

American Board of Family Medicine



IN-TRAINING EXAMINATION

1. A 45-year-old female presents to the emergency department with a 1-week history of facial swelling and progressive dyspnea with exertion. She was diagnosed 1 week ago with non-Hodgkin lymphoma but her medical history is otherwise unremarkable. A chest radiograph is shown below.

After hospital admission, which one of the following would be the most appropriate urgent next step in the management of this condition?

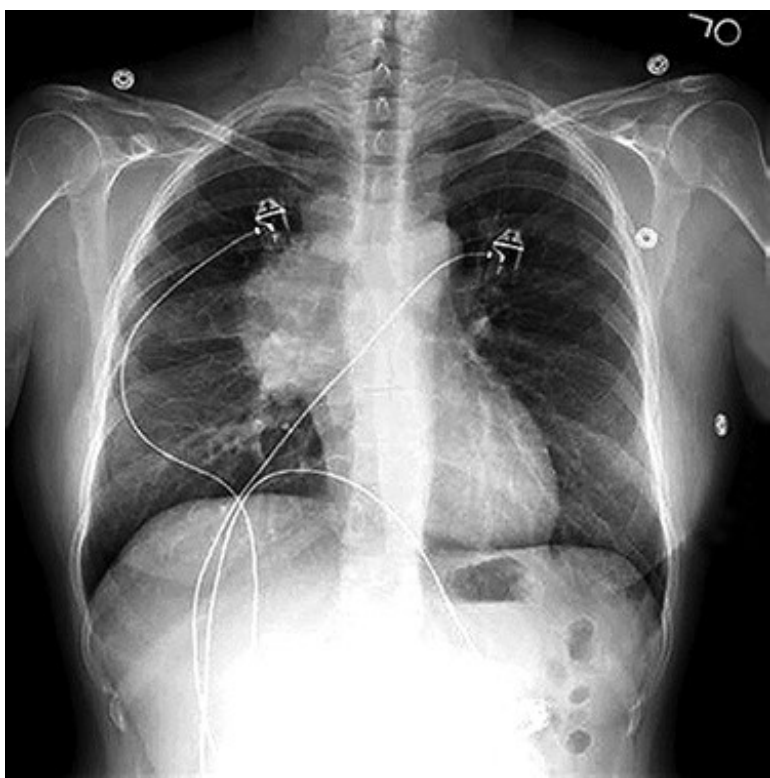
- A) Intravenous antibiotics
 - B) Echocardiography
 - C) Plasmapheresis
 - D) Bronchoscopy
 - E) Radiation
2. A 22-year-old male presents for follow-up of moderate persistent asthma. After discussing his treatment options, you decide to use a single maintenance and reliever therapy (SMART) approach.

Which one of the following daily inhaled therapies is appropriate to prescribe in this setting?

- A) Budesonide (Pulmicort)
 - B) Budesonide/formoterol (Symbicort)
 - C) Fluticasone/salmeterol (Advair Diskus)
 - D) Fluticasone/vilanterol (Breo Ellipta)
 - E) Tiotropium/olodaterol (Stiolto Respimat)
3. Which one of the following is an indication for long-term, rather than short-term, proton pump inhibitor therapy?
 - A) The eradication of *Helicobacter pylori*
 - B) Gastroprotection in users of high-dose NSAIDs at high risk for gastrointestinal bleeding
 - C) The prevention of rebleeding from a Mallory-Weiss tear
 - D) The prevention of ulcers after band ligation of esophageal varices
 - E) The treatment of an NSAID-related gastric ulcer
 4. An 85-year-old male presents for an annual Medicare examination. His wife tells you that he has been repeating himself in conversations, buying the same item multiple times, and taking longer to complete routine tasks such as balancing the checkbook. He recalls 1 out of 3 items on the Mini-Cognitive Assessment Instrument (Mini-Cog) and is unable to draw a clock. A depression screening is negative.

Which one of the following is the greatest risk factor for this patient's condition?

- A) Advanced age
- B) Atrial fibrillation
- C) Diabetes mellitus
- D) A history of head trauma
- E) Smoking



Item #1

5. Which one of the following would be the most appropriate initial pharmacotherapy for a temporomandibular disorder in an otherwise healthy 54-year-old male?
- A) Amitriptyline, 25 mg at bedtime
 - B) Gabapentin (Neurontin), 300 mg daily
 - C) Naproxen, 500 mg twice daily
 - D) Tramadol, 50 mg every 6 hours
 - E) Corticosteroid injection into the temporomandibular joint

6. A 33-year-old female presents to your office concerned about feeling fatigued for the past few months. She says that she feels cold often, has intermittent joint discomfort, and has gained 5 lb. She has not experienced any pain or problems swallowing. She gave birth to her youngest child almost 3 years ago, and she recently started an oral contraceptive. She has not had any recent illnesses. Her family history is significant for rheumatoid arthritis.

A physical examination reveals a mild goiter but is otherwise unremarkable. Her vital signs are stable. A CBC and comprehensive metabolic panel are normal. A TSH level is 6.48 $\mu\text{U/mL}$ (N 0.4–4.5) and a thyroid peroxidase antibody level is 378 IU/mL (N <34). A free T_4 level is normal.

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

- A) Drug-induced thyroiditis
 - B) Hashimoto thyroiditis
 - C) Postpartum thyroiditis
 - D) Subacute thyroiditis
7. A first-time mother brings her 12-month-old to your office for a well child check. She and the child's father are both your patients as well. Upon routine screening for anemia, you discover the infant has microcytic anemia with elevated red cell distribution width. You ask the parent about the child's diet. She looks down at the floor, exhibiting poor eye contact and a flat affect, and responds that she does not shop or cook often. She says the child is happy when eating just applesauce and milk. The mother reports that she has been unmotivated and crying frequently.

In addition to checking the child's lead level and starting iron supplementation, which one of the following would be the most important next step to help this dyad?

- A) Providing reassurance and validation for the mother
- B) Educating the mother about nutrition and the importance of iron-rich foods for the child
- C) Notifying the child's father
- D) Evaluating and treating the mother for postpartum depression
- E) Referring the mother to a psychiatrist

8. A 52-year-old male presents to your office for a routine annual health maintenance examination. He has a past medical history of hypertension and well-controlled type 2 diabetes with a hemoglobin A_{1c} of 6.6%. He is also a chronic tobacco smoker. He requests screening for testicular cancer because his close friend recently died from the disease. Other than colon cancer in his adoptive father, there is no known family history of cancer.

Which one of the following is indicated for testicular cancer screening for this patient?

- A) No screening
- B) An α -fetoprotein level
- C) Scrotal ultrasonography now
- D) Scrotal ultrasonography at age 55
- E) CT of the abdomen and pelvis at age 55

9. An 82-year-old female in your palliative care service who has stage 4 breast cancer is experiencing frequent episodes of delirium. Her pain is well controlled on long-acting oral opioid therapy. Additionally, no other reversible causes of delirium are noted. Her delirium is not responding to conservative measures, and her family asks if there are any medications that can effectively manage her symptoms.

Which one of the following should you recommend?

- A) Alprazolam (Xanax)
- B) Diazepam (Valium)
- C) Melatonin
- D) Risperidone (Risperdal)

10. A Black female presents with multiple insect bites on her arms and legs. This patient is at risk for developing which one of the following conditions?

- A) Acanthosis nigricans
- B) Acne keloidalis nuchae
- C) Dermatitis papulosa nigra
- D) Melasma
- E) Postinflammatory hyperpigmentation

11. You are co-managing a 59-year-old female with stage 3b chronic kidney disease (CKD) and secondary hyperparathyroidism resulting in osteoporosis. Due to transportation issues, she has been unable to see her specialist and requests that you take over her laboratory surveillance for CKD–bone mineral disorder.

In addition to serum calcium, parathyroid hormone, vitamin D, and creatinine levels and the estimated glomerular filtration rate, which one of the following laboratory values should be routinely monitored?

- A) Calcitonin
 - B) Magnesium
 - C) Parathyroid hormone–related peptide
 - D) Phosphorus
 - E) TSH
12. A 42-year-old premenopausal female presents to your office with new-onset bilateral nipple discharge for the past 4 weeks. She describes the discharge as green and nonbloody. She has a past medical history of diabetes mellitus, dyslipidemia, hypertension, and depression. Her current medications include the following:

Atorvastatin (Lipitor)
Escitalopram (Lexapro)
Hydrochlorothiazide
Lisinopril (Zestril)
Metformin

Her vital signs are unremarkable. A physical examination is significant for nonbloody green fluid expressed from the nipples. A TSH level, comprehensive metabolic panel, and CBC are all within normal range, and a serum hCG test is negative. A prolactin level is elevated at 85 ng/mL (N < 30 in nonpregnant premenopausal females).

Which one of her medications is most likely to cause galactorrhea?

- A) Atorvastatin
- B) Escitalopram
- C) Hydrochlorothiazide
- D) Lisinopril
- E) Metformin

13. A 73-year-old female with a history of obesity, essential hypertension, hyperlipidemia, and well-controlled type 2 diabetes presents to the emergency department (ED) with severe, crushing chest pain. She has a blood pressure of 115/64 mm Hg, a pulse rate of 90 beats/min, a respiratory rate of 15/min, a temperature of 37.2°C (99.0°F), and an oxygen saturation of 95 % on room air. A point-of-care troponin level is 1.0 ng/mL (N <0.04) and an EKG is normal, and you diagnose a non-ST-elevation myocardial infarction.

Which one of the following interventions in the ED has the greatest benefit with regard to decreasing mortality in this patient?

- A) Supplemental oxygen
- B) Aspirin
- C) Metoprolol
- D) Morphine
- E) Nitroglycerin

14. A 48-year-old male with a history of type 2 diabetes, obesity, and tobacco use disorder presents to your office for evaluation of a 4-day history of fever, malaise, and a productive cough. He smokes a half-pack of cigarettes per day but does not use recreational drugs or drink alcohol in excess. He has no known medication allergies.

Aside from a temperature of 38.2°C (100.8°F) and a BMI of 32 kg/m², his vital signs, including oxygen saturation, are normal. On physical examination he appears mildly ill although well hydrated and is breathing comfortably. Lung auscultation reveals focal right-sided crackles and decreased breath sounds.

Which one of the following oral treatment options would be best in this situation?

- A) Amoxicillin
- B) Cefuroxime
- C) Doxycycline
- D) Amoxicillin/clavulanate (Augmentin) plus azithromycin (Zithromax)
- E) Cephalexin plus sulfamethoxazole/trimethoprim (Bactrim)

15. A healthy 78-year-old female with no history of osteoporosis has a family history of hip fracture. Bone density screening reveals a lumbar T-score of -2.0 and a right hip T-score of -1.5. Her FRAX score is calculated at a 20% risk of major osteoporotic fracture and an 11% risk of hip fracture. She is concerned about the possibility of breaking her hip.

Which one of the following interventions would be most appropriate?

- A) Initiating treatment with a bisphosphonate
- B) Initiating treatment with combined estrogen/progesterone
- C) A repeat bone density scan in 1 year
- D) A repeat bone density scan in 3 years
- E) A repeat bone density scan in 5 years

16. Which one of the following tests has the highest negative predictive value to rule out celiac disease?

- A) An antigliadin antibody test
- B) A C-reactive protein level
- C) A fecal calprotectin level
- D) Genetic testing for *HLA-DQ2* and *HLA-DQ8*
- E) An IgA tissue transglutaminase (tTG) antibody test

17. A 42-year-old male with a history of chronic low back pain managed with extended-release morphine sulfate (MS Contin) comes to your office to discuss fatigue. Among other causes, you consider the impact that long-term opioid therapy may have on the endocrine system.

Which one of the following endocrine conditions is most commonly associated with long-term opioid therapy?

- A) Hyperprolactinemia
- B) Hypocortisolism
- C) Hypogonadism
- D) Hypoparathyroidism
- E) Hypothyroidism

18. An unhoused 63-year-old male is brought to the emergency department in a state of agitation and confusion. He is found to be hypothermic with a body temperature of 31.1°C (88.0°F). He has a blood pressure of 90/70 mm Hg and a heart rate of 120 beats/min.

While undergoing warming, which one of the following should be given to this patient?

- A) Normal saline at room temperature
- B) Normal saline that has been warmed
- C) Lactated Ringer solution at room temperature
- D) Lactated Ringer solution that has been warmed
- E) 50% dextrose in water at room temperature

19. According to the American Diabetes Association, which one of the following hemoglobin A_{1c} measurements fits the criteria for prediabetes?

- A) 5%
- B) 5.5%
- C) 6%
- D) 6.5%

20. A 69-year-old male presents 30 hours after the onset of difficulty speaking, right-sided facial droop, and marked weakness in his right arm and leg, with the arm more affected than the leg. You diagnose an ischemic stroke of the left middle cerebral artery (MCA). Noncontrast CT of the head reveals hypodensity in the area of the brain supplied by that artery, and CT angiography reveals occlusion of the left proximal MCA.

Which one of the following treatments would be indicated at this time?

- A) Aspirin daily
 - B) Clopidogrel (Plavix) plus aspirin
 - C) Intravenous alteplase (Activase)
 - D) Intravenous tenecteplase (TNKase)
 - E) Thrombectomy of the MCA
21. A 35-year-old female with a history of heavy menstrual bleeding is found to have a hemoglobin level of 10.4 g/dL (N 12.0–15.0). An elevated blood level of which one of the following biomarkers would be most consistent with iron deficiency anemia in this patient?
- A) Ferritin
 - B) Hepcidin
 - C) Reticulocyte count
 - D) Total iron-binding capacity
 - E) Transferrin saturation
22. A 70-year-old male presents with his wife because they are concerned that he may be developing dementia. Among other symptoms, he has a resting tremor and describes detailed hallucinations that are colorful, vivid, and include animals.

Which one of the following is the most likely diagnosis?

- A) Alzheimer disease
 - B) Dementia with Lewy bodies
 - C) Frontotemporal dementia
 - D) Normal pressure hydrocephalus
 - E) Vascular dementia
23. Newborn screening for critical congenital heart disease with pulse oximetry is recommended for
- A) all infants within the first 6 hours of life
 - B) all infants before 24 hours of life
 - C) all infants 24 hours or more after birth
 - D) only infants with clinical signs of hypoxemia
 - E) only infants with a heart murmur

24. A 64-year-old female presents to your office with a 1-week history of lesions on her legs (shown below). Her past medical history includes GERD, hypertension, and obesity. Her current medications include lisinopril (Zestril) and pantoprazole (Protonix). There is tenderness over the lesions but no itching or discharge. She feels well currently but recently completed a 3-day course of sulfamethoxazole/trimethoprim (Bactrim) for treatment of a urinary tract infection. The lesions started to appear about 3–4 days after finishing her course of antibiotics. She is normotensive and afebrile. A physical examination is otherwise unremarkable.

Which one of the following is the most likely diagnosis?

- A) Erythema nodosum
 - B) Necrobiosis lipoidica
 - C) Purpura fulminans
 - D) Pyoderma gangrenosum
 - E) Superficial thrombophlebitis
25. You are playing in a community league soccer tournament and are asked to evaluate a 30-year-old female. She was in her usual state of health when she suddenly began having difficulty breathing while playing soccer. She tells you that she has had similar episodes in the past. Treatment with an albuterol (Proventil, Ventolin) inhaler does not improve her symptoms.

On examination you note dyspnea with audible inspiratory wheezing but no increased work of breathing, and she has an oxygen saturation of 98%.

Which one of the following is the most likely diagnosis?

- A) Anaphylaxis
 - B) Exercise-induced asthma
 - C) Foreign body aspiration
 - D) Laryngeal edema
 - E) Vocal cord dysfunction
26. A 60-year-old male presents with left lower quadrant abdominal pain. His medical and surgical histories are remarkable only for a history of hypertension controlled with hydrochlorothiazide and lisinopril (Zestril), and a screening colonoscopy 5 years ago that showed diverticulosis without polyps. He is afebrile, and a physical examination is notable only for mild abdominal tenderness in the left lower quadrant without peritoneal signs. A urinalysis is normal. You diagnose mild diverticulitis.

Which one of the following would be indicated at this time?

- A) Rest and clear liquids
- B) Avoidance of seeds, nuts, and popcorn
- C) Abdominal CT
- D) Referral for colonoscopy
- E) Hospital admission for intravenous fluids and intravenous antibiotics



Item #24

27. A 68-year-old female presents for evaluation of low back pain. Which one of the following signs or symptoms would be most consistent with a diagnosis of spinal stenosis syndrome?

- A) Pain improvement when moving from sitting to standing
- B) Pain improvement with lumbar extension
- C) Pain worsened by bending forward at the waist
- D) Poor balance
- E) Urinary incontinence

28. The most common electrolyte abnormality in a patient with primary hyperaldosteronism is

- A) hypocalcemia
- B) hypokalemia
- C) hyponatremia
- D) hyperkalemia
- E) hypernatremia

29. A 71-year-old male who resides at sea level travels to Colorado for a vacation. He spends the first night in a resort at 2700 m (8858 ft) above sea level. He notes a headache and sleeps poorly. The next morning he is somewhat nauseated and lightheaded, but feels well enough to proceed with his plans and ascends to his campsite at 4000 m (13,123 ft). During the first evening at the campsite, friends note that he is confused and having difficulty with his balance.

Which one of the following diagnoses best explains his symptoms at the campsite?

- A) Acute mountain sickness
- B) High-altitude cerebral edema
- C) High-altitude headache
- D) High altitude-induced central sleep apnea
- E) High-altitude pulmonary edema

30. A 47-year-old female sees you for routine follow-up. Her past medical history is significant for hypertension, hyperlipidemia, depression, and osteoarthritis. She tells you that she has noticed her ankles swelling over the past few months. In addition to a physical examination and other indicated evaluations, you also review her medications, which include the following:

Acetaminophen
Amlodipine (Norvasc)
Atorvastatin (Lipitor)
Escitalopram (Lexapro)
Lisinopril (Zestril)

Which one of her medications is most likely to cause edema?

- A) Acetaminophen
- B) Amlodipine
- C) Atorvastatin
- D) Escitalopram
- E) Lisinopril

31. A 3-year-old male is brought to your office by his parents for evaluation of constipation that began about a year ago. They report that he cries before bowel movements, has resisted toilet training, and has unusually large stools about every 3 days, including this morning. He had normal bowel movements in infancy and his growth and development have been normal.

An examination shows a healthy child with a soft, nondistended, nontender abdomen. A rectal examination reveals normal sphincter tone and minimal soft stool.

Which one of the following would be the most appropriate next step in correcting his functional constipation?

- A) Increasing fluid intake
 - B) Increasing physical activity
 - C) Adding docusate (Colace)
 - D) Adding polyethylene glycol (MiraLAX)
 - E) Adding probiotic supplements with *Bifidobacterium* or *Lactobacillus* species
32. A 62-year-old male presents with daytime fatigue, sleepiness, snoring at night, and a BMI of 41 kg/m². You are concerned that he may have obesity hypoventilation syndrome (OHS) in addition to possible obstructive sleep apnea.

Which one of the following tests is most appropriate for establishing a diagnosis of OHS?

- A) Daytime awake serum HCO₃⁻
 - B) Daytime awake PaCO₂
 - C) Daytime awake PaO₂
 - D) Nighttime serial measurement of peripheral oxygen saturation during sleep
 - E) Nighttime serum HCO₃⁻ within 2 minutes of awakening
33. In a patient with new-onset polymyalgia rheumatica, which one of the following medications can be added to glucocorticoid therapy in order to reduce the risk of relapse?
- A) Ibuprofen
 - B) Icosapent ethyl (Vascepa)
 - C) Indomethacin
 - D) Mesalamine
 - E) Methotrexate

34. You are caring for a 21-year-old female with previously diagnosed bipolar II disorder, generalized anxiety disorder, attention-deficit/hyperactivity disorder, and insomnia. The patient presents for a same-day appointment with new symptoms of chills, excess sweating, flushing, and nausea of approximately 2 hours' duration. The patient felt normal upon awakening, took methylphenidate (Ritalin), 5 mg with breakfast, and went to work. She began to feel shaky around lunchtime and took a second dose of methylphenidate, 5 mg. Thirty minutes later she began having agitation, chills, sweating, flushing, and nausea and had to leave work. Her current medications include the following:

Desvenlafaxine (Pristiq), 50 mg daily
Doxepin, 10 mg daily at bedtime
Methylphenidate, 5 mg twice daily
Ziprasidone (Geodon), 40 mg twice daily

An examination reveals an alert and anxious patient with damp skin, a temperature of 38.1°C (100.6°F), and a heart rate of 110 beats/min. The pupils are slightly dilated and briskly reactive. A neurologic examination reveals a mild tremor and hyperreflexia without clonus.

Which one of the following would you recommend for this patient?

- A) Discontinuing all current medications until her symptoms subside
 - B) Replacing methylphenidate with atomoxetine (Strattera)
 - C) Replacing methylphenidate with amphetamine salts such as dextroamphetamine/amphetamine (Adderall)
 - D) Symptomatic treatment with diphenhydramine (Benadryl Allergy)
 - E) Symptomatic treatment with ondansetron
35. The daughter of an 82-year-old bedbound female with Alzheimer dementia requests a home visit to discuss transitions of care due to continued deterioration of her mother's condition. The daughter has been the caregiver for the past 5 years since her mother began to struggle with independently managing her activities of daily living (ADLs). Recently, the patient's appetite has significantly diminished, and her daughter is concerned that she has lost 15 lb in the last 6 months. She asks about feeding tube placement, medications to help her appetite, or ways to improve her dementia. The patient no longer recognizes her daughter and is nonverbal but smiles when approached at her bedside upon examination. Her vital signs are stable, she appears cachectic, a physical examination is unremarkable, and pain is not present upon palpation.

Which one of the following is recommended at this time?

- A) Assisted oral feeding
- B) Initiation of a high-calorie supplement
- C) Initiation of a cholinesterase inhibitor
- D) Initiation of an appetite stimulant
- E) Percutaneous feeding tube placement

36. A 24-year-old male presents for evaluation of a soft-tissue mass on his arm. Which one of the following features, if present, should prompt further evaluation with advanced imaging?
- A) Diameter ≥ 5 cm
 - B) Fluctuant texture
 - C) Lack of tenderness with palpation
 - D) Persistent, slow growth over several years
 - E) Superficial location (above the fascia)
37. In patients with type 2 diabetes, medications from which one of the following classes have been shown to reduce the progression of chronic kidney disease?
- A) Biguanides
 - B) DPP-4 inhibitors
 - C) SGLT2 inhibitors
 - D) Thiazolidinediones
38. Which one of the following is the most appropriate timing to initiate the use of fluoride varnish in infants and children to prevent dental caries?
- A) At age 6 months if their primary water source is deficient in fluoride
 - B) At age 6 months and then four times yearly
 - C) At age 6 years and then four times yearly
 - D) When the first primary tooth erupts and then twice yearly
 - E) When the first permanent tooth erupts and then four times yearly
39. A 55-year-old male sees you for a health maintenance examination. He tells you that his father had a myocardial infarction at age 55 and asks you how he can reduce his risk for coronary artery disease. He exercises regularly and does not smoke. His vital signs include a blood pressure of 128/78 mm Hg, a pulse rate of 75 beats/min, and a BMI of 28 kg/m². A physical examination is unremarkable.
- Which one of the following is needed to calculate this patient's American College of Cardiology/American Heart Association 10-year atherosclerotic cardiovascular disease event risk using the Pooled Cohort Equations?
- A) An ankle-brachial index
 - B) A high-sensitivity C-reactive protein level
 - C) A lipid panel
 - D) A coronary artery calcium score

40. Which one of the following patients has an increased risk for autism spectrum disorder?

- A) A 6-month-old who does not respond to his name
- B) A 12-month-old who does not engage in pretend play
- C) A 15-month-old who claps her hands when excited
- D) An 18-month-old who does not point to objects of interest
- E) A 24-month-old who looks at a parent's face to see how to react in a situation

41. A 56-year-old male with hypertension and a BMI of 39 kg/m² comes to your office for follow-up after a full-night study in the sleep laboratory for evaluation of snoring and fatigue. The study revealed an apnea-hypopnea index (AHI) of 12 events per hour of sleep. He has several questions about his treatment options. He reports that he is very concerned about this problem and is willing to try anything, but a family member suggested he consider the newer procedures.

In addition to diet, exercise, and behavioral modifications, which one of the following would be the most appropriate intervention at this time?

- A) An oral appliance
- B) CPAP therapy
- C) Hypoglossal nerve stimulation
- D) Pharyngeal soft-tissue modification
- E) Bariatric surgery

42. A 35-year-old female presents with a 4-month history of pain in her neck, chest, mid and lower back, hip, and right leg. She has difficulty falling asleep at night and does not feel refreshed upon awakening in the morning. She feels like she is not as mentally sharp as she used to be and feels mildly depressed at times. A physical examination is notable for multiple soft-tissue tender points without evidence of joint deformity, inflammation, or erythema.

Which one of the following would be appropriate first-line pharmacologic therapy for this patient's condition?

- A) Amitriptyline
- B) Celecoxib (Celebrex)
- C) Hydrocodone
- D) Hydroxychloroquine (Plaquenil)
- E) Naproxen

43. A 45-year-old female sees you for follow-up 3 days after a visit to the emergency department (ED) for acute abdominal pain due to an initial episode of a kidney stone. Her past medical history and family history are unremarkable. A CT scan in the ED demonstrated a nonobstructing, 4-mm mid-ureteral stone and several smaller stones in both kidneys, measuring up to 2 mm. Laboratory studies in the ED showed a calcium level of 11.4 mg/dL (N 8.0–10.0) and microscopic hematuria on urinalysis but were otherwise normal. She was treated with intravenous hydration and pain control and was discharged home. She passed the stone the next day.

A physical examination today is normal. Follow-up laboratory studies confirm an elevated serum calcium level, along with elevated serum parathyroid hormone and 24-hour urine calcium levels. A DEXA scan and repeat microscopic urinalysis are normal.

At this point, you should

- A) prescribe a bisphosphonate
 - B) prescribe a thiazide diuretic
 - C) refer her for genetic evaluation
 - D) refer her for cystoscopy
 - E) refer her for parathyroidectomy
44. A 42-year-old male sees you for a routine health maintenance examination. He has no symptoms, no high-risk behaviors, and no past medical history. The physical examination is unremarkable. He has had no health care screenings since a sports preparticipation evaluation at age 14.

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

- A) Carotid stenosis
 - B) Glaucoma
 - C) HIV
 - D) Testicular cancer
 - E) Vitamin D deficiency
45. A 20-year-old college student comes to your office on Monday morning after injuring his right arm during a rugby match 2 days earlier. He is not certain of the mechanism of injury but was struck forcefully on the lower posterior part of his upper arm above the elbow. He describes paresthesias on the extensor side of his forearm and the back of his hand. His upper arm is bruised and mildly swollen at the described location.

In addition to the paresthesias on the extensor forearm and the back of the hand, which one of the following motor findings would you expect?

- A) An inability to maintain all fingers fanned out under resistance
- B) Weakness of elbow flexion with the hand in a prone position
- C) Weakness of finger and wrist extension under resistance
- D) Weakness of flexion of the fourth and fifth fingers
- E) Weakness of thumb apposition

46. A 55-year-old male sees you because of heartburn and dysphagia. Esophagogastroduodenoscopy shows moderately severe esophagitis.

Which one of the following is the most appropriate long-term pharmacologic management for this condition?

- A) Famotidine (Pepcid), 10 mg daily
- B) Metoclopramide (Reglan), 10 mg before meals
- C) Omeprazole, 40 mg daily
- D) Sucralfate (Carafate), 1 g twice daily

47. A 12-year-old transgender female accompanied by her mother comes to your office to discuss persistent gender dysphoria. The patient has been in counseling for 2 years along with her family, who is supportive of her gender identity. The patient's mother asks about puberty blockers.

In discussing GnRH analogs with her, you note that the current recommendation for beginning this medication is when she is at which Tanner stage of development?

- A) 1
- B) 2
- C) 3
- D) 4
- E) 5

48. A 63-year-old female with a history of obesity and hypertension sees you for evaluation of shortness of breath on exertion and lower extremity edema. Echocardiography shows grade 2 diastolic dysfunction and an ejection fraction of 50%. You diagnose heart failure with preserved ejection fraction.

Which one of the following medications has the best evidence to reduce hospitalization due to heart failure or cardiovascular death in patients such as this?

- A) Carvedilol (Coreg)
- B) Empagliflozin (Jardiance)
- C) Lisinopril (Zestril)
- D) Sacubitril/valsartan (Entresto)
- E) Spironolactone (Aldactone)

49. A 45-year-old male presents to the urgent care clinic with a 2-hour history of central chest pain that began at rest with associated shortness of breath. In addition, he has had a mild dry cough and rhinorrhea for a few days but no fever. He has not had any nausea, dizziness, or diaphoresis, and the chest pain does not radiate. He took a low-dose aspirin at home at the insistence of his partner but states that it did not affect the pain. He has no past medical history, takes no medications, consumes 4–6 alcoholic drinks per night, and does not smoke. He has a sedentary job in customer service and walks his dog twice a day. He lives at home with his partner and toddler, who also has a mild cough and runny nose.

On examination the patient has a temperature of 37.0°C (98.6°F), a blood pressure of 150/100 mm Hg, a heart rate of 118 beats/min, a respiratory rate of 14/min, and an oxygen saturation of 98% on room air. The patient is well appearing, and an HEENT examination reveals no jugular vein distention. A cardiovascular examination reveals tachycardia without murmur. There is no chest wall tenderness to palpation. The lung examination reveals decreased breath sounds on the right compared with the left, and there are no crackles or wheezes. There is no lower extremity edema.

A chest radiograph and an EKG are shown below. Laboratory studies including D-dimer and troponin levels, a CBC, and a comprehensive metabolic panel have been ordered and the results are pending.

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

- A) Initiation of antibiotics
- B) Initiation of heparin infusion
- C) Chest tube placement
- D) Cardiac catheterization

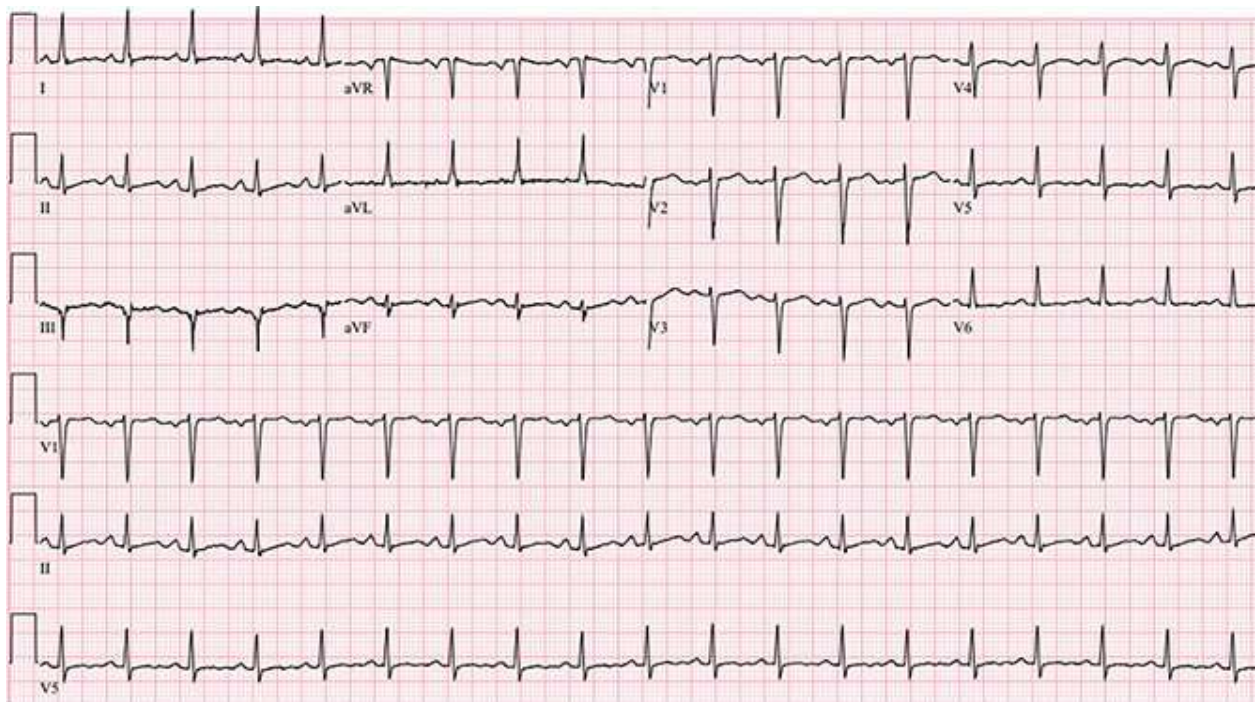
50. A 40-year-old male presents because he is losing large clumps of hair when he brushes or washes it. He feels well otherwise and does not take any medications. His past medical history is unremarkable except for a cholecystectomy 4 months ago for acute cholecystitis. A physical examination is normal except for uniform, diffuse thinning of the hair on his scalp. You do not observe any patches of hair loss, redness, inflammation, scaling, or scarring of his scalp.

Which one of the following would be the most appropriate next step in managing this patient's hair loss?

- A) Reassurance only
- B) Cognitive behavioral therapy
- C) Terbinafine
- D) Intracutaneous scalp corticosteroid injections



Item #49



Item #49

51. A 46-year-old female comes to your office because of left hip pain. After a thorough evaluation you make a diagnosis of osteoarthritis, likely associated with congenital hip dysplasia.

In addition to nonpharmacologic therapies, including physical exercise, which one of the following medications has the best evidence of treating her pain effectively?

- A) Topical diclofenac
- B) Topical lidocaine
- C) Oral acetaminophen
- D) Oral naproxen
- E) Oral tramadol

52. A 25-year-old male presents for a pretravel consultation prior to embarking on a 10-day mission trip to Central America with his church. His past medical history includes GERD, irritable bowel syndrome, and generalized anxiety disorder. The last time he traveled internationally he experienced a prolonged bout of traveler's diarrhea, despite his best efforts at practicing good hand hygiene and careful food and drink selection. He asks if there are any medications that he can take to prevent a similar experience this time.

Which one of the following is most appropriate for prophylactic use in this situation?

- A) Bismuth subsalicylate (Pepto-Bismol)
- B) Calcium carbonate (Tums)
- C) Ciprofloxacin (Cipro)
- D) Omeprazole
- E) A probiotic containing *Lactobacillus acidophilus*

53. A 39-year-old male with no known previous medical history sees you for follow-up of recently diagnosed depression. He works as a home renovation contractor and does not smoke. A physical examination is normal other than a BMI of 36 kg/m². Laboratory studies reveal a normal TSH level and a hemoglobin level of 17.4 g/dL (N 13.3–16.2).

You suspect that which one of the following is a cause of his polycythemia?

- A) Alcohol use
- B) Hemochromatosis
- C) Hereditary spherocytosis
- D) Lead exposure
- E) Obstructive sleep apnea

- 54.** A 48-year-old female presents to your office because of painful sexual intercourse occurring with both initial entry and deep penetration. She has been using lubricants, but still experiences burning and dryness. Her last menstrual period was 1 year ago. A pelvic examination reveals slightly pale vaginal mucosa.

Which one of the following would be the best and most cost-effective initial therapy?

- A) Vaginal estradiol cream (Estrace Vaginal)
- B) Vaginal prasterone (Intrarosa)
- C) Ospemifene (Osphena)
- D) OnabotulinumtoxinA (Botox)
- E) Pelvic floor physical therapy

- 55.** Which one of the following medications commonly causes hyponatremia in the elderly?

- A) Amlodipine (Norvasc)
- B) Amoxicillin
- C) Atorvastatin (Lipitor)
- D) Escitalopram (Lexapro)
- E) Spironolactone (Aldactone)

- 56.** A 16-year-old female sees you because she has not yet started her menses and has noticed little breast development. Both her mother and her older sister started menstruating at age 13. She has never been sexually active and has not had any abdominal pain, vaginal discharge, nipple discharge, appetite changes, or urinary symptoms. She does not take any medications and does not use tobacco, alcohol, or illicit substances. Her weight has been stable. She walks to and from school daily and plays recreational basketball during the winter season, but otherwise does not get regular exercise.

On examination the patient appears well. She has a blood pressure of 110/70 mm Hg and a heart rate of 70 beats/min, and she is in the 5th percentile for height and 50th percentile for weight. Cardiovascular, pulmonary, abdominal, and skin examinations are all normal. Her breast development is Tanner stage 2 and her genitourinary development is Tanner stage 4, with normal external genitalia and a normal-appearing nulliparous cervix. There is no edema to the extremities.

Laboratory studies include a normal TSH level, prolactin level, and basic metabolic panel. A urine pregnancy test is negative. Pelvic ultrasonography reveals a normal uterus and the ovaries are nonvisualized.

Which one of the following is the most likely diagnosis?

- A) Congenital adrenal hyperplasia
- B) Cushing syndrome
- C) Functional hypothalamic amenorrhea
- D) Polycystic ovary syndrome
- E) Turner syndrome

57. A 28-year-old female comes to your office for follow-up after learning during an emergency department visit that she is pregnant. Ultrasonography reveals an estimated gestational age of 14 weeks and 4 days. She has been using increasing dosages of oxycodone (OxyContin) daily for the past 7 months and gets sick whenever she tries to stop. She reports using 90 mg daily without a prescription, and stealing when necessary to obtain the drug. She wishes to continue her pregnancy and is worried about the safety of her developing fetus.

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

- A) A prescription for oxycodone, 90 mg daily
 - B) Buprenorphine/naloxone (Suboxone) therapy
 - C) Outpatient detoxification with a clonidine-based protocol
 - D) Inpatient detoxification with a clonidine-based protocol
58. In a patient with hyperuricemia with an elevated uric acid level but no prior episodes of acute gout, which one of the following is recommended?
- A) No urate-lowering medication
 - B) Allopurinol (Zyloprim), 100 mg daily
 - C) Febuxostat (Uloric), 40 mg daily
 - D) Naproxen, 250 mg three times daily
 - E) Probenecid, 100 mg twice daily
59. You are concerned about the alcohol use of a 45-year-old family physician colleague in your community. One evening you smell alcohol on their breath when they are on-call making evening rounds at the hospital. When you try to talk with them about it, they deny having a problem and tell you to mind your own business.

Which one of the following should be your next course of action?

- A) Do nothing further
 - B) Report your concern to your state medical board
 - C) Report your concern to the American Academy of Family Physicians
 - D) Report your concern to the American Board of Family Medicine
 - E) Report your concern to the American Medical Association
60. A previously healthy 30-year-old male who is a nonsmoker comes to your clinic for an acute visit because of a cough that produces yellowish phlegm. His illness started with a “cold” 10 days ago. He has no fever or chills, chest pain, or shortness of breath. On examination his vital signs are normal, and his lungs are clear bilaterally to the bases. A chest radiograph is normal.

The most appropriate next step is

- A) reassurance only
- B) amoxicillin
- C) azithromycin (Zithromax)
- D) doxycycline

- 61.** A 75-year-old male with long-standing diabetes mellitus, tobacco use, and venous insufficiency presents to your office with bilateral leg heaviness and recent oozing from his left leg. A physical examination reveals venous stasis dermatitis, edema of both legs, and a well-circumscribed 3×4-cm area of superficial ulceration on the left medial shin with a thin layer of purulent exudate overlying a pink base. The surrounding skin has no erythema, warmth, or tenderness. Pedal pulses are nonpalpable bilaterally.

In addition to smoking cessation counseling and local wound care, which one of the following would be the most appropriate next step?

- A) An ankle-brachial index
- B) A medical-grade compression stocking
- C) A zinc oxide-impregnated Unna boot
- D) A wound culture specimen
- E) A skin biopsy of the ulcer

- 62.** You are treating a patient for hypertension and opt to start an ACE inhibitor. Six weeks later the patient's blood pressure is at goal, but the serum creatinine level has increased from 1.0 to 1.2 mg/dL (N 0.7–1.0).

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

- A) Continuing the ACE inhibitor with close monitoring of renal function
- B) Discontinuing the ACE inhibitor immediately
- C) Ordering ultrasonography to evaluate for renal artery stenosis
- D) Referring the patient to a nephrologist

- 63.** A 55-year-old male presents with intermittent epigastric pain, early satiety, and bloating. His symptoms have been present for years with minimal change. You suspect a diagnosis of functional dyspepsia.

Which one of the following additional findings would constitute an alarm symptom and warrant further workup?

- A) Epigastric tenderness
- B) Increased abdominal pain when the abdominal wall muscles are tensed
- C) Lymphadenopathy
- D) Nausea
- E) Weight gain

64. A 65-year-old female with end-stage renal disease, who has been on dialysis for 2 years, presents for a health maintenance examination. She has a history of diabetes mellitus and hypertension and does not want to be considered for renal transplantation.

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

- A) No screening
- B) A skin survey
- C) A Papanicolaou smear
- D) Mammography
- E) Colonoscopy

65. A 45-year-old male sees you to review the results of a male hormone imbalance test that he took online. On the list of symptoms, he marked decreased sex drive and excessive sweating as severe; fatigue, mood changes, sleep problems, and muscle strength as moderate; and hair loss, decreased mental ability, weight gain, and muscle and joint pain as mild. The patient has no known chronic diseases and takes a daily multivitamin. His medical history and a physical examination are unremarkable. He would like to start testosterone therapy as soon as possible.

After discussing the limited indications for testosterone replacement, which one of the following would be the most appropriate next step to address this patient's concerns?

- A) Reassurance only
- B) FSH and LH levels
- C) A total testosterone level at the end of this visit
- D) Two separate fasting morning total testosterone levels
- E) A clinical trial of testosterone replacement

66. A healthy 23-year-old presents for a physical examination required for entrance to nursing school. The patient's vital signs and a physical examination are unremarkable. To complete the immunization requirements, you administer Tdap and varicella vaccines. The nursing school requests tuberculosis (TB) test results.

Which one of the following would be most appropriate regarding TB testing?

- A) No testing because the patient is asymptomatic
- B) A sputum culture
- C) A tuberculin skin test
- D) An interferon-gamma release assay (IGRA, QuantiFERON-TB Gold)
- E) A chest radiograph

67. A local corticosteroid injection is most likely to result in sustained improvement when offered early in the course of which one of the following conditions?

- A) Adhesive capsulitis
- B) De Quervain tenosynovitis
- C) Lateral epicondylitis
- D) Osteoarthritis of the knee
- E) Subacromial impingement syndrome

68. A 70-year-old male presents for evaluation of an itchy rash (shown below) that started a few weeks ago in the interdigital areas of both feet. The rash has since extended to his dorsal feet and ankles. He has tried using a topical moisturizing lotion and hydrocortisone 1% cream without improvement.

Based on the extent of skin involvement, you offer him an oral medication to treat the infection. He is concerned about the risk of gastrointestinal side effects and asks if he could use a different topical medication instead.

Of the following options, which one is most likely to resolve his symptoms?

- A) Clotrimazole/betamethasone dipropionate (Lotrisone) cream
 - B) Mupirocin cream
 - C) Nystatin cream
 - D) Nystatin ointment
 - E) Terbinafine cream
69. You are on a commercial aircraft at cruising altitude. One of the passengers rises from his seat and passes out on the aisle floor beside you. You offer your services as a physician and the flight attendant arrives at the patient's side. You find the scene safe and the patient unresponsive, not breathing, and without a carotid pulse. You request the automated external defibrillator (AED).

The most appropriate next step would be to

- A) attach the AED
 - B) begin chest compressions at a rate of 100/min
 - C) give two slow breaths using the mouth-to-mouth technique
 - D) give two slow breaths with a bag-valve mask
 - E) tell the flight crew to land as soon as possible
70. A 72-year-old male presents with a recent history of cough with bloody sputum. For 3 weeks, he produced dark red to brown sputum with his usual morning cough. The last episode was a week ago. He has a chronic, minimally productive cough that he attributes to allergies. He has not had any fever, chest pain, or dyspnea associated with the bloody sputum. He has never smoked and has no known lung disease. His medications include bupropion (Wellbutrin) and fluoxetine (Prozac). His vital signs are unremarkable.

An examination including the nasal fossa and oropharynx reveals no evidence of bleeding. A pulmonary examination is normal. A CBC, comprehensive metabolic panel, and INR are also normal.

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

- A) Reassurance only, with instructions to return if symptoms recur
- B) Azithromycin (Zithromax)
- C) A chest radiograph
- D) CT of the chest with and without contrast
- E) Referral for bronchoscopy



Item #68

71. You see a 5-year-old female for the first time for a new patient visit. Her mother notes that she tires easily and sometimes cannot keep up with other children her age. Laboratory studies reveal the following:

WBCs	6500/mm ³ (N 5000–14,500)
RBCs	5.6 million/mm ³ (N 3.90–5.30)
Hemoglobin	9.1 g/dL (N 11.5–15.5)
Hematocrit	27% (N 34–40)
Platelets	220,000/mm ³ (N 150,000–450,000)
Mean corpuscular volume	68 µm ³ (N 75–87)
Mean corpuscular hemoglobin	28 pg/cell (N 24–30)
Mean corpuscular hemoglobin concentration	34 g/dL (N 32–36)
Red cell distribution width	11% (N 11.5–15.0)
Ferritin	150 ng/mL (N 7–140)
Transferrin saturation	40% (N 15–50)

A peripheral smear shows target cells, microcytic cells, red cell fragments, teardrop cells, and nucleated RBCs.

Which one of the following is the most likely etiology of this patient's anemia?

- A) Aplastic anemia
 - B) Iron deficiency
 - C) Megaloblastic anemia
 - D) Myelofibrosis
 - E) Thalassemia minor
72. A 34-year-old female presents to your office and insists that she be seen. She seeks your care frequently, showering you with compliments. Today she says that she feels depressed and hurts “all over.” She reports that your medical assistant is not being friendly to her. She states that her symptoms started a few days ago, after her boyfriend broke up with her. She had thought he would propose soon although they had been dating for 2 months. She says he must have left her because she is unattractive. She asks to be tested for sexually transmitted infections since she frequently engages in unprotected intercourse. She was recently pulled over by a police officer for reckless driving, but states she was being punished unfairly.

A physical examination reveals a BMI of 31 kg/m², stable vital signs, and several scars on her upper arms, but is otherwise unremarkable. She appears anxious and depressed, and as in the past, mentions suicidal thoughts. Your staff asks you if she is just a difficult patient or whether a disease process is involved.

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

- A) Bipolar disorder
- B) Borderline personality disorder
- C) Generalized anxiety disorder
- D) Major depressive disorder
- E) Posttraumatic stress disorder

73. Overdiagnosis is defined as the diagnosis of a condition that, if unrecognized, would not cause symptoms or harm during the patient's lifetime. Which one of the following interventions has the best likelihood of reducing overdiagnosis?

- A) Broadening the criteria for diagnosis of a condition
- B) Creating financial incentives for more testing
- C) Focusing screening efforts on populations at highest risk for a disease
- D) Redefining risk factors as pre-diseases
- E) Using more sensitive screening tests

74. A 53-year-old female sees you because she would like treatment for hot flashes that she finds quite bothersome. Her last menstrual period was 8 months ago. She has a history of unprovoked deep vein thrombosis and a history of depression that is treated with venlafaxine (Effexor XR).

In addition to optimizing the dosage of her venlafaxine, which one of the following would be most effective for treatment of her hot flashes?

- A) Black cohosh
- B) Clonidine
- C) Gabapentin (Neurontin)
- D) Oral progesterone
- E) Topiramate (Topamax)

75. A 72-year-old male who underwent total left knee arthroplasty 3 months ago is scheduled for a routine 6-month dental visit next week. His dentist contacts you for advice regarding antibiotic prophylaxis to prevent joint infection.

Which one of the following should you recommend?

- A) No antibiotic prophylaxis
- B) Amoxicillin, 2 g orally, 1 hour before the procedure
- C) Ceftriaxone, 1 g parenterally, 1 hour before the procedure
- D) Delaying the dental visit for 3 months
- E) Contacting the orthopedic surgeon who performed the arthroplasty

76. An 8-year-old female is brought to the emergency department by her parents because of an asthma exacerbation that started earlier today in the context of a new upper respiratory infection. This morning she doubled her usual fluticasone (Flovent) inhaler and took 44 µg, four puffs. She has also been taking albuterol (Proventil, Ventolin), 90 µg, two puffs every hour for the past 3 hours, with minimal relief of shortness of breath and wheezing.

She has a temperature of 36.9°C (98.4°F), a respiratory rate of 28/min, a pulse rate of 128 beats/min, and an oxygen saturation of 96% on room air. On examination you note diffuse expiratory wheezing throughout both lungs. She received nebulized ipratropium/albuterol and oral prednisolone just prior to your assessment and reports feeling slightly better.

When administered intravenously, which one of the following has the best evidence of preventing the need for hospital admission for this patient's acute asthma exacerbation?

- A) Diphenhydramine
 - B) Epinephrine
 - C) Magnesium
 - D) Terbutaline
 - E) Theophylline
77. A 90-year-old female sees you regularly for follow-up of several chronic medical conditions including systolic hypertension, coronary artery disease, previous ischemic stroke, and heart failure with preserved ejection fraction. Her systolic blood pressure is usually >160 mm Hg while her diastolic blood pressure is usually <50 mm Hg, making management challenging.

In managing this patient's blood pressure, an important physiologic consideration is that coronary artery perfusion is determined by which one of the following?

- A) Diastolic blood pressure
 - B) Systolic blood pressure
 - C) Mean arterial pressure
 - D) Pulse pressure
 - E) Ejection fraction
78. A 54-year-old male with cervical disc disease, generalized anxiety disorder, and opioid use disorder on maintenance therapy presents with a 5-day history of pain and numbness in both hands and feet. He mentions that he had a COVID-19 booster vaccination 6 weeks ago.

On the review of systems, he reports increased urinary frequency and feeling less steady on his feet. A neurologic examination is notable for a slightly wide-based gait, decreased sensation in the upper extremities to the forearms and lower extremities to the calves, and brisk Achilles reflexes with clonus. His muscle strength is normal in both the upper and lower extremities, and there is no spinal tenderness. The remainder of the examination, including vital signs, is normal.

Which one of the following diagnoses is most consistent with this presentation?

- A) Cervical myelopathy
- B) Epidural abscess
- C) Guillain-Barré syndrome
- D) Multiple sclerosis

- 79.** An otherwise healthy 70-year-old male presents with a 6-month history of hives recurring every week or so. A causative factor is not identified through the history and physical examination.

Which one of the following is recommended as the first-line treatment for this patient's chronic urticaria?

- A) A first-generation H₁-antihistamine
- B) A second-generation H₁-antihistamine
- C) An H₂-antihistamine
- D) Omalizumab (Xolair)
- E) Prednisone

- 80.** A 20-year-old college football player becomes disoriented and weak during an afternoon practice in the heat. On the field, he is sweaty and tachycardic, with a core (rectal) temperature of 40.9°C (105.6°F).

In this patient with exertional heatstroke, which one of the following would be the most important initial step to reduce his core body temperature?

- A) Administering acetaminophen
- B) Administering aspirin
- C) Immersing him in cold water
- D) Initiating intravenous fluids
- E) Transporting him to an emergency facility for treatment

- 81.** A 36-year-old female with recently diagnosed polycystic ovary syndrome (PCOS) sees you to discuss treatment options. Her menses are irregular and she only has 2–3 cycles per year. She does not wish to have any more children. She has no contraindications to hormonal contraceptives. Her BMI is 27 kg/m².

Which one of the following would be the most appropriate medication to initiate as first-line PCOS therapy?

- A) Finasteride (Proscar)
- B) Letrozole (Femara)
- C) Metformin
- D) Norgestimate/ethinyl estradiol (Sprintec)
- E) Spironolactone (Aldactone)

82. A 72-year-old male presents to your office because of right hip pain and difficulty walking. He notes that the pain is relieved by activity and is worse at night. You obtain a plain film of the hip (shown below).

An elevation in which one of the following laboratory results would confirm the diagnosis?

- A) Alkaline phosphatase
- B) Calciferol
- C) Creatine phosphokinase
- D) Gamma-glutamyl transpeptidase
- E) Phosphorus

83. For patients with terminal pancreatic cancer, lung cancer, or metastatic melanoma, which one of the following is the potential increase in life expectancy from receiving hospice care?

- A) No increase
- B) 3 months
- C) 6 months
- D) 9 months
- E) 12 months

84. A 43-year-old male with hypertension and steatohepatitis sees you for follow-up after being treated for pneumonia and wheezing. On further questioning he reports mild shortness of breath for the past year. He is a former smoker with a 5-pack-year history. An examination is significant for diminished breath sounds diffusely, but no crackles or wheezing. Pulmonary function testing reveals a moderate nonreversible obstructive defect.

Which one of the following tests for genetic conditions would be most appropriate to order in this patient?

- A) α_1 -Antitrypsin levels
- B) Cystic fibrosis gene panel
- C) Ehlers-Danlos gene panel
- D) Hemochromatosis HFE
- E) *HLA-B27*

85. For patients with atrial fibrillation requiring anticoagulation, which one of the following concomitant conditions would indicate a need for treatment with warfarin instead of a direct oral anticoagulant?

- A) Congestive heart failure
- B) Diabetes mellitus
- C) A history of stroke
- D) Hypertension
- E) Severe mitral stenosis



Item #82

- 86.** A parent brings their 2-month-old infant to your office for a routine well check. The infant, who was born at full term, is formula fed and the parent is concerned about vomiting that occurs after every feeding. After taking a history and examining the infant you diagnose uncomplicated reflux.

The next appropriate intervention would be

- A) prone positioning for sleep
 - B) celiac testing
 - C) a trial of thickened feeds
 - D) a trial of an acid suppressor
 - E) abdominal ultrasonography
- 87.** A 27-year-old male took a COVID-19 rapid antigen test at home prior to coming to your office and reports that it was negative. Which one of the following pretest probability factors increases the likelihood that the test results were falsely negative?
- A) No clinical signs or symptoms of COVID-19 infection
 - B) No known exposure to a person with COVID-19 infection
 - C) Clinical signs or symptoms that are best explained by an alternative diagnosis such as influenza
 - D) A high prevalence of COVID-19 infection in the community
- 88.** A 28-year-old gravida 2 para 2 sees you for follow-up of heavy menstrual bleeding. She reports regular 30-day cycles with heavy bleeding that lasts for 5 days each month. She has tried ibuprofen and naproxen with minimal improvement. She and her husband desire more children but would prefer to wait a few years before trying again to conceive.

Which one of the following treatments is likely to be most effective in reducing her menstrual bleeding, while preserving future fertility?

- A) An estrogen-progestin oral contraceptive
- B) Tranexamic acid (Lysteda)
- C) A levonorgestrel IUD (Mirena)
- D) Uterine artery embolization
- E) Endometrial ablation

89. A 70-year-old male with a COPD exacerbation is found to have a sodium level of 127 mEq/L (N 135–145). He is alert and oriented although he is in mild respiratory distress. After an appropriate evaluation, you determine that he has euvolemic hyponatremia from the syndrome of inappropriate secretion of antidiuretic hormone (SIADH), due to his worsening lung disease.

Aside from addressing his COPD, which one of the following is the most appropriate initial treatment for his hyponatremia?

- A) Fluid restriction
 - B) Salt restriction
 - C) Hypertonic saline
 - D) Furosemide (Lasix)
 - E) Tolvaptan (Samsca)
90. A 70-year-old male presents with an acutely painful, swollen right knee that developed over 2–3 days without any known cause. There is no other joint pain. He has had similar, less severe episodes off and on in the past. He feels well otherwise and has not had any fever, chills, or rash.

Examination of other joints is negative except for some degenerative changes of the distal interphalangeal joints of the fingers. Examination of the right knee is notable for warmth, redness, diffuse tenderness, and swelling. There is no evidence of knee instability, meniscal injury, or trauma. A knee x-ray shows soft-tissue swelling and chondrocalcinosis (calcification of the cartilage). Knee aspiration is performed and a synovial fluid Gram stain is negative for bacteria with other results pending.

Which one of the following is the most likely explanation for these knee findings?

- A) Calcium pyrophosphate deposition disease (pseudogout)
- B) Gout
- C) Osteoarthritis
- D) Psoriatic arthritis
- E) Septic arthritis

91. A 63-year-old male presents to your office because of intermittent chest pain with exertion. He has been building a new deck and noted the onset of chest pain following particularly intense workdays. He reports that the pain always resolves with rest, and he has not noticed any lower extremity edema or difficulty breathing. His past medical history is notable only for hypertension and coronary artery disease diagnosed 3 years ago. His current medications include atorvastatin (Lipitor), 40 mg daily; lisinopril (Zestril), 10 mg daily; and aspirin, 81 mg daily.

His vital signs include a weight of 80 kg (176 lb), a height of 178 cm (70 in), a blood pressure of 138/78 mm Hg, a pulse rate of 80 beats/min, a respiratory rate of 12/min, and an oxygen saturation of 96% on room air. A physical examination is normal. An EKG reveals normal sinus rhythm without ST-segment, T-wave, or Q-wave abnormalities.

In addition to prescribing as-needed, immediate-release nitroglycerin, which one of the following would be the most appropriate pharmacotherapy at this time?

- A) Diltiazem (Cardizem LA), 180 mg daily
 - B) Ezetimibe (Zetia), 10 mg daily
 - C) Isosorbide mononitrate, 30 mg daily
 - D) Metoprolol succinate (Toprol-XL), 100 mg daily
 - E) Ranolazine (Ranexa), 500 mg twice daily
92. A 23-year-old graduate student presents to establish care at your office with a 2-week history of symptoms consistent with a major depressive episode. She reports being given a diagnosis of unipolar depression at age 16. For several years, she managed her symptoms effectively with psychotherapy alone. Last year, she was hospitalized for an initial episode of mania with psychotic features and was treated successfully with lithium and risperidone (Risperdal). After returning to her graduate studies 1 month later, she maintained a 9-month period of euthymia on lithium monotherapy before her recent major depressive symptoms began. She does not have any history of recreational drug use. A physical examination, CBC, comprehensive metabolic panel, and TSH level are all normal, and a urine pregnancy test is negative.

According to the *DSM-5*, her mood disorder diagnosis is

- A) bipolar I disorder
 - B) bipolar II disorder
 - C) bipolar disorder, not otherwise specified
 - D) cyclothymia
 - E) schizoaffective disorder
93. Which one of the following is most appropriate for treatment of respiratory syncytial virus (RSV) bronchiolitis in otherwise healthy hospitalized infants?
- A) Supportive care including as-needed oxygen and frequent nasal hygiene
 - B) Inhaled bronchodilators
 - C) Nebulized hypertonic saline every 4 hours
 - D) Systemic corticosteroids
 - E) Chest physiotherapy three times a day

94. A 94-year-old male with Alzheimer disease, heart failure, and chronic low back pain is brought to your office by his daughter who cares for him in her home. The daughter is interested in any support available for her father, and she asks specific questions about palliative care and hospice.

Which one of the following is needed to qualify for palliative care?

- A) An advance directive
- B) A do-not-resuscitate status
- C) A life expectancy < 6 months
- D) Pain
- E) Serious illness

95. A 52-year-old male presents to your office because of increasing difficulty hearing conversations in social settings over the past 6 months. On examination the finger rub test is positive on the left ear. A Rinne test is positive on the left ear and negative on the right ear. A Weber test lateralizes to the left ear.

Which one of the following is the most likely etiology of this patient's hearing loss?

- A) Conductive hearing loss
- B) Sensorineural hearing loss
- C) Meniere disease
- D) Ototoxic medication
- E) Presbycusis

96. A 45-year-old male with no past medical history presents to the urgent care clinic with hematuria and left-sided intermittent flank and inguinal pain. He has mild nausea but does not have any vomiting, fever, or other urinary symptoms. His vital signs are normal. He appears uncomfortable, but a physical examination is otherwise unremarkable. A urinalysis shows RBCs but no signs of infection. Same-day noncontrast CT shows a 3.5-mm left-sided ureteral stone. This is his first kidney stone.

In addition to encouraging oral hydration and pain control with NSAIDs, which one of the following would be appropriate in the management of this ureteral stone?

- A) Observation only
- B) Oral allopurinol (Zyloprim)
- C) Oral cephalexin
- D) Intravenous hydration with 2 L of lactated Ringer solution
- E) Referral for surgical stone removal

97. A 47-year-old male presents to your office concerned about his “ugly” toenails. On examination you note that all of his toenails are discolored, thickened, and brittle. He was evaluated by a dermatologist and has been using topical ciclopirox 8% for 7 months. He does not recall any allergies to any medications.

After confirming your suspected diagnosis with a sample from the affected toenails, which one of the following would be the most appropriate oral pharmacotherapy?

- A) Fluconazole (Diflucan)
- B) Griseofulvin
- C) Pulse dosing with itraconazole (Sporanox)
- D) Continuous itraconazole
- E) Terbinafine

98. A 45-year-old female presents with a 1-week history of pain at the base of her anterior neck radiating to her right jaw. Prior to the onset of pain she had a sore throat, fever, and body aches. These symptoms resolved and the neck pain started. She now reports palpitations and excessive sweating.

Her vital signs include a pulse rate of 110 beats/min, a blood pressure of 140/83 mm Hg, and a normal temperature. On examination she appears uncomfortable and diaphoretic. An HEENT examination is unremarkable and you note no cervical lymphadenopathy. Her thyroid is tender and mildly enlarged. A cardiac examination shows tachycardia with no murmurs.

Laboratory studies reveal a normal CBC, an erythrocyte sedimentation rate of 55 mm/hr (N 0–29), and a TSH level of 0.21 μ U/mL (N 0.5–5.0). Total T_3 and free T_4 levels are within the normal range. You order a radioactive iodine uptake scan, which shows diffusely low iodine uptake in her thyroid.

In addition to a β -blocker, which one of the following would be most appropriate at this point?

- A) Ibuprofen, 800 mg three times daily
- B) Levothyroxine (Synthroid), 50 μ g daily
- C) Methimazole, 5 mg three times daily
- D) Prednisone, 40 mg daily
- E) Vancomycin, 20 mg/kg intravenously every 12 hours

99. You recently initiated treatment for hypertension in a 65-year-old male. One week later his creatinine level has increased from 1.2 to 2.4 mg/dL (N 0.6–1.2). You consider renal artery stenosis as an etiology because you are treating his hypertension with which one of the following medications?

- A) Amlodipine (Norvasc)
- B) Chlorthalidone
- C) Lisinopril (Zestril)
- D) Metoprolol
- E) Spironolactone (Aldactone)

100. Your office staff proposes a practice improvement project to create a transgender-friendly clinical environment. Which one of the following interventions would help promote this goal?

- A) Ensuring that intake forms and records use gender-neutral or inclusive language
- B) Offering preventive services based on expressed gender only
- C) Offering referral to a transgender clinic to all patients
- D) Polling the staff to see if any of them are transgender

101. A 6-year-old female is brought to your office because of a 3-day history of productive cough, fever, and chills. She has not had any shortness of breath, wheezing, sore throat, or rash. Her past medical history is significant for mild intermittent asthma and seasonal allergies, treated with albuterol (Proventil, Ventolin), fluticasone furoate (Flonase Sensimist), and cetirizine (Children's Zyrtec Allergy). She is up to date on recommended vaccinations. Her vital signs include a temperature of 39.0°C (102.2°F), a pulse rate of 98 beats/min, a respiratory rate of 25/min, and an oxygen saturation of 98% on room air. Her weight today is 20 kg (44 lb). A pulmonary examination is notable for rhonchi in the right lung fields. A chest radiograph is shown below. A rapid COVID-19 test is negative.

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

- A) Amoxicillin
- B) Azithromycin (Zithromax)
- C) Doxycycline
- D) Levofloxacin
- E) Oseltamivir (Tamiflu)

102. A 63-year-old female presents with pain in her right hand. She states that for 3 months she has experienced a catching sensation and her ring finger occasionally locks into a claw-like form. On examination a nodule is palpated and her pain is localized to the volar surface of the metacarpophalangeal joint on her ring finger. When instructed to clench her fist and subsequently release, her ring finger remains in a flexed position.

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

- A) Buddy taping
- B) Transcutaneous electrical nerve stimulation (TENS) unit therapy
- C) Corticosteroid injection
- D) Physical therapy
- E) Surgical release



Item #101

- 103.** A 12-year-old female with Down syndrome is brought to your office by her parents to establish care after recently moving to the area. Which one of the following laboratory studies should you routinely check on an annual basis?
- A) A TSH level only
 - B) A lipid panel only
 - C) A CBC with differential and a lipid panel
 - D) A CBC with differential, and TSH and IgA tissue transglutaminase (tTG) levels
 - E) A CBC with differential, and serum iron, total iron-binding capacity, and TSH levels
- 104.** A 45-year-old male sees you for a routine health maintenance examination. You screen him for hepatitis C. A hepatitis IgG antibody is positive but on reflex testing there is no detectable viral RNA. When discussing the test results with him, he reports past use of injected opioids and intermittent use of cocaine. To his knowledge he has never been diagnosed with viral hepatitis.

Regarding hepatitis C, the patient's history and test results indicate

- A) current infection with need for treatment
 - B) exposure less than 2 weeks prior to screening
 - C) a false-positive result
 - D) previous infection with immunity to future infection
 - E) previous infection with susceptibility to future infection
- 105.** An 18-year-old female with a BMI of 21 kg/m² sees you for evaluation of recent hair loss and amenorrhea. During the review of systems she tells you that she thinks she is fat and reveals that she recently went on a restrictive diet and lost 15% of her body weight. On examination she is ill appearing, and her affect is blunted. Her blood pressure is 90/60 mm Hg and her heart rate is 50 beats/min. Laboratory testing reveals euthyroid sick syndrome and a decreased serum calcium level. Bone mineral density (BMD) testing shows bone loss. You refer her for extensive psychologic intervention.

Once this patient begins showing signs of improvement, the best indication for recovery of BMD would be

- A) increased food intake
- B) a normal calcium level
- C) normal thyroid studies
- D) the return of menses
- E) weight restoration

- 106.** A 19-year-old male presents with a 3-day history of fever, fatigue, and sore throat. He states that his girlfriend has been experiencing similar symptoms for the past couple of weeks. His past medical history is unremarkable. His vital signs include a temperature of 38.3°C (100.9°F), a heart rate of 92 beats/min, and a respiratory rate of 18/min. On examination you note tonsillar erythema, palatal petechiae, and anterior and posterior cervical lymphadenopathy. An abdominal examination reveals splenomegaly. A rapid streptococcal test is negative and a heterophile antibody test is positive. A CBC with differential demonstrates atypical lymphocytes.

Which one of the following would be the most appropriate pharmacotherapy for this patient's condition?

- A) Amoxicillin
- B) Dexamethasone
- C) Foscarnet (Foscavir)
- D) Ibuprofen
- E) Valacyclovir (Valtrex)

- 107.** A 70-year-old male with hypertension sees you because of a syncopal episode. During the examination you ask him to move from a supine position to standing.

Which one of the following results of this maneuver would confirm a diagnosis of orthostatic hypotension?

- A) He becomes lightheaded
- B) He feels chest pain
- C) His systolic blood pressure decreases by at least 10 mm Hg
- D) His systolic blood pressure decreases by at least 20 mm Hg

- 108.** A 55-year-old male presents to your clinic for evaluation of COPD. He has a history of tobacco use and quit smoking 2 years ago. He reports occasional symptoms that limit his activities but has not had any exacerbations or hospitalizations. Pulmonary function tests indicate an FEV₁/FVC ratio <0.7 and an FEV₁ of 75%. His vital signs are normal.

Which one of the following would be the most appropriate initial pharmacotherapy?

- A) Budesonide/formoterol (Symbicort)
- B) Ipratropium (Atrovent)
- C) Levalbuterol
- D) Tiotropium (Spiriva)
- E) Umeclidinium/vilanterol (Anoro Ellipta)

- 109.** A 56-year-old female comes to your office because she thinks she has a herniated disc in her lower back causing sciatica. She has electric pain shooting down her left leg all the way to her toes, and she requests MRI to see if she needs surgery. She has not had any injury, saddle anesthesia, or changes in bowel or bladder habits. On examination she has 2+ symmetric deep tendon reflexes of the lower extremities, a negative bilateral straight leg raising test, and a positive log roll test. Her pain is worse with external rotation of the left hip. You suspect piriformis syndrome.

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

- A) Reassurance only
- B) MRI of her lumbar spine
- C) Injection of the piriformis muscle with a corticosteroid and local anesthetic
- D) Referral to a physical therapist
- E) Referral to an orthopedic surgeon

- 110.** A 35-year-old female presents to your office after a recent trip to Brazil. She tells you that she has developed an extremely pruritic rash that started on her face and has spread to her trunk and limbs. In addition, she reports a headache, arthralgias, and myalgias. On examination you note a diffuse scarlatiniform rash, conjunctivitis, and small petechiae on the palate. She is afebrile.

Which one of the following is the most likely diagnosis?

- A) Chikungunya virus
- B) Dengue virus
- C) West Nile virus
- D) Yellow fever
- E) Zika virus

- 111.** You diagnose hand-foot-and-mouth disease in a 5-year-old male. His parents ask when he can return to kindergarten.

You advise that if he feels well enough to participate, he may return

- A) 5 days after the onset of symptoms
- B) when afebrile and there are no mouth sores causing drooling
- C) when afebrile as long as all skin lesions can be covered with a dressing
- D) when afebrile and all skin lesions have crusted over

- 112.** A 35-year-old female with previously regular menses presents with a 3-month history of amenorrhea, hot flashes, and increased irritability. A pregnancy test is negative, an estrogen level is low, and an FSH level is markedly elevated. There is no change in repeat testing 1 month later and you make a diagnosis of primary ovarian insufficiency. Further testing does not reveal a cause for her condition. She does not desire more children.

Which one of the following should you recommend to this patient for hormone replacement therapy?

- A) No treatment
- B) Transdermal estradiol without progestogen
- C) Continuous oral estradiol without progestogen
- D) Continuous oral estradiol and cyclic progestogen
- E) Continuous oral estradiol and a levonorgestrel IUD (Mirena)

- 113.** A 40-year-old male presents to the urgent care clinic with a 2-day history of a progressive inability to walk. His husband is concerned that he has Guillain-Barré syndrome.

Which one of the following, if present in this patient, would be concerning for Guillain-Barré syndrome?

- A) Afferent pupillary defect
- B) Asymmetric flaccid weakness
- C) Muscle spasticity
- D) Nystagmus
- E) Symmetric hyporeflexia

- 114.** You are instructing a new medical assistant in preordering laboratory studies for upcoming patients. You have a series of patients with appointments for physical examinations in the next week.

Based on U.S. Preventive Services Task Force guidelines, which one of the following patients should have a screening fasting glucose level or hemoglobin A_{1c}?

- A) A 24-year-old female with a BMI of 26 kg/m²
- B) A 36-year-old male with a BMI of 27 kg/m²
- C) A 52-year-old female with a BMI of 22 kg/m²
- D) A 72-year-old male with a BMI of 32 kg/m²
- E) An 84-year-old female with a BMI of 40 kg/m²

- 115.** A randomized, controlled study of 300 participants tested the effectiveness of a new medication to reduce breast cancer–related deaths. Within 2 years of treatment, 15 out of 150 participants with breast cancer in the treatment group died, while 60 out of the 150 participants in the control group died.

Based on this study, what is the number needed to treat to prevent one breast cancer–related death?

- A) 2
- B) 3
- C) 5
- D) 10
- E) 15

- 116.** An 88-year-old female is admitted to the hospital with a hip fracture after tripping and falling, and her orthopedist recommends surgery. You are consulted for co-management and risk stratification prior to surgery.

The patient has a history of controlled blood pressure and had a coronary artery bypass graft 10 years earlier. She is not experiencing any cardiac symptoms or syncope.

The most appropriate intervention would be operative management within how many hours?

- A) 48
- B) 60
- C) 72
- D) 84
- E) 96

- 117.** A 42-year-old male presents for evaluation of a persistent cough. Three weeks ago, he developed a runny nose, dry cough, and generalized malaise without fever. One week later, he began to develop persistent fits of coughing followed by bouts of posttussive emesis. You suspect pertussis.

Which one of the following laboratory tests should be used to confirm your diagnostic suspicion?

- A) Culture
- B) Direct fluorescent antibody assay
- C) Polymerase chain reaction (PCR)
- D) Serology for IgG

118. A 9-year-old male has persistent severe depression despite cognitive behavioral therapy. Which one of the following medications is approved by the FDA for the treatment of major depressive disorder in this age group?

- A) No antidepressant medications
- B) Bupropion (Wellbutrin)
- C) Escitalopram (Lexapro)
- D) Fluoxetine (Prozac)
- E) Sertraline (Zoloft)

119. A 52-year-old male sees you for follow-up after a recent right-sided ischemic stroke. The evaluation in the hospital demonstrated an unremarkable cardiac workup, an LDL-cholesterol level of 110 mg/dL, and a right internal carotid artery stenosis of 45%. His blood pressure today is 120/75 mm Hg and an examination is notable for some residual right-sided facial weakness. His current medications are aspirin, clopidogrel (Plavix), and hydrochlorothiazide.

Which one of the following would be most likely to reduce his risk for a secondary stroke?

- A) Atorvastatin (Lipitor)
- B) Losartan (Cozaar)
- C) Warfarin
- D) Carotid endarterectomy

120. A 48-year-old male presents to the emergency department for an initial episode of acute gallstone pancreatitis with a lipase level of 700 U/L (N 10–140). A right upper quadrant ultrasound shows gallstones within the gallbladder but is otherwise normal. He is treated with intravenous fluids and medications to control pain and nausea, and is admitted to a regular medical floor bed. The next morning he reports that his symptoms are improving with oral medications. A physical examination is notable for normal vital signs and mild epigastric tenderness. A comprehensive metabolic panel shows improving leukocytosis and stable parameters including a normal bilirubin level.

Which one of the following management options is most appropriate in this situation?

- A) Rechecking a serum lipase level and starting oral feeding if the result is normal
- B) Initiating enteral feeding through a nasojejunum tube
- C) Initiating parenteral feeding through an intravenous line
- D) Consulting a gastroenterologist for endoscopic retrograde cholangiopancreatography (ERCP)
- E) Consulting a general surgeon for cholecystectomy during this admission

121. Which one of the following supplements has been associated with an increased risk of lung cancer in people who smoke?

- A) β -Carotene
- B) Magnesium
- C) Vitamin B₂
- D) Vitamin B₁₂
- E) Vitamin C

122. A 35-year-old female presents with a 2-week history of right posteromedial foot and ankle pain. The pain began during a vacation that included several days of sightseeing and hiking. She does not have a history of acute injury or trauma. Her pain is worse with weight bearing and improves with relative rest and ibuprofen use.

A physical examination reveals soft-tissue swelling and tenderness along the posterior edge of the medial malleolus into the medial arch of the foot. Standing alignment, range of motion, a strength assessment, and neurovascular testing are normal. Her symptoms are unchanged by gentle, repetitive tapping over the posteromedial ankle.

Which one of the following is the most likely diagnosis?

- A) A deltoid ligament sprain
- B) A medial malleolar stress fracture
- C) Peroneal tendinopathy
- D) Posterior tibialis tendinopathy
- E) Tarsal tunnel syndrome

123. A 25-year-old male with no significant past medical history comes to your office to establish care. A physical examination reveals a cardiac murmur that has not been documented previously.

Which one of the following findings would be most concerning for hypertrophic cardiomyopathy as the cause of his murmur?

- A) A diastolic murmur that increases in the left lateral decubitus position
- B) A systolic murmur that increases with an isometric handgrip
- C) A systolic murmur that increases when moving from squatting to standing
- D) A systolic murmur that decreases with the Valsalva maneuver
- E) A fixed split of the second heart sound

124. A 32-year-old female contacts you through the patient portal regarding a 5-day history of symptoms consistent with acute rhinosinusitis. Which one of the following treatment recommendations would be in alignment with current recommendations from the Infectious Diseases Society of America?

- A) Symptomatic treatment only
- B) Amoxicillin
- C) Amoxicillin/clavulanate (Augmentin)
- D) Azithromycin (Zithromax)
- E) Levofloxacin

125. You provide care for a 65-year-old female who has metastatic breast cancer. She would like to consider simple treatments and/or admissions, but wishes to avoid any further surgeries, heroic procedures, transfers to the ICU, or intubation.

Which one of the following forms should you recommend as most beneficial for directing her end-of-life care?

- A) Cardiopulmonary resuscitation (CPR) directives
- B) A living will
- C) A medical power of attorney
- D) Physician Orders for Life-Sustaining Treatment (POLST)

126. A 60-year-old female comes to your office several weeks after an emergency department (ED) visit for ureteral colic. At that time, a comprehensive metabolic panel was normal except for a calcium level of 10.6 mg/dL (N 8.6–10.5). An ionized calcium level was also elevated. A urinalysis showed 20 RBCs/hpf but a urine culture was negative. CT of the abdomen and pelvis demonstrated a 4-mm radiopaque calculus in the distal ureter but no other abnormality. She was treated with analgesics and tamsulosin (Flomax) and passed the stone several days later.

She currently has no urinary or gastrointestinal symptoms. This is her third episode of ureterolithiasis in the past 5 years.

Which one of the following would be the most appropriate test to order next?

- A) An intact parathyroid hormone level
- B) A 24-hour urine sample for calcium
- C) A TSH level
- D) Repeat urinalysis and urine culture
- E) Renal ultrasonography

127. A 30-year-old female reports that a new male sex partner told her that he has a urethral chlamydial infection. She has no symptoms, but testing with an endocervical swab confirms that she is also infected with *Chlamydia*. No other sexually transmitted infections are identified. She is not allergic to any medications.

Which one of the following would be the most appropriate treatment regimen for her?

- A) Oral azithromycin (Zithromax), 1 g once
- B) Oral cefixime (Suprax), 800 mg once
- C) Oral doxycycline, 100 mg twice daily for 7 days
- D) Oral levofloxacin, 500 mg daily for 7 days
- E) Intramuscular ceftriaxone, 500 mg once

- 128.** A 45-year-old female who lives in southern Florida presents to the urgent care clinic after a suspected spider bite. She was cleaning up some debris on her patio when she felt a pinprick on her right lower extremity and saw a spider crawl off her leg. The spider was shiny, with a dark-colored body and a red hourglass shape on its abdomen. She developed pain around the bite area. She applied ice to the wound, but the pain has persisted and comes in waves. She currently rates her pain as 4 points on a 10-point scale.

The patient is up to date on her tetanus vaccination and is unaware of any allergies. Her vital signs are stable. She is not experiencing any chest pain, chest tightness, tachycardia, abdominal pain, or muscle spasms. A physical examination reveals a small target lesion on her right lateral malleolus, with some erythema and swelling at the site. The remainder of the physical examination is unremarkable.

The most appropriate initial step in management would be

- A) oral analgesia with NSAIDs
 - B) calcium and magnesium
 - C) parenteral opioids
 - D) antivenom
 - E) hospital admission
- 129.** A 48-year-old female with alcohol use disorder presents to your clinic 2 days after she has stopped drinking alcohol. She reports some mild anxiety, sweating, and insomnia. On examination her vital signs are stable and she does not have a tremor. She has no history of alcohol withdrawal-related seizures or delirium.

Which one of the following medications is most appropriate for treating her alcohol withdrawal syndrome?

- A) Atenolol (Tenormin)
- B) Chlordiazepoxide
- C) Diazepam (Valium)
- D) Gabapentin (Neurontin)
- E) Valproate

130. A 63-year-old retired banker presents for follow-up of diabetes mellitus. He has an 8-year history of diabetes and started metformin 7 years ago. His hemoglobin A_{1c} gradually worsened and glipizide (Glucotrol) was added 6 months ago. Since starting this medication he has had episodes of symptomatic hypoglycemia twice per week. His weight has been increasing and his current BMI is 29 kg/m². At the office visit today his hemoglobin A_{1c} is 7.7%. He tells you that his uncle with diabetes recently died from heart disease.

You discuss discontinuing glipizide since it is causing hypoglycemic episodes. He wants to remain on oral medications and does not want to start any medications that will make it harder to lose weight.

Given his priorities, which one of the following would be the most appropriate recommendation for this patient?

- A) No additional medications
 - B) Glyburide
 - C) Insulin glargine (Lantus)
 - D) Semaglutide (Rybelsus)
 - E) Sitagliptin (Januvia)
131. A 9-year-old child is brought to your office for evaluation of right wrist pain after a fall from a swing at recess this morning. On examination you note tenderness and swelling over the lateral aspect of the distal radius. Radiographs are shown below.

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

- A) A cock-up wrist splint
 - B) A double sugar-tong splint
 - C) A figure-of-8 sling
 - D) A short arm cast
 - E) A long arm cast
132. A 57-year-old male sees you for follow-up of a first episode of a distal deep vein thrombosis (DVT). He is currently taking apixaban (Eliquis) and has had no complications. He has no past medical history, including surgery or hospitalization, and he has not traveled recently. His vital signs today include a heart rate of 70 beats/min and a blood pressure of 118/76 mm Hg. His BMI is 32 kg/m². A physical examination is otherwise unremarkable.

Which one of the following would be the most appropriate duration of treatment for an unprovoked first DVT?

- A) No treatment
- B) 6 weeks
- C) 3 months
- D) 6 months
- E) Indefinite



Item #131

133. An 82-year-old male requires a walker for ambulation. To be eligible for home health services, Medicare requires a patient to be homebound. The patient reports that leaving home is difficult and exhausting.

Which one of the following conditions could disqualify a patient from being considered homebound?

- A) Attending a support group at an adult day care program two times per week
- B) Going to the grocery store three times per week
- C) Attending his church for Mass three times per week
- D) Going to outpatient dialysis three times per week

134. A 39-year-old male presents during influenza season with symptoms of nasal congestion and sore throat associated with a cough. He is most bothered by his severe laryngitis, and is concerned about a planned conference where he will be speaking next week. He would like the symptoms to resolve quickly, and is being proactive so it does not lead to pneumonia. His symptoms started 5 days ago and have been constant. He had a fever of 100°F for the first 3 days.

On examination he has a fever, appears tired and mildly ill, and has a red pharynx and a very hoarse voice. The remainder of the examination is normal.

Which one of the following should you recommend for management of this patient's condition?

- A) Reassurance and vocal rest
- B) Inhaled fluticasone (Flovent)
- C) Amoxicillin/clavulanate (Augmentin)
- D) Levofloxacin
- E) Oseltamivir (Tamiflu)

135. A 42-year-old male presents with a 2-day history of right lower quadrant pain, fever, nausea, and anorexia. His medical history is remarkable for hypertension treated with lisinopril (Zestril), type 2 diabetes managed without medication, microalbuminuria, and stage 3 chronic kidney disease with an estimated glomerular filtration rate of 48 mL/min/1.73 m². He has not had any previous surgeries. An examination is remarkable for tenderness in the right lower quadrant. You order a CBC, urinalysis, and metabolic panel.

To complete the initial workup, which one of the following would be the most appropriate imaging modality in this situation?

- A) Ultrasonography
- B) CT without contrast
- C) CT with oral contrast
- D) CT with intravenous contrast
- E) MRI with intravenous contrast

136. Which one of the following is the hallmark of proliferative diabetic retinopathy?

- A) Blot hemorrhages
- B) Cotton-wool spots
- C) Drusen
- D) Macular edema
- E) Neovascularization

137. You have recently acquired several patients from a retiring colleague. These patients have been using topical corticosteroids over a prolonged period of time.

Which one of the following patient groups is at highest risk for adverse systemic reactions to prolonged topical corticosteroid use?

- A) Children
- B) Young adults
- C) Middle-aged adults
- D) Pregnant women
- E) Breastfeeding women

138. A 13-year-old female with a peanut allergy is brought to the urgent care clinic 15 minutes after she was inadvertently exposed to a peanut butter sandwich while at a friend's house. She develops swelling of the tongue, wheezing, and difficulty breathing.

Which one of the following should be administered at this time?

- A) Subcutaneous epinephrine
- B) Intramuscular epinephrine
- C) Intravenous epinephrine
- D) Intravenous dexamethasone
- E) Intravenous diphenhydramine

139. A previously healthy 58-year-old female sees you for evaluation of increased hair growth on her face and a weight gain of 18 kg (40 lb) over the past year. An examination is significant for a blood pressure of 155/98 mm Hg, a BMI of 34 kg/m² with a truncal obesity pattern, striae on the sides of the torso and lower abdomen, marked hirsutism, and a rounded, swollen facial appearance. A urine pregnancy test is negative. Liver and renal function tests are normal, as are TSH, electrolyte, testosterone, and DHEA levels. A hemoglobin A_{1c} is 6.2%.

Which one of the following would be most useful to diagnose the condition suggested by this patient's presentation?

- A) A 24-hour urinary free cortisol level
- B) 24-hour urinary metanephrines
- C) ACTH stimulation testing
- D) FSH and LH levels
- E) Plasma renin activity testing and an aldosterone level

140. According to the 2022 American Academy of Family Physicians clinical practice guideline, treatment to a blood pressure target of <135/85 mm Hg in adults who have hypertension reduces which one of the following?

- A) All-cause mortality
- B) Cardiovascular mortality
- C) Risk of myocardial infarction
- D) Risk of stroke

141. A 55-year-old male with oxygen-dependent COPD plans to visit family 2000 miles away. For the last year, his COPD has been well controlled on medications and oxygen at 2 L/min. He wants to travel by commercial airline.

Which one of the following would be the most appropriate advice for this patient regarding air travel?

- A) Choosing another mode of transit
- B) Flying first class only
- C) Continuing his oxygen flow rate at 2 L/min during the flight
- D) Lowering his oxygen flow rate to 1 L/min during the flight
- E) Doubling his oxygen flow rate to 4 L/min during the flight

142. Which one of the following is the most appropriate initial management for patients with patellofemoral pain syndrome?

- A) A medial unloading knee brace
- B) Exercise therapy
- C) Intra-articular corticosteroid injection
- D) Confirmation of the diagnosis with MRI
- E) Referral for knee arthroscopy

143. A 51-year-old male presents to your office with right arm weakness. He has a history of multiple sclerosis (MS) with infrequent flares only. His MS is managed with interferon as the long-term disease-modifying therapy. After a thorough history and examination, you diagnose a flare of MS.

In addition to notifying his neurologist, which one of the following would be the most appropriate next step?

- A) Doubling his dosage of interferon for 5 days
- B) Initiating high-dose aspirin
- C) Initiating corticosteroids
- D) Ordering plasmapheresis
- E) Referral to physical therapy

144. You are preparing to inform a patient of a diagnosis of terminal metastatic cancer. When sharing bad news with a patient, which one of the following is the most appropriate next step?

- A) Selecting which information to share with the patient
- B) Asking the family what the patient knows
- C) Obtaining the patient's permission to discuss the diagnosis
- D) Explaining palliative care
- E) Informing the patient about hospice

145. A 56-year-old female with type 2 diabetes is hospitalized with acute epigastric pain, nausea, and vomiting. She reports that several of her diabetes medications were recently changed. Findings on physical examination and laboratory studies are consistent with acute pancreatitis.

Which one of the following classes of medications is the most likely cause?

- A) Biguanides
- B) GLP-1 receptor agonists
- C) Insulin
- D) SGLT2 inhibitors

146. A young adult who has been one of your patients for several years begins to exhibit symptoms of a thought disorder, and you are concerned about schizophrenia. In a review of the diagnostic criteria for schizophrenia, your resources refer to positive and negative symptoms.

Which one of the following is a negative symptom associated with schizophrenia?

- A) Delusions
- B) Depression
- C) Disorganized speech
- D) Hallucinations
- E) Reduced speech

147. A 17-year-old high school football player presents the Monday after a weekend game during which he attempted a tackle and caught his left ring finger on his opponent's uniform. On examination he has mild swelling and tenderness over the volar aspect of the affected finger, and he is unable to actively flex the distal interphalangeal joint. Plain radiographs demonstrate no bony trauma.

Which one of the following management options would be most appropriate?

- A) Early referral to occupational therapy for exercises to restore active range of motion
- B) Corticosteroid injection into the flexor tendon sheath to restore active range of motion
- C) Two weeks of immobilization in flexion, followed by buddy taping to the middle finger
- D) Six weeks of full-time immobilization in an extension splint
- E) Urgent referral to an orthopedist for surgical repair of the flexor tendon

- 148.** A 55-year-old male with a 10-pack-year history of smoking as a young adult sees you for follow-up after a recent hospitalization for community-acquired right lower lobe pneumonia. His symptoms resolved after standard antibiotic treatment.

Which one of the following should you recommend regarding follow-up radiography?

- A) No follow-up chest imaging
- B) A standard chest radiograph 2 weeks after treatment
- C) A standard chest radiograph 6 weeks after treatment
- D) Standard chest CT 6 weeks after treatment
- E) Low-dose chest CT 12 weeks after treatment and again in 1 year

- 149.** A 42-year-old female sees you for follow-up 6 weeks after starting treatment for *Helicobacter pylori*. She was diagnosed with the urea breath test. She completed her antibiotic regimen as prescribed and stopped her proton pump inhibitor (PPI) 2 weeks ago. She is symptom free.

Which one of the following is the recommended next step?

- A) Repeating the *H. pylori* urea breath test
- B) Ordering *H. pylori* serology
- C) Resuming PPI therapy
- D) Screening for colon cancer
- E) Screening for a peptic ulcer

- 150.** A 74-year-old patient presents to your office for medical clearance for an upcoming surgery. In addition to basic laboratory studies requested by the surgeon, you obtain an EKG (shown below).

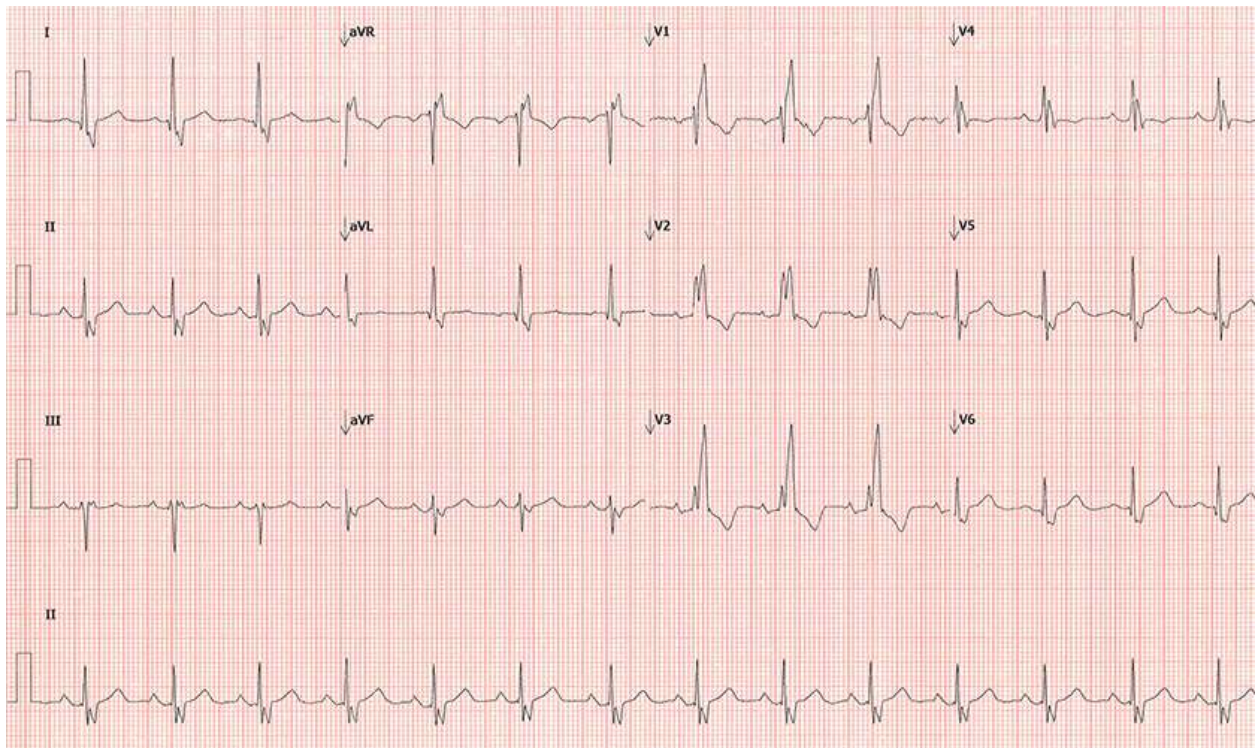
The EKG is most consistent with which one of the following?

- A) Left bundle branch block
- B) Right bundle branch block
- C) Right ventricular hypertrophy
- D) Paced rhythm
- E) Wolff-Parkinson-White syndrome

- 151.** A 72-year-old female with a history of hypertension, previous stroke with no residual deficits, and mild cognitive impairment presents for an annual health maintenance examination. Her documented weight 6 months ago was 79 kg (174 lb) and her current weight is 73 kg (161 lb). She is sedentary and has not changed her diet.

Which one of the following is true about this patient's condition?

- A) It is associated with increased mortality
- B) It is associated with a lower risk of cardiovascular disease
- C) More than 50% of patients with this condition will be diagnosed with a malignancy
- D) High-calorie dietary supplements are recommended as primary treatment
- E) Medications do not contribute to her condition



Item #150

- 152.** A 27-year-old gravida 2 para 2 presents because of tenderness in her left lower breast, which she first noticed this morning. Three weeks ago she vaginally delivered an 8 lb 1 oz infant. She breastfed her first child for 10 months and initiated breastfeeding after this delivery without difficulty. Currently she is feeding her infant on cue about every 2–4 hours. On examination she has 4 cm of focal tenderness at 6 o'clock on the breast with no skin erythema. Her vital signs include a temperature of 37.0°C (98.6°F), a pulse rate of 84 beats/min, and a blood pressure of 118/72 mm Hg.

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

- A) A trial of conservative management of breastfeeding on cue and analgesics
 - B) Expressing breast milk by hand every 1½ hours to keep the breast emptied
 - C) Expressing breast milk with a breast pump hourly to keep the breast emptied
 - D) Amoxicillin/clavulanate (Augmentin), 875/125 mg twice daily for 5 days; plus pumping and discarding the breast milk
 - E) Cephalexin, 500 mg four times daily for 7 days; plus pumping and discarding the breast milk
- 153.** Since the United States began fortifying grains with folic acid, which one of the following birth defects has declined?
- A) Anencephaly
 - B) Cleft lip
 - C) Down syndrome
 - D) Omphalocele
 - E) Tetralogy of Fallot
- 154.** A 36-year-old male presents to the urgent care clinic 2 days after he fell on his outstretched arm while snow skiing. He waited until his return home to seek evaluation and treatment. On presentation to your clinic he reports pain located in the deltoid region that is exacerbated when lifting the arms overhead. The pain is so severe that it awakens him at night. Examination of the shoulder demonstrates weakness with external rotation, internal rotation, and abduction. The empty can and drop arm tests are positive. Initial shoulder radiographs are negative.

Based on the presentation and examination, which one of the following would be the most appropriate next step in management?

- A) Rest, ice, compression, elevation, and home exercises
- B) NSAIDs and physical therapy
- C) Corticosteroid injection
- D) MRI

- 155.** A 5-year-old female is brought to the emergency department by her parents after her temperature increases to 104°F. On examination she has noticeable inspiratory stridor. She is restless and drooling, and her voice is muffled. In spite of the nurse's repeated efforts to get the child to lie back, the patient continues to sit forward in a sniffing position. Her parents indicate that they have declined vaccinations for the patient since leaving the hospital after delivery.

Which one of the following is the most important next step in management?

- A) Supplemental oxygen by nasal cannula
 - B) Intravenous fluids
 - C) Arterial blood gas measurement
 - D) A CBC
 - E) Direct visualization of the epiglottis in the operating room
- 156.** An 8-year-old female is brought to your office by her parents for follow-up 6 months after you recommended a DASH diet and 1 hour of physical play daily to address her BMI and blood pressure, which were both greater than the 95th percentile for her age and height. Her mother also has a history of obesity and hypertension. The patient otherwise has an unremarkable past medical history. Although she has lost 1.4 kg (3 lb) her blood pressure remains at 125/77 mm Hg. You diagnose stage 1 hypertension and recommend management with medication.

In addition to a CBC; electrolyte, BUN, and creatinine levels; a urinalysis; and a lipid panel, you recommend

- A) no further testing
 - B) serum or urine catecholamine measurement
 - C) renal Doppler ultrasonography
 - D) CT angiography of the kidneys
 - E) echocardiography
- 157.** For a patient presenting for follow-up of monoclonal gammopathy of undetermined significance, which one of the following findings would be most concerning for progression to multiple myeloma?
- A) A serum albumin level that is more than 1 g/dL below the lower limit of normal
 - B) A serum calcium level that is more than 1 mg/dL above the upper limit of normal
 - C) A hemoglobin level that is 2 g/dL above the upper limit of normal
 - D) The presence of 3 or more RBCs/hpf on microscopic urinalysis
 - E) An osteoblastic lesion seen on a skeletal radiograph

- 158.** A 27-year-old male with no significant medical history presents for evaluation of a new onset of blood in his semen occurring on three occasions over the past 10 days. He has not had any additional genitourinary, gastrointestinal, or constitutional symptoms. He has no personal history of tobacco use and he is sexually active with his wife only. A physical examination, including a genitourinary examination, is unremarkable. A CBC, comprehensive metabolic panel, prothrombin time/partial thromboplastin time, urinalysis and culture, and sexually transmitted infection screening are all normal.

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

- A) Reassurance and no additional testing
 - B) A PSA level
 - C) Ultrasonography of the scrotum and prostate
 - D) CT of the abdomen and pelvis
 - E) Referral to a urologist
- 159.** A 38-year-old female with a past medical history of posttraumatic stress disorder (PTSD) seeks treatment for recurring nightmares, which she has been experiencing for over 2 years following a near-drowning experience. During the daytime, she has unwanted intrusive thoughts and flash images of her drowning incident, and she avoids going near swimming pools. Her nightmares are increasingly distressing and she loses several hours of sleep nightly despite adequate behavioral therapy.

Which one of the following is the best initial pharmacotherapy for PTSD-associated nightmares?

- A) Clonazepam (Klonopin)
 - B) Gabapentin (Neurontin)
 - C) Prazosin (Minipress)
 - D) Sertraline (Zoloft)
 - E) Venlafaxine (Effexor XR)
- 160.** A 76-year-old male presents to your office for evaluation. He has a history of worsening New York Heart Association class IV heart failure and is on maximum medical therapy. He had a left ventricular assist device (LVAD) placed 6 months ago. He has a 50-pack-year smoking history and started smoking one pack a day at age 15. He quit smoking 10 years ago when he was diagnosed with heart failure. He asks you to schedule lung cancer screening with low-dose CT, which he has received annually for the last 10 years.

According to the U.S. Preventive Services Task Force, which one of the following is an indication to discontinue screening for lung cancer in this case?

- A) Limited life expectancy
- B) Age 76
- C) Quitting smoking within the last 10 years
- D) Recent cardiac procedure

- 161.** A 37-year-old male sees you for a routine health maintenance examination. He is morbidly obese with a BMI of 42 kg/m². In addition to his obesity diagnosis, his past medical history is significant for diabetes mellitus, hypertension, hyperlipidemia, GERD, and bilateral knee osteoarthritis, which are all adequately controlled with oral medications. His father died of a myocardial infarction (MI), and the patient is worried about his risk of dying of an MI like his father, since they share a similar body habitus and comorbidities. He is concerned about his weight and has researched metabolic surgical interventions on the internet. He is overwhelmed with the options and is seeking your guidance.

Given his medical conditions, which one of the following surgical options is the recommended intervention?

- A) Adjustable gastric band
 - B) Sleeve gastrectomy
 - C) Roux-en-Y gastric bypass
 - D) Biliopancreatic diversion with a duodenal switch
- 162.** Which one of the following topical corticosteroids should be AVOIDED for long-term use on the face?
- A) Clobetasol 0.05% lotion (Clobex)
 - B) Desonide 0.05% ointment (Desowen)
 - C) Hydrocortisone 1% lotion
 - D) Hydrocortisone 2.5% cream
 - E) Triamcinolone 0.025% cream
- 163.** A 56-year-old female comes to your office for an acute visit because she has had increased urinary frequency, thirst, and fatigue over the past month. Her medical history includes hypertension and type 2 diabetes with microalbuminuria, and her current medications are extended-release metformin, 1500 mg daily; losartan (Cozaar), 50 mg daily; and rosuvastatin (Crestor), 10 mg daily. Her current BMI is 36 kg/m², and you note that she has lost 5 kg (11 lb) since her last visit 4 months ago. A point-of-care hemoglobin A_{1c} is 12%.

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

- A) Basal insulin
- B) A DPP-4 inhibitor
- C) A GLP-1 receptor agonist
- D) An SGLT2 inhibitor
- E) A thiazolidinedione

164. A 45-year-old male works at a warehouse where he routinely lifts loads weighing more than 25 kg (55 lb). Which one of the following preventive measures has been shown to reduce the likelihood of developing chronic lower back pain?

- A) Back braces
- B) Over-the-counter insoles
- C) Customized orthoses
- D) Education on lifting techniques
- E) Core strengthening exercises

165. A 45-year-old transgender female presents for a health maintenance visit. Her current medications include spironolactone (Aldactone), ethinyl estradiol, and escitalopram (Lexapro). Her blood pressure is within normal range. She transitioned 4 years ago and started estrogen therapy at that time. Her surgical history includes breast augmentation and vaginoplasty. There is no family history of colon, prostate, breast, or cervical cancers.

Which one of the following preventive screenings should you recommend for this patient?

- A) Breast cancer
- B) Cervical cancer
- C) Colon cancer
- D) Osteoporosis
- E) Prostate cancer

166. A 67-year-old male presents for a preoperative evaluation before a knee replacement. His past medical history is significant for well-controlled type 2 diabetes, hypertension, and atrial fibrillation, for which he is taking apixaban (Eliquis).

Which one of the following would be the most appropriate approach to managing anticoagulation prior to surgery?

- A) Continuing apixaban therapy during the perioperative period
- B) Discontinuing apixaban for 2 days prior to the procedure without bridging
- C) Discontinuing apixaban for 2 days prior to the procedure, and bridging with enoxaparin (Lovenox)
- D) Discontinuing apixaban for 5 days prior to the procedure without bridging
- E) Discontinuing apixaban for 5 days prior to the procedure, and bridging with enoxaparin

- 167.** A 66-year-old female with a past medical history of well-controlled type 2 diabetes diagnosed at age 60 presents for a health maintenance examination. She was previously vaccinated with 23-valent pneumococcal polysaccharide vaccine (PPSV23, Pneumovax 23) at the time of her diabetes diagnosis.

Based on CDC guidelines, which one of the following should you recommend to her today to complete her pneumococcal vaccination series?

- A) No additional pneumococcal vaccine
- B) A repeat dose of PPSV23
- C) 13-valent pneumococcal conjugate vaccine (PCV13, Prevnar 13)
- D) 15-valent pneumococcal conjugate vaccine (PCV15, Vaxneuvance)
- E) 20-valent pneumococcal conjugate vaccine (PCV20, Prevnar 20)

- 168.** In patients with severe COPD associated with chronic hypoxemia and hypercapnia, which one of the following has been shown to decrease mortality?

- A) Oxygen therapy
- B) Inhaled fluticasone (Flovent)
- C) Inhaled formoterol (Perforomist)
- D) Oral azithromycin (Zithromax)
- E) Oral prednisone

- 169.** Which one of the following tests should you obtain in a patient with lichen planus?

- A) Antihistone antibodies
- B) Hepatitis C antibody
- C) HIV antibody
- D) Sjögren syndrome–related antigen A (Ro) and Sjögren syndrome–related antigen B (La) antibodies

- 170.** A 60-year-old male with recently diagnosed squamous cell lung cancer presents to the emergency department with generalized weakness and altered mental status. He has a temperature of 36.9°C (98.4°F) and a blood pressure of 134/78 mm Hg. His pulse rate is 100 beats/min and regular. A physical examination reveals confusion and dry oral mucosa. An EKG reveals sinus rhythm with first-degree atrioventricular block and a short ST segment. Aside from his known lung mass, imaging studies including head CT and a chest radiograph are normal. Laboratory studies, including a CBC, comprehensive metabolic panel, and lactate level, are normal except for a serum calcium level of 14.0 mg/dL (N 8.0–10.0) and a creatinine level of 1.4 mg/dL (N 0.7–1.3).

Which one of the following is the most important first step to address his hypercalcemia?

- A) A 2-liter intravenous fluid bolus with normal saline
- B) Furosemide, 40 mg intravenously
- C) Methylprednisolone (Solu-Medrol), 125 mg intravenously
- D) Pamidronate, 90 mg intravenously
- E) Placement of a large bore central venous dialysis catheter

171. A 45-year-old nurse presents with a 3-week history of heel pain that is worse at the end of a workday. She reports that there has not been any trauma. An examination is significant for tenderness inferior to the lateral calcaneus extending below the malleolus to the lateral midfoot.

Which one of the following is the most likely diagnosis?

- A) Achilles tendinopathy
- B) Lisfranc arthropathy
- C) Peroneal tendinopathy
- D) Plantar fasciitis
- E) Tarsal tunnel syndrome

172. A 78-year-old male presents to your office for a health maintenance visit at the request of his spouse. He does not have any current symptoms or concerns. He states that he has not seen a physician since he was a teenager. The patient reports breaking his arm as a child but has no other known medical conditions. He has a 30-pack-year history of smoking cigarettes but has not smoked for 10 years. He has one glass of wine with dinner 3–4 times a month and does not use illicit substances. His sexual history consists of sex with only his wife. His family history includes a mother who died of a stroke and a father who died of pancreatic cancer. He walks 2 miles five times a week. His vital signs and a physical examination are normal.

Which one of the following screenings is recommended by the U.S. Preventive Services Task Force for this patient?

- A) Hepatitis B testing
- B) Prostate-specific antigen testing
- C) Abdominal aortic aneurysm ultrasonography
- D) A DEXA scan
- E) Low-dose CT of the chest

173. A 47-year-old female presents to your office with a 3-day history of sore throat, a fever of 100.9°F, and a dry cough. On examination she has tender anterior cervical lymphadenopathy and swollen tonsils without exudate. Her lungs are clear to auscultation. A point-of-care streptococcal rapid antigen detection test is negative.

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

- A) Supportive care only
- B) Penicillin V potassium
- C) A repeat streptococcal rapid antigen test
- D) A throat culture
- E) Laryngoscopy

- 174.** A 15-year-old male is brought to the clinic for evaluation of his eating habits. His parents note that on several occasions they have found him alone with multiple empty food packages. He confirms that yesterday he consumed two fried chicken sandwiches, two orders of French fries, and two milkshakes in a 1-hour time period in which he was alone in his room. After this episode he was uncomfortably full for several hours.

Which one of the following would support your suspicion that this individual has binge-eating disorder?

- A) Distorted body image
- B) Feeling content after eating
- C) Markedly low body weight for age and sex
- D) Sense of loss of control during overeating episodes
- E) Use of laxatives to control weight

- 175.** A 35-year-old female presents for contraceptive counseling. Her last menstrual period was 3 weeks ago and she had unprotected sex 2 days ago. A pregnancy test is negative.

Which one of the following would be the most effective emergency contraceptive agent for this patient?

- A) Oral levonorgestrel (Plan B One-Step)
- B) Oral ulipristal (Ella)
- C) Subcutaneous depot medroxyprogesterone acetate (Depo-Provera)
- D) An etonogestrel subdermal implant (Nexplanon)
- E) A copper IUD (Paragard)

- 176.** An 80-year-old male with well-controlled hypertension undergoes surgery to repair a hip fracture. He had coronary artery stenting 6 years ago and is asymptomatic. His current medications include lisinopril (Zestril), atorvastatin (Lipitor), and low-dose aspirin. He also takes chronic gabapentin (Neurontin) for postherpetic neuralgia, which is continued postoperatively. Multimodal analgesia is used, including intravenous morphine as needed after surgery.

In the postoperative period, this patient would be at greatest risk for which one of the following?

- A) Gabapentin withdrawal symptoms
- B) Heart failure
- C) Respiratory depression
- D) Restless legs syndrome
- E) Seizure

177. A 20-year-old college football player is struck by another athlete and is lying still in the supine position on the field. On examination on the field, the athlete reports bilateral numbness, tingling, and pain radiating to his fingertips but does not appear to be confused. He is alert and apprehensive of cervical range of motion but does not exhibit weakness of the upper extremities.

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

- A) Immediate examination for neurologic compromise and return to play if the examination is unremarkable
 - B) Return to play if symptoms resolve in less than 15 minutes and a repeat neurologic examination is normal
 - C) Serial neurologic examinations; if there is no progression of neurologic symptoms, he may remain on the sideline but may not re-enter the same game
 - D) Immediate removal of his helmet and pads sequentially, log-rolling him, and transporting him to the emergency department (ED) via EMS if symptoms continue for more than 15 minutes
 - E) Keeping his helmet and pads intact, log-rolling him, and transporting him to the ED via EMS
178. A patient with early-stage Alzheimer disease is brought to your office by his wife to discuss the benefits and risks of possible major surgery. Which one of the following would be the most appropriate next step in determining this patient's decision-making capacity for surgical informed consent?
- A) Assessing his ability to understand the risks, benefits, and alternatives
 - B) Reviewing his living will
 - C) Determining his health care surrogate
 - D) Obtaining a competence evaluation
 - E) Obtaining a psychiatric evaluation
179. A 62-year-old female with a history of compensated cirrhosis secondary to nonalcoholic steatohepatitis presents to establish care and has no acute issues. She has read that she may have an increased risk for liver cancer and asks if she should be screened.

Which one of the following should you advise?

- A) No routine surveillance, but evaluation based on signs or symptoms
- B) Ultrasonography every 6 months
- C) Annual α -fetoprotein testing
- D) Annual CT
- E) Annual MRI

- 180.** A 58-year-old female with coronary artery disease and alcohol use disorder presents with progressive shortness of breath over the past 3 weeks. A chest radiograph demonstrates bilateral pleural effusions that are greater on the right side. Laboratory studies, including pleural fluid analysis, show the following:

Serum protein	5.5 g/dL (N 6.0–8.0)
Serum LDH	305 IU/L (N 105–333)
Plasma glucose	88 mg/dL (N 70–100)
Pleural fluid protein	2.9 g/dL
Pleural fluid LDH	295 IU/L
Pleural fluid glucose	51 mg/dL

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

- A) Cirrhosis of the liver
 - B) Congestive heart failure
 - C) COPD
 - D) Malignancy
 - E) Pulmonary embolism
- 181.** A 60-year-old female presents to the emergency department after developing confusion with severe headache and nausea. Shortly after arrival she has a generalized tonic-clonic seizure lasting less than 30 seconds. She has a blood pressure of 220/130 mm Hg, a pulse rate of 85 beats/min, and an oxygen saturation of 98% on room air. Cardiac enzymes are negative. Noncontrast CT of the head is negative for hemorrhage and contrast CT of the chest and abdomen reveals no aortic dissection. Based on guidelines from the American Heart Association, the patient's blood pressure is lowered by approximately 20% during the first hour of treatment.

Assuming the patient remains clinically stable, the goal over the next 2–6 hours is to lower her blood pressure to

- A) 130/90 mm Hg
- B) 140/90 mm Hg
- C) 150/100 mm Hg
- D) 160/100 mm Hg
- E) 170/100 mm Hg

- 182.** A 58-year-old female sees you to request testing for a possible vitamin D deficiency. She lives independently and has no health problems except for osteoarthritis. Her BMI is 25 kg/m² and she has no pain or muscle weakness. After discussing the U.S. Preventive Services Task Force recommendations regarding screening for vitamin D deficiency, she chooses to be tested. A serum 25-hydroxyvitamin D level is 18 ng/mL.

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

- A) Explaining to her that there is no accepted cut-off for deficiency, and that the benefits of supplementation with this laboratory result are unclear
 - B) Initiating vitamin D supplementation to decrease the risk of cardiovascular events because her serum 25-hydroxyvitamin D level is <20 ng/mL
 - C) Initiating vitamin D supplementation to decrease the risk of mortality because her serum 25-hydroxyvitamin D level is <20 ng/mL
 - D) Ordering a 1,25-dihydroxyvitamin D study
- 183.** Which one of the following is a predictor of a poor response to psychotherapy in adolescents with major depressive disorder?
- A) High global functioning on assessment
 - B) Hypersomnia
 - C) Inappropriate guilt
 - D) Presence of family conflict

- 184.** A 32-year-old male presents to your office because of a 3-month history of severe headaches. The pain is localized to the right orbital area and is accompanied by a red, watery eye. He notes rhinorrhea and sweating on the right side of his face along with feeling restless. The headaches occur daily and usually last 30 minutes to 1 hour. They can be triggered by strong odors or consuming alcohol. The patient reports that his symptoms improved when he tried a friend's sumatriptan (Imitrex). A neurologic examination is unremarkable. He asks about medication to prevent these bouts of pain.

The first-line prophylactic medication for this condition is

- A) lithium
 - B) topiramate (Topamax)
 - C) ubrogepant (Ubrelvy)
 - D) valproic acid
 - E) verapamil
- 185.** Which one of the following is an indication for urgent dialysis in a patient with an acute kidney injury?
- A) Encephalopathy
 - B) A potassium level of 5.5 mEq/L (N 3.4–4.5)
 - C) Pulmonary edema that is responsive to diuretics
 - D) Negligible urine output for 2 hours
 - E) A urine output of 500 mL over 24 hours

- 186.** A 63-year-old female presents to your office for evaluation of a lesion on her left forearm (shown below). She reports that it started as a “pimple” about a month ago and has since increased in size. It is not painful or itchy and has not bled. She has no personal or family history of skin cancer.

Which one of the following should you recommend for management of this lesion?

- A) Reassurance that the lesion is benign
- B) Intralesional corticosteroid injection
- C) Cryotherapy
- D) Shallow shave biopsy
- E) Excisional biopsy with 3- to 5-mm margins

- 187.** A 56-year-old male presents to your clinic for evaluation of knee pain. He reports several weeks of right knee pain with an occasional locking sensation. He has tried rest, acetaminophen, and ibuprofen with minimal relief. He usually walks for 1 hour daily but is currently unable to do this due to pain. His vital signs are normal except for a BMI of 33 kg/m².

On examination the left knee is unremarkable. The right knee is notable for pain localized to the right anterolateral region. There is no tenderness to palpation. You gently rotate the patient's torso while he stands on the affected leg with the knee at 20° of flexion, resulting in pain in the right knee. The remainder of the examination is unremarkable.

Which one of the following is the most likely diagnosis?

- A) An anterior cruciate ligament tear
- B) Gout
- C) Iliotibial band syndrome
- D) A lateral collateral ligament sprain
- E) A meniscal tear

- 188.** A 37-year-old male presents for a medical clearance examination. He has no symptoms or concerns. His past medical and surgical histories are unremarkable. His social history is significant for a 20-pack-year cigarette use and occasional alcohol intake. When asked if he has considered quitting smoking, he says that he may wish to quit some day for his health, but he is not currently ready.

In addition to behavioral counseling, which one of the following medications has been shown to be effective for smoking cessation in patients who are reluctant to quit?

- A) Bupropion (Wellbutrin SR)
- B) Clonidine
- C) Nicotine transdermal patch (Nicoderm CQ)
- D) Nortriptyline (Pamelor)
- E) Varenicline



Item #186

- 189.** You are considering a workup for resistant hypertension in a 58-year-old male due to a lack of response to medication therapy. Which one of the following is the most common cause of uncontrolled hypertension?
- A) Hyperaldosteronism
 - B) Increased salt intake
 - C) Medication nonadherence
 - D) Obstructive sleep apnea
 - E) Renal artery stenosis >75%
- 190.** A 68-year-old male with a past medical history of tobacco use and alcohol abuse presents with halitosis. On physical examination you note that he has thick white hyperkeratosis with a furry appearance on the anterior two-thirds of his tongue.
- Which one of the following should you recommend?
- A) Serial observations with close follow-up
 - B) Increased fiber intake and regular tongue brushing
 - C) Oral fluconazole (Diflucan)
 - D) Topical corticosteroids
 - E) Referral for biopsy of the tongue
- 191.** For a patient with a borderline low serum cobalamin (vitamin B₁₂) level, which one of the following additional findings is the most sensitive and specific for a true vitamin B₁₂ deficiency state?
- A) High methylmalonic acid level
 - B) Low ferritin level
 - C) Low folate level
 - D) Low homocysteine level
 - E) Negative intrinsic factor antibodies
- 192.** Which one of the following is associated with a shorter duration of active labor and reduction of risk for cesarean section or operative vaginal delivery?
- A) Admission to the labor and delivery unit during the latent phase of labor
 - B) Amniotomy prior to the onset of active labor
 - C) The use of high-dose rather than low-dose oxytocin (Pitocin)
 - D) Membrane stripping prior to the onset of labor
 - E) Using an individual labor support person (doula)

193. Which one of the following is the strongest risk factor for the development of nonalcoholic fatty liver disease?

- A) Chronic acetaminophen toxicity
- B) Hereditary hemochromatosis
- C) Obesity
- D) Severe hypertriglyceridemia
- E) Type 2 diabetes

194. A 45-year-old female comes to your clinic for follow-up of pruritus. She notes swelling in her distal fingers. She reports that her fingers become pale and numb, and they tingle when exposed to cold. An examination shows multiple telangiectasias and bilateral thickening and swelling of her fingers. An erythrocyte sedimentation rate and C-reactive protein level are elevated. An antinuclear antibody titer is positive at 1:320 with a nucleolar pattern. Anti-double-stranded DNA antibodies and anti-Smith antibodies are negative. Antiribonucleoprotein antibodies, anti-Sjögren-syndrome-related antigen A and B, anticardiolipin, and lupus anticoagulant are negative. Anticentromere and anti-Scl-70 antibodies are positive.

Which one of the following is the most likely diagnosis?

- A) Dermatomyositis
- B) Mixed connective tissue disease
- C) Sjögren syndrome
- D) Systemic lupus erythematosus
- E) Systemic sclerosis (scleroderma)

195. A 52-year-old postmenopausal female presents for evaluation of a lump on her neck. Other than a palpable thyroid nodule measuring approximately 1 cm, a history and physical examination are unremarkable.

Based on this finding, which one of the following additional evaluations is indicated at this time?

- A) TSH, T₃, and free T₄ levels, and an antithyroid antibodies assay
- B) A TSH level and thyroid ultrasonography
- C) A TSH level and neck CT
- D) A TSH level, thyroid ultrasonography, and neck CT
- E) A TSH level and a radionuclide thyroid uptake scan

196. A 32-year-old female presents to your office with a 6-month history of difficulty sleeping. This occurs 4–5 nights per week and often it takes her more than 2 hours to fall asleep.

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

- A) Diphenhydramine (Benadryl Allergy), 25–50 mg before bed
- B) Lorazepam (Ativan), 0.5 mg before bed
- C) Zolpidem (Ambien), 5 mg before bed
- D) Positive airway pressure therapy
- E) Cognitive behavioral therapy

- 197.** A 30-year-old security guard who runs 15–20 miles per week and works 12-hour shifts 3–4 days per week presents with a 2-week history of heel pain. The pain is especially intense when she first steps out of bed in the morning and at the end of her shift. A physical examination reveals tenderness to palpation over the medial plantar region of the heel.

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

- A) NSAIDs, stretching, and ice massage
 - B) Corticosteroid injection of the heel
 - C) Ultrasound-guided botulinum toxin injection of the heel
 - D) Extracorporeal shock wave therapy
 - E) Referral to a surgeon for plantar fasciotomy
- 198.** A male with active tuberculosis in the United States refuses treatment. Which one of the following entities has the ultimate power to enforce isolation and treatment of this patient in order to protect public health and safety?
- A) No entities
 - B) City government
 - C) County government
 - D) State government
 - E) Federal government
- 199.** A 66-year-old male with a current history of tobacco use, hypertension, and gout presents for an annual health maintenance examination. He does not have any concerns today. A physical examination is unremarkable except for an elevated blood pressure of 149/90 mm Hg and a bruit heard over his abdomen. Abdominal duplex ultrasonography shows an abdominal aortic aneurysm with a diameter of 4.5 cm.

In addition to encouraging smoking cessation, which one of the following would be the most appropriate next step?

- A) No further surveillance
- B) Repeating abdominal duplex ultrasonography in 6–12 months
- C) Repeating abdominal duplex ultrasonography in 2 years
- D) Referral to a vascular surgeon for elective surgical repair
- E) Referral to a vascular surgeon for emergent surgical repair

- 200.** A 32-year-old male sees you for a routine health maintenance examination in the fall and you recommend influenza vaccination. He mentions a previous possible allergic reaction to eggs. Upon further questioning, you determine that he had hives and no other symptoms after exposure to eggs.

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

- A) Avoiding any influenza vaccine
- B) Receiving any influenza vaccine
- C) Pretreatment with diphenhydramine (Benadryl Allergy) before receiving an influenza vaccine
- D) Prophylactic oseltamivir (Tamiflu) for the influenza season