic event

195. A 60-year-old male who is a bricklayer presents to your office in Florida with a fever, fatigue, headaches, night sweats, cough, and intermittent dyspnea. He also has myalgias and arthralgias. His symptoms started after he returned from a job in Arizona 2 weeks ago. He does not have any other travel history or sick contacts. His vital signs and a physical examination are unremarkable. A chest radiograph does not show any acute pathology. A CBC shows eosinophilia and his erythrocyte sedimentation rate is mildly elevated.

Which one of the following is the most likely pathogen?

- A) *Aspergillus*
- B) *Blastomyces*
- C) *Coccidioides*
- D) *Cryptococcus*
- E) *Histoplasma*

196. Which one of the following psychoactive medications would create the greatest risk of respiratory depression if used in combination with an opioid?

- A) Amitriptyline
- B) Bupropion (Wellbutrin)
- C) Escitalopram (Lexapro)
- D) Lorazepam (Ativan)
- E) Trazodone

197. A 15-year-old basketball player presents with a 3-week history of bilateral knee pain that is greater in the left knee. The pain increases with jumping, walking down stairs, and kneeling. He has not had any recent injury. He tells you that he has grown more than 5 inches in the past year. A physical examination is notable for tight quadriceps and hamstrings, and tenderness to palpation over the tibial tuberosity bilaterally.

Which one of the following is the most likely diagnosis?

- A) Anterior cruciate ligament tear
- B) Medial meniscus tear
- C) Osgood-Schlatter disease
- D) Patellar sleeve fracture
- E) Patellofemoral pain syndrome

198. A healthy 36-year-old female who is a nonsmoker sees you for a routine well woman examination. She has been sexually active with five partners in the last 2 years. She has never had an abnormal Papanicolaou (Pap) smear. Last year's Pap test with high-risk HPV co-testing was negative. You review her immunization status and note that she received the influenza vaccine last fall.

Which one of the following vaccines that this patient has never previously received would you recommend for her?

- A) Hepatitis A vaccine
- B) HPV vaccine (Gardasil 9)
- C) Meningococcal polysaccharide conjugate vaccine (Menactra)
- D) Pneumococcal polysaccharide vaccine (PPSV23, Pneumovax 23)
- E) Recombinant zoster vaccine (Shingrix)

199. A 50-year-old female sees you for further evaluation after she had elevated blood pressure on two consecutive visits to an urgent care clinic for minor illnesses. She has no history of chest pain, shortness of breath, headache, or changes in vision. She has smoked half a pack of cigarettes daily since the age of 16 and has an allergy to iodine. There is no other significant medical history.

On examination the patient has a blood pressure of 155/92 mm Hg and a heart rate of 80 beats/min. The cardiovascular and pulmonary examinations are otherwise normal. A basic metabolic panel and a TSH level are normal.

In addition to lifestyle changes, which one of the following would be most appropriate as initial pharmacologic therapy for management of this patient's hypertension?

- A) Carvedilol
- B) Furosemide (Lasix)
- C) Hydralazine
- D) Hydrochlorothiazide
- E) Spironolactone (Aldactone)

200. A 36-year-old female sees you for a routine health maintenance visit. She reports worsening hair growth on her chin and abdomen over the last few years. The excessive hair growth first appeared in her late teens and she has been dissatisfied with the cosmetic results of various hair removal methods. She is generally healthy aside from a BMI of 31 kg/m². She does not take any medications, is a nonsmoker, and has had a bilateral tubal ligation. Her menses are regular.

A complete physical examination is consistent with some terminal hairs in the distribution she described and is otherwise unremarkable. Laboratory results are normal, including fasting lipids, a comprehensive metabolic panel, a hemoglobin A_{1c}, and a TSH level.

Which one of the following would be the recommended first-line treatment for this patient's condition?

- A) Drospirenone/ethinyl estradiol (Yasmin)
- B) Flutamide
- C) Leuprolide (Eligard)
- D) Metformin (Glucophage)
- E) Spironolactone (Aldactone)