American Board of Family Medicine

IN-TRAINING EXAMINATION
1. A 68-year-old male presents to your office with a 2-day history of headache, muscle aches, and chills. His wife adds that his temperature has been up to 104.1°F and he seems confused sometimes. His symptoms have not improved with usual care, including ibuprofen and increased fluid intake. He and his wife returned from a cruise 10 days ago but don’t recall anyone having a similar illness on the ship. This morning he started to cough and his wife was concerned because she saw some blood in his sputum. He also states that he experiences intermittent shortness of breath and feels nauseated. His blood pressure is 100/70 mm Hg, heart rate 98/min, temperature 39.4°C (102.9°F), and oxygen saturation 95% on room air.

Which one of the following would be the preferred method to confirm your suspected diagnosis of Legionnaires’ disease?

A) Initiating azithromycin (Zithromax) to see if symptoms improve  
B) A chest radiograph  
C) *Legionella* polymerase chain reaction (PCR) testing  
D) A sputum culture for *Legionella*  
E) Urine testing for *Legionella pneumophila* antigen

2. Which one of the following factors related to pregnancy and delivery increases the risk of developmental dysplasia of the hip in infants?

A) A large-for-gestational age infant  
B) Twin birth  
C) Breech presentation  
D) Cesarean delivery  
E) Premature birth

3. A healthy 2-month-old female is brought to your office for a routine well baby examination by both of her parents, who have no concerns. The parents refuse routine recommended vaccines for their daughter because of their personal beliefs.

You want to incorporate patient-centeredness and are also concerned about improving the health of the population. You decide to follow the CDC recommendations by

A) accepting their decision without further action  
B) not offering vaccines at future visits to preserve a positive doctor-patient relationship  
C) having the parents sign a refusal to vaccinate form  
D) dismissing the family from the practice  
E) pursuing a court order for vaccine administration since the child has no medical exemptions
4. A 50-year-old male carpet layer presents with swelling of his right knee proximal to the patella. He does not have any history of direct trauma, fever, chills, or changes in the overlying skin. On examination the site is swollen but minimally tender, with no warmth or erythema.

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

A) Rest, ice, and compression  
B) Aspiration of fluid for analysis  
C) Injection of a corticosteroid  
D) An oral corticosteroid taper  
E) Referral to an orthopedic surgeon for resection

5. An 85-year-old female with a previous history of diabetes mellitus, hypertension, dementia, and peptic ulcer disease has been in a skilled nursing facility for 4 weeks for rehabilitation after a hip fracture repair secondary to a fall during an ischemic stroke. She is transported to the emergency department today when she develops confusion, shortness of breath, and diaphoresis. Her blood pressure is 172/98 mm Hg, her heart rate is 122 beats/min with an irregular rhythm, and her respiratory rate is 22/min. An EKG demonstrates atrial fibrillation and 0.2 mV ST-segment elevation compared to previous EKGs. Her first troponin level is elevated.

Which one of the following conditions in this patient is considered an ABSOLUTE contraindication to fibrinolytic therapy?

A) Poorly controlled hypertension  
B) Peptic ulcer disease  
C) Alzheimer’s dementia  
D) Hip fracture repair  
E) Ischemic stroke

6. An otherwise healthy 57-year-old female presents with a sudden onset of hearing loss. She awoke this morning unable to hear out of her left ear. There was no preceding illness and she currently feels well otherwise. She does not have ear pain, headache, runny nose, congestion, or fever, and she does not take any daily medications.

On examination you note normal vital signs and find a normal ear, with no obstructing cerumen and with normal tympanic membrane motion on pneumatic otoscopy. You perform a Weber test by placing a tuning fork over her central forehead. She finds that the sound lateralizes to her right ear. The Rinne test shows sounds are heard better with bone conduction on the left and with air conduction on the right.

You refer her to an otolaryngologist for further evaluation including audiometry. You should also consider initiating which one of the following medications at this visit in order to optimize the likelihood of recovery?

A) Acyclovir (Zovirax)  
B) Amoxicillin/clavulanate (Augmentin)  
C) Aspirin  
D) Nifedipine (Procardia)  
E) Prednisone
7. You are the team physician for the local high school track team. During a meet one of the athletes inadvertently steps off the edge of the track and inverts her right foot forcefully. She is able to bear weight but with significant pain. She reports pain across her right midfoot. An examination reveals edema over the lateral malleolus and diffuse tenderness, but she does not have any pain with palpation of the navicular, the base of the fifth metatarsal, or the posterior distal lateral and medial malleoli.

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

A) Radiographs of the right ankle only
B) Radiographs of the right foot only
C) Radiographs of the right foot and ankle
D) Lace-up ankle support, ice, compression, and clinical follow-up
E) Crutches and no weight bearing for 2 weeks, followed by a slow return to weight bearing

8. A 65-year-old male with type 2 diabetes mellitus, hypertension, and obstructive sleep apnea sees you for follow-up. He does not use tobacco or other drugs, and his alcohol consumption consists of two drinks per day. His BMI is 31.0 kg/m², and he just started a fitness program. The patient tells you that his brother was recently diagnosed with atrial fibrillation and he asks you if this increases his own risk.

Which one of the following factors would increase the risk of atrial fibrillation in this patient?

A) Alcohol use
B) Treatment with lisinopril (Prinivil, Zestril)
C) Treatment with pioglitazone (Actos)
D) Use of a continuous positive airway pressure (CPAP) device
E) Physical stress

9. You have diagnosed a 32-year-old female with moderate iron deficiency anemia, presumed to be due to chronic menstrual blood loss. She has no gastrointestinal or genitourinary symptoms, and no bruising or bleeding other than menstrual bleeding. Her vital signs are normal and a physical examination is unremarkable. You initiate a trial of oral iron therapy.

Which one of the following would be the best way to assess the patient’s response to oral iron?

A) A reticulocyte count in 1–2 weeks
B) A repeat hematocrit in 2 weeks
C) A peripheral smear to look for new RBCs in 4 weeks
D) A serum total iron binding capacity and ferritin level in 6 weeks
10. You see an adult patient who has chronic urticaria and no other known chronic conditions. He continues to experience hives after a 3-month course of daily loratadine (Claritin).

Which one of the following would be the most appropriate addition to his treatment regimen at this time?

A) A short course of oral corticosteroids
B) Cyclosporine
C) Ranitidine (Zantac)
D) Narrow-band UV light treatment

11. A 10-year-old male has an 8-mm induration 2 days after a tuberculin skin test. He shares a bedroom with his 18-year-old brother who was recently diagnosed with tuberculosis. There are no other historical or physical examination findings to suggest active tuberculosis infection and a chest radiograph is normal.

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

A) Monitoring with annual tuberculin skin testing
B) Observation and repeat tuberculin skin testing in 3 weeks
C) Rifampin (Rifadin) daily for 4 months
D) Isoniazid daily for 9 months
E) Once-weekly isoniazid and rifampin for 3 months

12. A 62-year-old female with diabetes mellitus presents to your office with left lower quadrant pain and guarding. She has a previous history of a shellfish allergy that caused hives and swelling.

Further evaluation of this patient should include which one of the following?

A) Ultrasonography of the abdomen
B) CT of the abdomen and pelvis with oral and intravenous (IV) contrast
C) Oral corticosteroids and antihistamines, then CT of the abdomen and pelvis with oral and IV contrast
D) Intravenous corticosteroids and antihistamines, then CT of the abdomen and pelvis with oral and IV contrast
E) Laparotomy
13. A 45-year-old female who works as a house cleaner presents with left shoulder pain. On examination she has pain and relative weakness when pushing toward the midline against resistance while the shoulder is adducted and the elbow is bent to 90°. With the elbow still at 90° she is unable to keep her left hand away from her body when you position her hand behind her back.

This presentation is most consistent with an injury of which one of the following tendons?

A) Deltoid  
B) Infraspinatus  
C) Subscapularis  
D) Supraspinatus  
E) Teres minor

14. An 8-year-old male is brought to your office because of acute lower abdominal pain. He is not constipated and has never had abdominal surgery. You suspect acute appendicitis.

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

A) Plain radiography  
B) Ultrasonography  
C) CT without contrast  
D) CT with contrast  
E) MRI

15. You see a patient with a serum sodium level of 122 mEq/L (N 135–145) and a serum osmolality of 255 mOsm/kg H₂O (N 280–295). Which one of the following would best correlate with a diagnosis of syndrome of inappropriate antidiuresis?

A) A fractional excretion of sodium below 1%  
B) Elevated urine osmolality  
C) Elevated serum glucose  
D) Elevated BUN  
E) Low plasma arginine vasopressin

16. A 45-year-old African-American male returns to your clinic to evaluate his progress after 6 months of dedicated adherence to a diet and exercise plan you prescribed to manage his blood pressure. His blood pressure today is 148/96 mm Hg. He is not overweight and he does not have other known medical conditions or drug allergies.

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

A) Chlorthalidone  
B) Hydralazine  
C) Lisinopril (Prinivil, Zestril)  
D) Losartan (Cozaar)  
E) Metoprolol
17. An 85-year-old female with metastatic breast cancer requests hospice care. She has type 2
diabetes mellitus, stage 3 renal failure, and heart disease.

The patient’s eligibility for hospice care will be based on her

A) age
B) cancer diagnosis
C) comorbid conditions
D) life expectancy
E) Medicare Part B plan

18. A 15-year-old female presents with a 3-month history of intermittent abdominal pain and
headaches. She does not have any associated weight loss, fever, nausea, change in bowel
habits, or other worrisome features. An examination is unremarkable. She does report being
stressed at school and has a PHQ-2 score of 4.

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

A) Further evaluation for depression
B) Laboratory studies
C) Abdominal imaging
D) Citalopram (Celexa)
E) Fluoxetine (Prozac)

19. A 69-year-old male with type 2 diabetes mellitus, obesity, and a history of coronary artery
disease sees you for follow-up of his diabetes. His hemoglobin A1c has increased to 8.7%
despite therapy with metformin (Glucophage), 1000 mg twice daily, and insulin glargine
(Lantus).

Which one of the following additional medications would be most effective for reducing his
blood glucose level and lowering his risk of cardiovascular events?

A) Exenatide (Byetta)
B) Glipizide (Glucotrol)
C) Liraglutide (Victoza)
D) Rosiglitazone (Avandia)
E) Sitagliptin (Januvia)

20. A 2-year-old African-American male with a history of sickle cell disease is brought to your
office for a well child check. Which one of the following would be most appropriate for
screening at this time?

A) A chest radiograph
B) A DXA scan
C) Abdominal ultrasonography
D) Renal Doppler ultrasonography
E) Transcranial Doppler ultrasonography
21. You perform the initial newborn examination on a male on his first day of life, following an uncomplicated vaginal delivery at an estimated gestational age of 37 weeks and 6 days. The prenatal course was significant for the initial presentation for prenatal care at 22 weeks gestation. You note that the infant’s upper lip is thin and the philtrum is somewhat flat.

Which additional finding would increase your concern for fetal alcohol syndrome?

A) Curvature of the fifth digit of the hand (clinodactyly)
B) A supernumerary digit of the hand
C) Flattening of the head (plagiocephaly)
D) Metatarsus adductus in one foot
E) Syndactyly of the toes (webbed feet)

22. An otherwise healthy 3-year-old child with no allergies is found to have otitis media with effusion in the right ear. Which one of the following would you recommend?

A) No treatment, and follow-up in 3 months
B) Amoxicillin
C) Oral antihistamines
D) Nasal corticosteroids
E) Tympanostomy tube placement

23. A 32-year-old male presents with a 4-week history of persistent low back pain. He started feeling tightness in his low back after helping a friend move into a new apartment. The pain does not radiate, there is no associated paresthesia or numbness, and he has not had any bowel or bladder incontinence. The pain is constant and worsens with prolonged sitting. He rates the pain as 6 on a scale of 10. Ibuprofen has provided minimal relief.

Examination of the lumbar area over the paraspinous muscles reveals minimal tenderness. A neurovascular examination and a straight leg raise are normal in both lower extremities.

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

A) Imaging studies of the lumbar spine
B) A short course of an oral corticosteroid
C) Gabapentin (Neurontin) started at a low dose and titrated to effect
D) A skeletal muscle relaxant and an NSAID
E) A short-acting opioid and an NSAID
24. A 48-year-old female with GERD treated with a proton pump inhibitor for the past 2 years sees you for a routine visit. She reports that she has paresthesia and numbness in both feet. Her hemoglobin A₁c is 5.8%, her hemoglobin level is 10.4 g/dL (N 12.0–16.0), and her mean corpuscular volume is 102 μm³ (N 81–99). Microfilament testing shows decreased sensation in both feet.

Which one of the following is the most likely cause of her peripheral neuropathy?

A) Charcot-Marie-Tooth disease
B) Diabetic peripheral neuropathy
C) Hyperthyroidism
D) Tarsal tunnel syndrome
E) Vitamin B₁₂ deficiency

25. A 60-year-old male presents with a several-month history of a dry cough and progressive shortness of breath with exertion. On examination he has tachypnea and bibasilar end-inspiratory dry crackles, and a chest radiograph reveals interstitial opacities.

Which one of the following patient occupations would most likely support a diagnosis of silicosis?

A) Baker
B) Firefighter
C) Stone cutter
D) Goat dairy farmer
E) High-tech electronics fabricator

26. A 28-year-old female presents with a 3-month history of fatigue and postural lightheadedness. On examination she is diffusely hyperpigmented, especially her skin creases and areolae. A CBC and basic metabolic panel are normal except for an elevated potassium level. You order a corticotropin stimulation test.

Prior to the corticotropin injection, you should order which one of the following tests to confirm that this patient has a primary insufficiency and not a secondary (pituitary) disorder?

A) ACTH
B) Aldosterone
C) Melanocyte-stimulating hormone
D) Renin
E) TSH
27. You see a 3-year-old female with a 2-day history of intermittent abdominal cramps, two episodes of emesis yesterday, and about five watery, nonbloody stools each day. She does not have a fever, her other vital signs are normal, and she has not traveled recently. Today she has tolerated sips of fluid but still has mild fatigue and thirst. An examination is normal except for mildly dry lips. A friend at preschool had a similar illness recently.

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

A) A sports drink and food on demand  
B) Half-strength apple juice and food on demand  
C) Ginger ale and no food yet  
D) Water and no food yet  
E) A bolus of intravenous normal saline and no food yet

28. A 32-year-old female requests a physical examination prior to participating in an adult soccer league. Her blood pressure is 118/70 mm Hg and her pulse rate is 68 beats/min. The examination is otherwise normal except for a systolic murmur that intensifies with Valsalva maneuvers. She says that she has recently been experiencing mild exertional dyspnea and moderate chest pain. The chest pain has been atypical and is not necessarily related to exertion. Echocardiography reveals hypertrophic cardiomyopathy.

In addition to referring the patient to a cardiologist, you recommended initiating therapy with

A) amiodarone (Cordarone)  
B) amlodipine (Norvasc)  
C) furosemide (Lasix)  
D) lisinopril (Prinivil, Zestril)  
E) metoprolol

29. An 85-year-old female with advanced Alzheimer’s disease is brought to your office for treatment of agitation, aggressive behavior, and delusions. Behavioral and psychological interventions have had little success and the family is willing to try medications because they prefer to keep the patient at home.

Which one of the following would most likely help control this patient’s symptoms?

A) Alprazolam (Xanax)  
B) Aripiprazole (Abilify)  
C) Clozapine (Clozaril)  
D) Donepezil (Aricept)  
E) Haloperidol
30. A 30-year-old female with anovulatory uterine bleeding asks about treatment options. An examination is normal and blood testing is negative. She is unmarried and is undecided about having children.

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

A) Oral progestin during the luteal phase  
B) A levonorgestrel-releasing IUD  
C) Endometrial ablation  
D) Hysterectomy

31. A 73-year-old male with advanced degenerative arthritis of the knees asks what you would recommend for relief. He does not wish to have a total knee replacement. He says that NSAIDs have not been effective.

Which one of the following would be the best recommendation?

A) Acetaminophen  
B) Intra-articular corticosteroids  
C) Intra-articular hylan GF 20 (Synvisc)  
D) Physical therapy for quadriceps strengthening  
E) Tramadol (Ultram)

32. A 66-year-old male recently underwent percutaneous angioplasty for persistent angina with exertion. He does not have any symptoms now. His LDL-cholesterol level is 90 mg/dL.

Which one of the following would be most appropriate for secondary prevention of this patient’s coronary artery disease?

A) No drug treatment  
B) Evolocumab (Repatha), 140 mg subcutaneously every 2 weeks  
C) Ezetimibe (Zetia), 10 mg daily  
D) Rosuvastatin (Crestor), 20 mg daily  
E) Simvastatin (Zocor), 40 mg daily
33. A 62-year-old female who is a new patient requests a thyroid evaluation because she has a history of abnormal thyroid test results. You obtain a copy of her records, which include a TSH level of 0.2 μU/mL (N 0.4–4.2) and a free T₄ level of 2.0 ng/dL (N 0.8–2.7) from 3 years ago. She reports feeling well and has no other health conditions. She does not take any medications.

A physical examination reveals normal vital signs, a BMI of 23.0 kg/m², no neck masses, a normal thyroid size, and normal heart sounds. Laboratory studies reveal a TSH level of 0.1 μU/mL, a free T₄ level of 2.5 ng/dL, and a free T₃ level of 3.1 pg/mL (N 2.3–4.2).

Treatment for this condition would be indicated if the patient has an abnormal

A) calcium level
B) DXA scan
C) glucose level
D) lipid level
E) thyroid ultrasonography study

34. A 43-year-old male who works in a warehouse sees you because of dizziness. He first noticed mild dizziness when he rolled over and got out of bed this morning. He had several more severe episodes that were accompanied by nausea, and on one occasion vomiting occurred after he tilted his head upward to look for items on the higher shelves at work. You suspect benign paroxysmal positional vertigo, so you perform the Dix-Hallpike maneuver as part of the examination.

Which one of the following findings during the examination would confirm the diagnosis?

A) Nystagmus when vertigo is elicited
B) Vertigo that occurs immediately following the test-related head movement
C) Persistence of vertigo for 5 minutes following the test-related head movement
D) A drop in systolic blood pressure of >10 mm Hg when supine

35. You are initiating pharmacologic therapy for a 75-year-old patient with depression. Which one of the following would be most appropriate for this patient?

A) Amitriptyline
B) Escitalopram (Lexapro)
C) Imipramine (Tofranil)
D) Paroxetine (Paxil)
36. A 58-year-old male with a 30-pack-year smoking history comes to your office to discuss screening for COPD. His older brother and sister have both recently been diagnosed with COPD and he wants to be screened for this soon. He continues to smoke and does not express a desire to quit. He does not have shortness of breath, cough, orthopnea, paroxysmal nocturnal dyspnea, or dyspnea on exertion. His only medication is aspirin, 81 mg daily. He has never used inhaled medications such as albuterol (Proventil, Ventolin). His family history is otherwise negative. You counsel him on tobacco cessation today.

Which one of the following is recommended with regard to COPD screening for this patient?

A) No screening  
B) Spirometry with pre- and postbronchodilator testing  
C) Posteroanterior and lateral chest radiographs  
D) Noncontrast CT of the chest  
E) α₁-Antitrypsin deficiency gene testing

37. The dietary herbal supplement with the highest risk for drug interactions is

A) black cohosh  
B) ginseng  
C) St. John’s wort (Hypericum perforatum)  
D) saw palmetto  
E) valerian

38. A 32-year-old female sees you for a health maintenance visit. She reports that she experiences severe anxiety when involved in social situations. She lives with her mother and dreads meeting unfamiliar people. At work she remains in her cubicle throughout the day and avoids staff parties. She has a history of alcoholism in remission. She has otherwise been in good health and a physical examination is normal.

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

A) Amitriptyline  
B) Bupropion (Wellbutrin)  
C) Escitalopram (Lexapro)  
D) Lorazepam (Ativan)  
E) Pregabalin (Lyrica)

39. A 67-year-old female presents with a swollen wrist after falling on her outstretched hand. A radiograph of the affected wrist is shown below.

Prior to surgical intervention, you recommend application of a splint.

A) radial gutter splint  
B) sugar tong splint  
C) thumb spica splint  
D) forearm circumferential cast
40. A 7-year-old female with asthma is brought to your office because of her fourth episode of wheezing in the last 3 months. She has also had to use her short-acting β-agonist rescue inhaler more frequently.

Which one of the following should be added to reduce the frequency of asthma exacerbations?

A) A leukotriene receptor antagonist  
B) A long-acting β-agonist  
C) An inhaled corticosteroid  
D) Inhaled cromolyn via nebulizer

41. A 55-year-old female presents with the new onset of palpitations. An underlying cardiac cause should be suspected if the patient’s palpitations

A) affect her sleep  
B) are associated with dry mouth  
C) are worse in public places  
D) last less than 5 minutes

42. A 69-year-old female presents with scaling, redness, and irritation under her breasts for the past several months. She has tried several over-the-counter antifungal creams without any improvement. On examination you note erythematous, well demarcated patches with some scale under both breasts. You examine the rash with a Wood’s lamp to confirm your suspected diagnosis.

This rash is most likely to fluoresce

A) bright yellow  
B) coral pink  
C) lime green  
D) pale blue  
E) totally white

43. A 25-year-old female who recently moved to the area comes in for a well woman visit. She reports that she has had yearly Papanicolaou (Pap) tests and sexually transmitted infection (STI) screening since age 21 with no abnormal results. She has had a total of six sexual partners. She is asymptomatic and does not have any history of STIs or new partners in the past year. Your nurse informs her that STI screening can be done, but a Pap test is not necessary at this time.

The patient is concerned about not having a Pap test this year and asks you why it is not recommended. You explain that the most important reason is that

A) she has no history of STIs  
B) she has had several normal Pap tests in a row  
C) she is in a low-risk group for HPV infection  
D) Pap test abnormalities would require no further evaluation in a patient her age  
E) the risk of harm from unnecessary procedures and treatment exceeds the potential benefit at her age
44. A 42-year-old male with hypertension and hyperlipidemia sees you for a routine health maintenance examination. His blood pressure is 185/105 mm Hg. He does not have any current symptoms, including headache, chest pain, edema, or shortness of breath. He is adherent to his current medication regimen, which includes lisinopril (Prinivil, Zestril), 10 mg daily, and simvastatin (Zocor), 20 mg at night. A thorough history and physical examination are both unremarkable.

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

A) A 30-minute rest period followed by a repeat blood pressure reading
B) Clonidine (Catapres), 0.2 mg given in the office
C) A comprehensive metabolic panel, fasting lipid profile, and TSH level
D) A stress test
E) Hospital admission for blood pressure reduction

45. You see a 53-year-old female with diabetes mellitus, hypertension, mixed hyperlipidemia, and GERD. Recent laboratory studies include an incidental finding of thrombocytopenia. The patient has no other significant past medical history, and she does not use tobacco or drink alcohol. Her current medications include metformin (Glucophage), lisinopril (Prinivil, Zestril), omeprazole (Prilosec), calcium citrate, and pravastatin (Pravachol). A physical examination is notable for a BMI of 31.3 kg/m². Her skin, heart, lungs, abdomen, and extremities are normal. Results of a CBC and a comprehensive metabolic panel are normal with the following exceptions:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
<th>Normal Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platelets</td>
<td>70,000</td>
<td>(N 150,000–379,000)</td>
</tr>
<tr>
<td>Glucose</td>
<td>108 mg/dL</td>
<td>(N 0.0–0.4)</td>
</tr>
<tr>
<td>Bilirubin</td>
<td>0.4 mg/dL</td>
<td>(N 0.0–0.4)</td>
</tr>
<tr>
<td>Alkaline phosphatase</td>
<td>175 U/L</td>
<td>(N 38–126)</td>
</tr>
<tr>
<td>ALT (SGPT)</td>
<td>52 U/L</td>
<td>(N 10–28)</td>
</tr>
</tbody>
</table>

A peripheral smear is normal except for reduced platelets. Tests for hepatitis B, hepatitis C, and HIV are negative.

The most likely etiology of this patient’s thrombocytopenia is

A) a hematologic malignancy
B) chronic liver disease
C) drug-induced thrombocytopenia
D) immune thrombocytopenic purpura (ITP)
E) primary bone marrow failure

46. A patient has a past medical history that includes a sleeve gastrectomy for weight loss. Which one of the following medications should be AVOIDED in this patient?

A) Acetaminophen
B) Gabapentin (Neurontin)
C) Hydrocodone
D) Ibuprofen
E) Tramadol (Ultram)
47. An 11-year-old female is referred to you after a sports physical examination because 2+ protein was found on a random dipstick urinalysis. She feels well and does not have any health concerns. She plays soccer an average of 5 days a week.

The patient’s medical history is unremarkable and she takes no medications. Menarche has not occurred. She does not report any urinary or back symptoms, recent illness, edema, or weight change. A physical examination is normal. A dipstick urinalysis in your office shows 1+ protein but is otherwise normal.

Which one of the following would you recommend next?

A) Withdrawing from all physical activity for 24 hours and a 24-hour urine for protein
B) A spot protein/creatinine ratio performed on first morning urine
C) Serum BUN, creatinine, electrolyte, and albumin levels
D) Ultrasonography of the kidneys and bladder
E) Referral to a pediatric nephrologist

48. Intensive behavioral intervention has more benefit than other treatment modalities in treating children who have been diagnosed with

A) attention-deficit/hyperactivity disorder
B) autism
C) depression
D) obsessive-compulsive disorder
E) posttraumatic stress disorder

49. A patient asks which shingles vaccine he should receive. Which one of the following is an advantage of the recombinant zoster vaccine (Shingrix) compared to the live zoster vaccine (Zostavax)?

A) Improved efficacy
B) Lower cost
C) Subcutaneous administration
D) Proven safety for immunocompromised patients
E) Administration as a single dose
50. A 45-year-old female sees you because of an increase in fibromyalgia pain. On examination
she has a BMI of 35.6 kg/m² and normal vital signs except for a blood pressure of 156/91
mm Hg. Her other medical problems include obstructive sleep apnea, type 2 diabetes
mellitus, hypertension, and generalized anxiety disorder. She smokes one pack of cigarettes
daily and does not drink alcohol. She is currently taking metformin (Glucophage), 500 mg
twice daily; lisinopril (Prinivil, Zestril), 10 mg daily; gabapentin (Neurontin), 300 mg 3
times daily; oxycodone (OxyContin), 10 mg every 6 hours; and lorazepam (Ativan), 1 mg
3 times daily.

Which one of the following findings in this patient’s history greatly increases her risk of an
accidental overdose?

A) Tobacco use
B) Morbid obesity
C) Use of oxycodone
D) Use of oxycodone and lorazepam
E) Use of lorazepam and gabapentin

51. A 34-year-old female presents with a 3-month history of a minimally productive cough. She
has never smoked. She does not have any fever, weight loss, rhinorrhea, congestion, or
heartburn. She does not have a known history of allergies or asthma and has tried
over-the-counter cold remedies, cough syrups, and cough drops without significant relief.
She is otherwise healthy and takes no medications. On examination her vital signs are
normal. An ear, nose, and throat examination is remarkable for swollen nasal turbinates. A
lung examination is normal. Given the duration of the cough, you order a chest radiograph,
which is normal as well.

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

A) A trial of an intranasal corticosteroid
B) A trial of an inhaled bronchodilator
C) A trial of a proton pump inhibitor
D) A sinus radiograph
E) Referral for allergy testing

52. A 68-year-old female presents with a history of episodic severe lower abdominal pain
relieved by defecation. She has had a long history of constipation with normal to very firm
stools. Her history and a physical examination are otherwise normal. A colonoscopy 3 years
ago was normal. You diagnose constipation-predominant irritable bowel syndrome.

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

A) Lactulose
B) Magnesium citrate
C) Milk of magnesia
D) Polyethylene glycol
E) Sodium phosphate
53. A 48-year-old male presents with pain in the right antecubital fossa after lifting a trailer in his garage. On examination you note ecchymosis and tenderness in the antecubital fossa. You suspect a possible distal biceps tendon rupture.

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

A) A Speed’s test  
B) Plain radiographs of the elbow  
C) MRI of the elbow  
D) A local corticosteroid injection  
E) Referral for physical therapy

54. A 72-year-old male with type 2 diabetes mellitus sees you for routine follow-up. He takes metformin (Glucophage), 1000 mg twice daily. He is sedentary and does not adhere to his diet. His BMI is 32.0 kg/m². The examination is otherwise within normal limits. His hemoglobin A₁c is 9.5%.

Which one of the following is recommended by the American Diabetes Association to better control his blood glucose?

A) Start an intensive diet and exercise program for weight loss  
B) Start home monitoring of blood glucose with close follow-up  
C) Start basal insulin at 10 units/day  
D) Stop metformin and start a sulfonylurea  
E) Stop metformin and start a basal and bolus insulin regimen

55. A 47-year-old male presents with bilateral lower extremity edema of undetermined etiology extending to the proximal lower extremities, associated with fatigue. His lipid levels were also very high on recent testing. He does not take any daily medications and his thyroid function is normal. The only significant findings on examination are lower extremity edema and some periorbital edema.

Which one of the following urine tests could help confirm the most likely diagnosis?

A) Crystals  
B) Ketones  
C) pH  
D) Protein  
E) Specific gravity
56. You are notified by the nurse that a 66-year-old female who was admitted for pain control for her bone metastases is still having breakthrough pain. You gave her 10 mg of immediate-release oxycodone (Roxicodone) 15 minutes ago.

You are hoping to optimize pain control and minimize sedation, so you advise the nurse that the last dose will have its peak effect

A) now  
B) 1 hour after it was given  
C) 2 hours after it was given  
D) 4 hours after it was given

57. A 62-year-old female has a history of COPD graded as moderate on pulmonary function testing, with an FEV₁ of 65% of predicted and a PaO₂ of 57 mm Hg. Because her symptoms of dyspnea on exertion and fatigue seem out of proportion to her pulmonary function tests, you order echocardiography, which shows a pulmonary artery systolic pressure of 50 mm Hg, indicating pulmonary hypertension.

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

A) Supplemental oxygen  
B) An endothelin receptor antagonist such as bosentan (Tracleer)  
C) A calcium channel blocker such as nifedipine (Procardia)  
D) A phosphodiesterase 5 inhibitor such as sildenafil (Revatio)  
E) Referral for pulmonary artery endarterectomy

58. Which one of the following antihypertensive drugs may reduce the severity of sleep apnea?

A) Amlodipine (Norvasc)  
B) Hydralazine  
C) Lisinopril (Prinivil, Zestril)  
D) Metoprolol  
E) Spironolactone (Aldactone)

59. The U.S. Preventive Services Task Force recommends screening all adults for obesity and offering intensive, multicomponent behavioral interventions to patients with a BMI ≥30 kg/m². This recommendation is based on trials that show that behavioral weight-loss interventions for overweight and obese patients with elevated plasma glucose levels reduce the incidence of diabetes mellitus by 30%–50% over 2–3 years and the number needed to treat is 7.

What is the absolute risk reduction for developing diabetes, based on these trials?

A) 1/7  
B) 1/5  
C) 1/0.7  
D) 1/0.2  
E) 1/0.02
60. A 25-year-old female sees you because of irregular menses, hirsutism, and moderate acne. She is sexually active in a monogamous relationship with a male, has never been pregnant, and prefers not to become pregnant at this time.

Which one of the following is considered first-line therapy?

A) Clomiphene (Clomid)
B) Letrozole (Femara)
C) Levonorgestrel/ethinyl estradiol
D) Metformin (Glucophage)
E) Spironolactone (Aldactone)

61. A 68-year-old male presents with chronic right knee pain from osteoarthritis that inhibits his activity and is associated with stiffness throughout the day. He has tried acetaminophen and NSAIDs with limited effect. He has consulted an integrative medicine specialist who recommended multiple modalities to reduce pain and increase function, and he asks whether you think they would be helpful.

Which one of the following measures recommended by the other physician has the STRONGEST evidence of benefit?

A) A low-impact aerobic exercise program
B) Lateral wedge insoles
C) Oral glucosamine and chondroitin
D) A platelet-rich plasma injection
E) Needle lavage of the knee

62. A 52-year-old female nurse sees you for the first time. She was previously a patient of a recently retired physician in your practice. Her history is significant for a Roux-en-Y gastric bypass, degenerative joint disease of both knees and shoulders, and chronic low back pain. She takes oxycodone (Roxicodone), 5–10 mg every 4 hours. She tells you that she has been taking this for almost 10 years as treatment for various pains. She says that acetaminophen just “does not touch the pain” and that physical therapy has not worked. She asks you to continue this medication.

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

A) Add an NSAID to the current regimen
B) Initiate weekly urine drug screens
C) Taper oxycodone by 5%–10% every 1–4 weeks
D) Discontinue oxycodone
63. A 13-year-old male sees you because of pain in his throwing arm. He is a very dedicated football quarterback and has been practicing throws and playing games every day for 2 months. The pain started gradually over the season, and there is no history of acute injury. The patient is right-hand dominant, and on examination he has pain when he raises his right arm above his shoulder. There is also tenderness to palpation of the proximal and lateral humerus.

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

A) Injection of 10 mL of lidocaine into the subacromial space  
B) Plain radiographs of the shoulder  
C) Ultrasonography of the supraspinatus muscle  
D) MRI of the shoulder  
E) A bone scan of the shoulder

64. A 30-year-old female presents with an episode of recurrent, painful vesicular lesions on the labia. She noted a tingling, burning sensation a few days before the lesions appeared. A few years ago she had a similar outbreak just before the birth of her second child.

Which one of the following is indicated for this patient?

A) Doxycycline  
B) Fluconazole (Diflucan)  
C) Metronidazole  
D) Penicillin G benzathine (Bicillin L-A)  
E) Valacyclovir (Valtrex)

65. A 62-year-old Asian female presents to your office with pain and redness in her left eye that started last night. She does not wear contact lenses. The pain has become more severe and she now has a headache, light sensitivity, and mild nausea. Examination of the eyes reveals diffuse conjunctival injection on the left. Her pupils are 4 mm bilaterally but the left one reacts poorly to light. Her visual acuity is 20/30 on the right and 20/100 on the left.

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

A) Polymyxin B/trimethoprim ophthalmic drops (Polytrim)  
B) Prednisolone ophthalmic drops (Omnipred)  
C) An erythrocyte sedimentation rate and C-reactive protein level  
D) MRI of the brain with contrast  
E) Emergent evaluation by an ophthalmologist
66. A 24-year-old female with a history of bulimia nervosa sees you for treatment of depression. She is currently receiving cognitive-behavioral therapy. You decide that she requires medication to treat her depression.

Which one of the following medications has been associated with an increased risk of seizures in patients with bulimia nervosa?

A) Bupropion (Wellbutrin)
B) Fluoxetine (Prozac)
C) Nortriptyline (Pamelor)
D) Sertraline (Zoloft)
E) Venlafaxine (Effexor XR)

67. At a routine well child visit the mother of a 3-year-old male expresses concern that his toes turn in, causing a clumsy gait when he walks. You diagnose internal tibial torsion, because his feet point inward when his patellae face forward. The examination is otherwise normal.

Which one of the following is recommended at this time?

A) No intervention
B) Shoe modification with wedges to externally rotate the feet while walking
C) Night splinting with the feet externally rotated
D) Serial casting to gradually externally rotate the feet
E) Surgery to correct the deformity

68. A 24-year-old female seeks your advice regarding the recent onset of a cough when running. She moved to the United States from Mexico last year and her symptoms first became apparent during her first winter in the Midwest. The cough starts after she has been running approximately 1 mile but no sputum is produced and no other symptoms occur. She has no other health concerns.

A physical examination and office spirometry are consistent with a healthy young adult. You ask her to run around the outside of the clinic several times and then you reexamine her. The only change noted is an increase in her pulse rate and a 10% drop in her FEV₁.

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

A) An endurance conditioning program
B) An over-the-counter antihistamine as needed
C) An inhaled corticosteroid 2 hours before running
D) An inhaled short-acting β₂-agonist 15 minutes before running
E) Daily use of an inhaled long-acting β₂-agonist
69. Which one of the following malignancies is associated with hereditary hemochromatosis?

A) Biliary carcinoma  
B) Chronic myeloid leukemia  
C) Hepatocellular carcinoma  
D) Multiple myeloma  
E) Pancreatic cancer

70. You admit a previously healthy 62-year-old female to the hospital for intractable nausea and vomiting with intravascular volume depletion and hypotension. She lives in rural northern New Mexico. Prior to the onset of her symptoms she had been gardening and cleaning out a chicken coop, where she encountered several rodents. She is febrile and you obtain blood and urine cultures. Two out of four blood culture bottles are positive for gram-negative rods. Which one of the following is the most likely pathogen?

A) Brucella melitensis  
B) Coxiella burnetii  
C) Escherichia coli  
D) Listeria monocytogenes  
E) Yersinia pestis

71. A 21-year-old female is being evaluated for secondary causes of refractory hypertension. Which one of the following would be most specific for fibromuscular dysplasia?

A) A serum creatinine level  
B) An aldosterone:renin ratio  
C) 24-hour urine for metanephrines  
D) Renal ultrasonography  
E) Magnetic resonance angiography of the renal arteries

72. Of the following, which one is the greatest risk factor for developing knee osteoarthritis as an older adult?

A) A sedentary lifestyle  
B) Cigarette smoking  
C) Low socioeconomic status  
D) Male sex  
E) Obesity
73. A staff member at a local assisted living facility calls you about an 88-year-old female who has chronic urinary incontinence and well controlled hypertension. A urinalysis was obtained after the patient reported some dizziness and malaise. She does not have dysuria and has had no change to her incontinence. The patient is afebrile and other vital signs are normal. The urine culture reveals >100,000 colony-forming units of *Escherichia coli*, with sensitivities pending.

In addition to supportive care and hydration, which one of the following would be indicated at this time?

A) Ciprofloxacin (Cipro)
B) Fosfomycin (Monurol)
C) Nitrofurantoin (Macrodantin)
D) Trimethoprim/sulfamethoxazole (Bactrim)
E) No antibiotics

74. A 61-year-old white male with type 2 diabetes mellitus sees you for a follow-up visit. His blood pressure is 156/94 mm Hg. At a visit 1 week ago his blood pressure was 150/92 mm Hg. Laboratory studies obtained prior to this visit show a BUN of 16 mg/dL (N 6–20), a serum creatinine level of 0.9 mg/dL (N 0.7–1.3), and microalbuminuria on a urinalysis. His diabetes is well controlled with metformin (Glucophage) and he is taking aspirin.

Which one of the following would you recommend?

A) Observation only
B) An ACE inhibitor
C) A β-blocker
D) A calcium channel blocker
E) A diuretic

75. A 66-year-old female with a previous history of hypertension, stable angina, and carotid endarterectomy presents with acute upper abdominal pain, which has developed over the past 3 hours. A physical examination reveals epigastric tenderness without guarding or rebound, but does not reveal a cause for the level of pain reported by the patient. Initial laboratory findings are within normal limits, including a CBC, glucose, lactic acid, amylase, lipase, liver enzymes, and kidney function tests. You suspect acute mesenteric ischemia.

Which one of the following diagnostic imaging tests is the preferred initial evaluation for this problem?

A) Duplex ultrasonography
B) CT angiography
C) Catheter angiography
D) Magnetic resonance angiography (MRA)
E) Upper and lower GI endoscopy
76. A 38-year-old patient wishes to start contraception. She currently takes lisinopril (Prinivil, Zestril) for hypertension and also takes sumatriptan (Imitrex) occasionally for migraines at the first sign of flashing lights or zigzagging lines in her vision. Her medical, family, and social histories are otherwise unremarkable. An examination is notable only for a blood pressure of 130/80 mm Hg and a BMI of 36.0 kg/m².

The patient is interested in using either the vaginal ring or the contraceptive patch. Which one of the following would you recommend?

A) Transdermal norelgestromin/ethinyl estradiol (Ortho Evra)
B) The etonogestrel/ethinyl estradiol vaginal ring (NuvaRing)
C) Neither method due to her migraines
D) Neither method due to her age
E) Losing weight before starting either method

77. A 45-year-old male sees you for follow-up of several chronic medical problems including hypertension, diabetes mellitus, and obesity. He is a truck driver, smokes one pack of cigarettes per day, and does not exercise. His blood pressure is 166/94 mm Hg and his hemoglobin A1c is 9.7%. His medical conditions have been difficult to control with medications and he has been resistant to making lifestyle changes.

Which one of the following strategies would be most effective for inducing significant behavioral change?

A) Counsel the patient on the complications of smoking and uncontrolled diabetes
B) Utilize motivational interviewing to explore the patient’s level of desire to change
C) Treat the patient with an SSRI and refer him to a counselor
D) Transfer the patient to another family physician in your community

78. A 47-year-old male who lives at sea level attempts to climb Mt. Rainier. On the first day he ascends to 3400 m (11,000 ft). The next morning he has a headache, nausea, dizziness, and fatigue, but as he continues the climb to the summit he becomes ataxic and confused.

Which one of the following is the treatment of choice?

A) Administration of oxygen and immediate descent
B) Dexamethasone, 8 mg intramuscularly
C) Acetazolamide, 250 mg twice a day
D) Nifedipine (Procardia), 10 mg immediately, followed by 30 mg in 12 hours
E) Helicopter delivery of a portable hyperbaric chamber
79. A 60-year-old male presents with the lesion shown below. It has grown over the last few months. His past medical history includes well controlled hypertension. He takes lisinopril (Prinivil, Zestril), 10 mg daily, and aspirin, 81 mg daily.

After the diagnosis is established with a biopsy, which one of the following has the highest cure rate for this problem?

A) Standard wide excision
B) Electrodesiccation and curettage
C) Mohs surgery
D) Photodynamic therapy
E) Radiation therapy

80. A 55-year-old female sees you for a preoperative evaluation prior to having cataract surgery. The patient has a previous history of type 1 diabetes mellitus. She reports that she takes a brisk daily walk and has no angina or other cardiac symptoms. The cardiovascular and pulmonary examinations are unremarkable.

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

A) No further evaluation
B) An EKG
C) A treadmill stress test
D) Pharmacologic stress testing
E) A chest radiograph

81. The novel anticoagulants (NOACs) include apixaban (Eliquis), dabigatran (Pradaxa), edoxaban (Savaysa), and rivaroxaban (Xarelto). Which one of the following should be considered when starting or adjusting the dosage of a NOAC?

A) Serum albumin
B) INR
C) Liver enzymes
D) Partial thromboplastin time
E) Renal function

82. A 42-year-old male with alcohol use disorder tells you that his last drink was 7 days ago and asks if there are any medications available to help him maintain abstinence from alcohol. He has no other medical or psychological problems.

Which one of the following pharmacologic agents could help reduce this patient’s alcohol consumption and increase abstinence?

A) Acamprosate
B) Amitriptyline
C) Paroxetine (Paxil)
D) Promethazine
E) Venlafaxine (Effexor XR)
83. A 68-year-old male with a 40-pack-year history of smoking presents with a 2-month history of dyspepsia and difficulty swallowing. He also reports a 20-lb unintentional weight loss. He takes omeprazole (Prilosec), 20 mg daily.

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

A) Increasing omeprazole to 40 mg twice daily
B) Abdominal CT
C) Barium esophagography
D) Esophageal manometry
E) Upper endoscopy

84. A 16-year-old white male sees you for a sports preparticipation examination. His height is 193 cm (76 in), his weight is 69 kg (152 lb), and he appears to have long arms. A physical examination reveals a high arched palate, kyphosis, myopia, and pectus excavatum.

Which one of the following valvular abnormalities is most likely in this patient?

A) Mitral stenosis
B) Pulmonic stenosis
C) Aortic stenosis
D) Aortic insufficiency
E) Bicuspid aortic valve

85. A 46-year-old male with a 30-pack-year smoking history has had multiple episodes of coughing up blood that he describes as a “quarter size” amount. This has happened over the last couple of days. He has not had any chronic cough and has not been ill. A chest radiograph is negative.

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

A) Observation with no further workup unless the cough persists for >1 month or the quantity of hemoptysis increases
B) CT of the chest
C) Referral for bronchoscopy
D) Referral for nasolaryngoscopy
86. A 68-year-old female presents for evaluation of shortness of breath with activity for the past several weeks. She used to walk 2 miles daily for exercise but can no longer do so because of dyspnea and chest tightness. She also reports mild lower extremity edema. She has a history of a bicuspid aortic valve and aortic stenosis. Echocardiography 1 year ago showed moderately severe aortic stenosis with a mean valve area of $1.1 \text{ cm}^2$.

Echocardiography today shows aortic stenosis with an aortic valve area of $0.9 \text{ cm}^2$, a mean pressure gradient of $42 \text{ mm Hg}$, and a transaortic velocity of $4.3 \text{ m/sec}$. The ejection fraction is estimated to be $50\%$.

Which one of the following is indicated at this time?

A) Atorvastatin (Lipitor)
B) Furosemide (Lasix)
C) Lisinopril (Prinivil, Zestril)
D) Metoprolol succinate (Toprol-XL)
E) Referral for aortic valve replacement

87. You suspect a 45-year-old female may have irritable bowel syndrome. She has a 6-month history of crampy, diffuse abdominal pain associated with defecation. Her symptoms occur several days per week.

According to the Rome IV criteria, an associated symptom that would help in making this diagnosis is

A) a change in stool frequency
B) increased gas and bloating
C) pain brought on by eating
D) waking up at night to defecate
E) weight loss of 5 lb (2 kg)

88. The U.S. Preventive Services Task Force recommends routine screening for gestational diabetes mellitus no sooner than

A) 16 weeks gestation
B) 20 weeks gestation
C) 24 weeks gestation
D) 32 weeks gestation

89. A 20-year-old football player presents with pain in the proximal fifth metatarsal. The pain was initially present only after practices, but now it causes push-off pain during practice. There is tenderness to palpation. Plain films show no signs of fracture.

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

A) Start NSAIDs and allow him to continue practicing as tolerated
B) Place him at non–weight bearing for 2 weeks and repeat the plain films
C) Place him in a hard shoe for 3 weeks and then reexamine
D) Order MRI of the foot
E) Order a bone scan of the foot
90. An 84-year-old female with severe dementia due to Alzheimer’s disease is a resident of a long-term care facility. She has been hitting the staff while receiving personal care and recently had an altercation with another resident. Behavioral interventions have been unsuccessful in managing her symptoms and you suggest to the patient’s family that she be started on low-dose risperidone (Risperdal). They ask about appropriate use of the drug and the potential for side effects.

Which one of the following would be appropriate advice?

A) Extrapyramidal side effects are more common compared to typical antipsychotics
B) Dementia-related psychosis is an FDA-approved indication
C) No monitoring will be necessary
D) The risk of diabetes mellitus is decreased
E) The risk of mortality is increased

91. Which one of the following diabetes mellitus medications is MOST likely to cause weight gain?

A) Empagliflozin (Jardiance)
B) Glimepiride (Amaryl)
C) Liraglutide (Victoza)
D) Metformin (Glucophage)
E) Sitagliptin (Januvia)

92. A previously healthy 34-year-old female presents with a 1-hour history of palpitations. She does not have a cough, shortness of breath, wheezing, or chest pain. An EKG is shown below.

Which one of the following laboratory tests is most likely to demonstrate the cause of the patient’s underlying problem?

A) BNP
B) D-dimer
C) Lactic acid
D) Troponin
E) TSH
93. A 14-year-old male is brought to your office with a 2-month history of a lump in his left chest. An examination reveals a slightly tender 2-cm area of concentric firm mobile tissue under the left areola. He has no skin changes, nipple discharge, or associated adenopathy. The right side is unremarkable. A genital examination reveals Tanner 3 development but is otherwise unremarkable. Growth curves are appropriate for the patient’s age, with a BMI of 19.1 kg/m².

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

A) Follow-up in 6–12 months
B) A prolactin level
C) Ultrasonography of the left breast
D) Tamoxifen (Soltamox), 10 mg/day for 3 months
E) A biopsy

94. A 52-year-old male presents for evaluation of a long-standing facial rash. He reports that the rash is itchy, with flaking and scaling around his mustache and nasolabial folds.

Which one of the following is most likely to be beneficial?

A) Topical antibacterial agents
B) Topical antifungal agents
C) Topical vitamin D analogues
D) Oral zinc supplementation

95. A 58-year-old male sees you for a routine health maintenance visit. He has a 20-pack-year smoking history and proudly tells you that he quit “for good” 1 year ago. You congratulate him on this accomplishment and encourage him to continue to abstain from tobacco. He has not seen a physician for 20 years.

U.S. Preventive Services Task Force recommendations for this patient include which one of the following?

A) Abdominal aortic aneurysm screening
B) Fall prevention screening
C) Hepatitis C screening
D) Lung cancer screening with low-dose CT
96. A 30-year-old female who gave birth to a healthy infant 3 months ago has had mildly
depressed moods almost daily for the last 7 weeks. She takes very little joy in daily activities
and interacting with her baby. She is exclusively breastfeeding and has difficulty sleeping.
She says that she felt fine during the first month after the delivery, and has not experienced
any homicidal or suicidal ideations. You rule out postpartum psychosis and bipolar disorder.

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

A) Reassurance only
B) A home health visit
C) Oral contraceptives
D) Trazodone (Olepto)
E) Referral for psychotherapy

97. Which one of the following is the preferred first-line agent in the treatment of rheumatoid
arthritis?

A) Adalimumab (Humira)
B) Etanercept (Enbrel)
C) Hydroxychloroquine (Plaquenil)
D) Methotrexate (Trexall)
E) Prednisone

98. A 68-year-old female sees you for a routine health maintenance visit. She feels well and says
she has been eating more carefully and exercising for 45 minutes 4 days a week for the past
6 months. Her past medical history includes controlled hypertension and osteoarthritis of the
knee. Her family history is notable for a myocardial infarction in her mother at 48 years of
age. Her only medication is lisinopril (Prinivil, Zestril).

The physical examination is notable only for a BMI of 36.0 kg/m². Laboratory findings are
notable for significant hyperlipidemia and you recommend starting a statin. She reports that
she will undergo an elective total knee replacement next month and asks about the safety of
starting a new medication before this surgery.

You recommend that she

A) start a statin immediately to decrease her risk of cardiovascular disease and
perioperative mortality
B) start a statin immediately to decrease her risk of cardiovascular disease, although her
risk of perioperative mortality will not be affected
C) start a statin immediately to decrease her risk of cardiovascular disease, stop the
statin 1 week before surgery, and resume taking it after the surgery, to decrease her
risk of perioperative mortality
D) start a statin immediately after the surgery to decrease her risk of cardiovascular
disease and perioperative mortality
E) start a statin after she is released postoperatively by her surgeon to decrease her risk
of cardiovascular disease and perioperative mortality
99. A 40-year-old male presents to your office for follow-up of an abnormal clean-catch urine test performed at his employee health clinic during a preemployment screening examination. He had a positive urine dipstick for hemoglobin and 5 RBCs/hpf on microscopy. The urine was negative for protein, WBCs, and casts. A basic metabolic panel was notable for a creatinine level of 0.8 mg/dL (N 0.6–1.2) and a BUN of 15 mg/dL (N 8–23). He reports that he has been healthy and has not sought medical care in the last 5 years. He quit smoking 6 months ago and walks the dog daily for 30 minutes. A physical examination today is normal.

According to the guidelines of the American Urological Association, which one of the following would be the most appropriate next step in the workup?

A) Repeat urine microscopy  
B) Urine cytology  
C) Cystoscopy  
D) Renal ultrasonography  
E) Retrograde pyelography

100. A 68-year-old female presents with a 3-month history of low back pain and fatigue. She has unintentionally lost 15 lb. A physical examination is positive for vertebral point tenderness over the third and fourth lumbar vertebrae. Initial laboratory testing reveals a normocytic anemia, elevated total protein, and a mild decrease in renal function.

You order a lumbar spine radiograph and additional diagnostic testing. Which one of the following would be most appropriate at this point?

A) A serum ferritin level and iron studies  
B) TSH and vitamin B₁₂ levels  
C) Serum protein electrophoresis  
D) MRI of the lumbar spine  
E) A bone marrow biopsy

101. A 48-year-old female with type 2 diabetes mellitus has been unable to achieve optimal glycemic control with lifestyle modifications alone. You recommend that she start medication.

Which one of the following medications is generally recommended as the first-line medication for initiating treatment for type 2 diabetes mellitus?

A) Alogliptin (Nesina)  
B) Empagliflozin (Jardiance)  
C) Glipizide (Glucotrol)  
D) Metformin (Glucophage)  
E) Pioglitazone (Actos)
102. A 22-year-old female presents to your office for evaluation of nasal and sinus congestion, frequent sneezing, and itchy red eyes. These symptoms have been present 5–7 days per week for the past 6 months. She has had similar symptoms in the past but they have never lasted this long. She moved into a new home 2 months ago. There are no animals in the house. She has tried over-the-counter fexofenadine (Allegra) with only partial relief of symptoms.

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

A) Use of a mite-proof impermeable pillow cover
B) Intranasal saline irrigation
C) Intranasal azelastine (Astepro)
D) Intranasal budesonide (Rhinocort)
E) CT of the sinuses

103. An elderly male presents with a shallow, irregularly shaped ulceration over the medial aspect of his right lower leg between the lower calf and medial malleolus. There is some surrounding edema with pigment deposition over the lower leg. He reports aching and burning pain in the lower leg with daytime swelling. His symptoms improve with leg elevation.

You make a diagnosis of venous stasis ulcer. Which one of the following would be the most appropriate management?

A) The use of foam dressings rather than other standard dressings
B) The use of silver-based antiseptic products even if there is no infection
C) Compression therapy
D) A 3-week course of systemic antibiotics

104. Which one of the following is the most reliable measure to protect children from lead toxicity in the United States?

A) Anticipatory guidance for parents and caregivers during well child visits
B) Checking the serum lead level after a known exposure
C) Eliminating the sources of lead in the community
D) Iron and calcium supplementation to reduce lead absorption
E) Providing appropriate cleaning equipment to families with known lead in the home
105. A 64-year-old female with hypertension, diabetes mellitus, hyperlipidemia, and chronic kidney disease has had headaches that have been escalating over the past 6 months and are associated with double vision and ataxia. Her medications include lisinopril (Prinivil, Zestril) and atorvastatin (Lipitor). She weighs 61 kg (135 lb) and her blood pressure is 144/64 mm Hg. A basic metabolic panel is normal except for a creatinine level of 2.1 mg/dL (N 0.6–1.1) and an estimated glomerular filtration rate of 26 mL/min/1.73 m².

You decide to order MRI of the brain. Which one of the following would be most appropriate with regard to the use of gadolinium contrast in this patient?

A) Use of gadolinium if the patient’s blood pressure is controlled to a goal systolic pressure of < 130 mm Hg
B) Use of gadolinium if the patient is pretreated with n-acetylcysteine and intravenous normal saline
C) Use of gadolinium if lisinopril is stopped 48 hours before the MRI
D) Avoiding the use of gadolinium contrast

106. A 29-year-old gravida 2 para 1 comes to the hospital for scheduled induction of labor. Her last delivery was a spontaneous vaginal delivery without complications. Her pregnancy has been uneventful. Oxytocin (Pitocin) is used during induction according to the hospital protocol and her labor progresses without difficulty.

Which one of the following should be AVOIDED to minimize the risk of postpartum hemorrhage in this patient?

A) Administration of oxytocin with delivery of the anterior shoulder
B) Controlled cord traction
C) Active management of the third stage of labor
D) Routine episiotomy
E) Manual removal of a retained placenta

107. A 64-year-old male with midsternal chest pain is brought to the emergency department by ambulance. He is on oxygen and an intravenous line is in place. Shortly after arrival he loses consciousness and becomes pulseless and apneic, and CPR is begun. Cardiac monitoring shows ventricular tachycardia with a rate of 160 beats/min.

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

A) Amiodarone, intravenous infusion, followed by synchronized cardioversion
B) Adenosine (Adenocard), rapid intravenous push, repeated in 1–2 minutes if needed
C) Epinephrine, intravenous push, followed by synchronized cardioversion
D) Lidocaine (Xylocaine), intravenous push, repeated in 5 minutes if needed
E) Defibrillation
108. In patients with COPD, which one of the following inhaled medications has been shown to reduce exacerbations and exacerbation-related hospitalizations?

A) Albuterol (Proventil, Ventolin)  
B) Fluticasone (Flovent)  
C) Ipratropium (Atrovent)  
D) Salmeterol (Serevent)  
E) Tiotropium (Spiriva)

109. A 52-year-old male sees you for a routine health maintenance examination. He does not take any medications, does not drink alcohol, and is feeling well. A physical examination is normal with the exception of a BMI of 33.2 kg/m². Routine laboratory studies reveal mild elevations of ALT (SGPT) and AST (SGOT), which remain elevated on repeat testing 2 months later. Hepatitis B and hepatitis C testing are negative.

In addition to ultrasonography of the liver, which one of the following laboratory studies should be ordered to further evaluate this patient?

A) Serum ferritin  
B) Serum phosphorus  
C) α-Fetoprotein  
D) Carcinoembryonic antigen (CEA)  
E) Serum protein electrophoresis

110. A 62-year-old white male with a 3-month history of diabetes mellitus has a hemoglobin A₁c of 7.8%. Which one of the following is the best parameter for determining if he can safely take metformin (Glucophage)?

A) 24-hour urine for creatinine clearance  
B) BUN/creatinine ratio  
C) Estimated glomerular filtration rate  
D) Serum creatinine  
E) Urine microalbumin
111. A 43-year-old male presents with a 6-week history of right ankle pain. The pain worsens with walking or running for a moderate distance and fails to improve with heat application or reduction of activity. He has been following a moderate cardiovascular exercise program for several years without problems and did not increase his physical activity before the onset of the pain. He does not recall any injury to the ankle.

On examination the area of pain is localized in the right Achilles tendon proximal to its insertion. No swelling, redness, or deformity is apparent but tenderness is elicited with application of moderate fingertip pressure to the tendon.

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

A) Use of a heel cup in the right shoe
B) A 1-month course of daily NSAIDs at a prescription dosage
C) An eccentric gastrocnemius-strengthening program
D) A corticosteroid injection into the right Achilles tendon sheath
E) Immobilization of the right ankle for 3 weeks with a boot

112. A 45-year-old male presents to your office with a 2-month history of a nonproductive cough, mild shortness of breath, fatigue, and a 5-lb weight loss. On examination his lungs are clear. A PPD skin test is negative. A chest radiograph shows bilateral hilar adenopathy and his angiotensin converting enzyme level is elevated. A biopsy of the lymph node shows a noncaseating granuloma.

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

A) Azathioprine (Imuran)
B) Fluconazole (Diflucan)
C) Isoniazid
D) Levofloxacin (Levaquin)
E) Prednisone

113. A 40-year-old white female sees you for the first time. When providing a history she describes several problems, including anxiety, insomnia, fatigue, persistent depressed mood, and low libido. These symptoms have been present for several years and are worse prior to menses, although they also occur to some degree during menses and throughout the month. Her menstrual periods are regular for the most part.

Based on this history, the most likely diagnosis is

A) premenstrual dysphoric disorder
B) menopause
C) dysthymia
D) anorexia nervosa
E) dementia
114. A 33-year-old gravida 3 para 2 presents for prenatal care 8 weeks after her last menstrual period. She asks if she will need any immunizations during this pregnancy.

Which one of the following vaccines is recommended for all women with each pregnancy?

A) 13-valent pneumococcal conjugate vaccine (PCV13, Prevnar 13)
B) Hepatitis B
C) MMR
D) Tdap
E) Varicella

115. A 26-year-old male presents with a rash on his anterior neck in the area of his beard that has been present for over a year. On examination he has dark, curly facial hair, and you find slightly tender, red, hyperpigmented papules on the superior anterior neck.

Which one of the following would you recommend to improve this patient’s rash?

A) Shaving with a multi-blade razor
B) Shaving with electric clippers
C) Pulling the skin taut while shaving
D) Plucking hairs rather than shaving
E) Oral cephalexin (Keflex)

116. A 54-year-old male comes to your office to establish care. He has a past history of hypertension treated with lisinopril (Prinivil, Zestril) and hydrochlorothiazide but has not taken his medications for over a year. He does not have any symptoms, including chest pain, shortness of breath, or headache. On examination his blood pressure is 200/115 mm Hg on two separate readings taken 5 minutes apart. The remainder of the physical examination is normal.

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

A) Institute out-of-office monitoring with an ambulatory device and follow up in 2 weeks
B) Restart the patient’s previous antihypertensive medications and follow up within 1 week
C) Administer a short-acting antihypertensive medication in the office to lower his blood pressure to <160/100 mm Hg
D) Hospitalize for hypertensive emergency
117. A 17-year-old female comes to your office with an 8-month history of amenorrhea. Menarche occurred at age 12 and her menses were regular until the past year. On examination the patient’s vital signs are in the normal range for her age but she has a BMI of 16.1 kg/m², which is below the third percentile for her age. She is a high school senior who dances with the local ballet company. She practices dance several hours a day and works out regularly. She tells you that she follows a strict 800-calorie/day diet to keep in shape for ballet.

You order a CBC, a comprehensive metabolic panel, a urine β-hCG level, FSH and LH levels, and a TSH level. Which one of the following is also recommended as part of the workup?

A) An EKG  
B) Pelvic ultrasonography  
C) Abdominal/pelvic CT  
D) A DXA scan  
E) A nuclear bone scan

118. A 45-year-old electrician presents to your office with concerns about a bump on his left elbow. He does not recall any injury. The bump is painful to touch but causes no other symptoms. He is worried since it has been present for at least a month and never goes away.

On examination the patient is afebrile. He has a 4-cm movable fluctuant growth at the tip of his left olecranon that is slightly tender to touch. There is no warmth or erythema and he has full range of motion of his elbow. There is no other joint involvement.

Which one of the following would you recommend?

A) No further evaluation  
B) Laboratory testing, including a CBC with differential  
C) Plain radiography  
D) Ultrasonography  
E) Aspiration

119. A 25-year-old gravida 1 para 0 at 24 weeks gestation comes to your office with right lower extremity swelling and pain. Her pregnancy has been uncomplicated so far and her only medication is a prenatal vitamin. She does not have chest pain, shortness of breath, or fever. She recently started feeling the baby move, and an anatomy scan at 20 weeks gestation was normal.

Lower extremity Doppler ultrasonography confirms a right lower extremity deep vein thrombosis (DVT). Laboratory studies including a CBC, coagulation studies, and renal function are normal.

Which one of the following would be the most appropriate initial treatment of her DVT?

A) Oral apixaban (Eliquis)  
B) Oral aspirin  
C) Oral warfarin (Coumadin)  
D) Subcutaneous enoxaparin (Lovenox)  
E) Subcutaneous heparin
120. A 46-year-old female with a past medical history of polycystic ovary syndrome and migraine headaches presents with bilateral, hyperpigmented patches along her mandible. The patches are asymptomatic but bother her cosmetically and seem to be darkening.

Which one of her medications would be most likely to contribute to her melasma?

A) B-complex vitamins  
B) Metformin (Glucophage)  
C) Oral contraceptives  
D) Spironolactone (Aldactone)  
E) Sumatriptan (Imitrex)

121. A 73-year-old female is brought to your office by her daughter, who is concerned that there may be some memory changes in her mother. She has noticed that her mother frequently repeats herself and has made several medication errors lately.

The patient has type 2 diabetes mellitus, hypertension, depression, and hypothyroidism. Her current medications include glyburide (DiaBeta), aspirin, lisinopril (Prinivil, Zestril), hydrochlorothiazide, atorvastatin (Lipitor), and sertraline (Zoloft).

A physical examination reveals a blood pressure of 136/72 mm Hg. She scores 26/30 on a Saint Louis University Mental Status (SLUMS) examination, which suggests mild cognitive impairment. A cardiac examination and a foot examination are normal.

Laboratory studies reveal a hemoglobin A<sub>1c</sub> of 7.0% and a TSH level of 3.8 μU/mL (N 0.4–4.2). A basic metabolic panel is normal and her glucose level is 93 mg/dL. A CBC is normal.

Which one of the following medications should be stopped in this patient?

A) Atorvastatin  
B) Glyburide  
C) Hydrochlorothiazide  
D) Lisinopril  
E) Sertraline
122. A 75-year-old white male presents to your office following hospitalization for an episode of heart failure. His edema has resolved but he still becomes symptomatic with minor exertion such as walking less than a block. A recent chest radiograph shows cardiomegaly, and echocardiography reveals an ejection fraction of 25%. He is currently taking furosemide (Lasix), 20 mg daily; carvedilol (Coreg), 25 mg twice daily; and lisinopril (Prinivil, Zestril), 20 mg daily. His vital signs include a pulse rate of 60 beats/min, a blood pressure of 110/70 mm Hg, a respiratory rate of 18/min, and a temperature of 37.0°C (98.6°F). No crackles or hepatojugular reflux are noted on auscultation.

Which one of the following would improve this patient’s symptoms and decrease his mortality risk?

A) Digoxin  
B) Hydralazine and isosorbide dinitrate (BiDil)  
C) Hydrochlorothiazide  
D) Spironolactone (Aldactone)

123. A 67-year-old female who was recently diagnosed with colon cancer presented to the emergency department 2 days ago with acute shortness of breath and was diagnosed with a pulmonary embolism. She was started on enoxaparin (Lovenox) and was hemodynamically stable during her stay in the hospital. Her shortness of breath has improved and her oxygen saturation is currently 95% on room air.

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

A) Continue enoxaparin upon discharge  
B) Discontinue enoxaparin and start rivaroxaban (Xarelto)  
C) Discontinue enoxaparin and start warfarin (Coumadin)  
D) Start warfarin and continue enoxaparin until the INR is ≥2.0

124. A 32-year-old Yazidi female from Iraq is brought to your office to establish care. She is a refugee who was relocated 2 weeks ago.

Which one of the following would be appropriate at this visit?

A) Having a family member who speaks English serve as an interpreter  
B) Screening for posttraumatic stress disorder  
C) Hepatitis B vaccine  
D) Varicella vaccine
125. A 35-year-old male has a negative past medical history and a normal physical examination. He reports that he smokes half a pack of cigarettes per day and has 3–4 beers per week. A comprehensive metabolic panel reveals an ALT (SGPT) of 30 U/L (N 10–40) and an AST (SGOT) of 84 U/L (N 10–30). The remaining laboratory studies are negative. There is no family history of liver disease.

The laboratory findings suggest which one of the following?

A) Hepatitis C  
B) Hemochromatosis  
C) Gilbert syndrome  
D) Alcoholic liver disease  
E) Nonalcoholic liver disease

126. A 48-year-old female presents with dyspnea with exertion. She has never smoked. A physical examination is normal, including vital signs and pulse oximetry. A chest radiograph reveals mild hyperexpansion of the chest, and pulmonary function testing reveals an FEV₁/FVC ratio of 0.67, unchanged after bronchodilator use. An EKG and stress echocardiogram are normal. You suspect COPD.

Which one of the following is the most likely underlying cause of this patient’s pulmonary disease?

A) Allergic bronchopulmonary aspergillosis  
B) α₁-Antitrypsin deficiency  
C) Hemochromatosis  
D) Primary pulmonary hypertension  
E) Hypertrophic obstructive cardiomyopathy

127. A 52-year-old pianist is concerned that she may have carpal tunnel syndrome. Which one of the following would be consistent with this problem?

A) Weakness of thumb adduction  
B) Decreased sensation over the thenar eminence  
C) Decreased sensation over the dorsal aspect of the fourth finger  
D) Decreased sensation over the dorsal aspect of the fifth finger  
E) Decreased sensation over the palmar aspect of the thumb, index, and middle finger
A 67-year-old female with hypertension and atrial fibrillation has been taking warfarin (Coumadin) for the past 10 years. She has been hemodynamically stable for many years with no complications from her atrial fibrillation. She is scheduled to undergo elective bladder sling surgery for urinary incontinence. She does not have any other significant past medical history.

Which one of the following would be the most appropriate perioperative management of her warfarin?

A) Continue warfarin without interruption  
B) Discontinue warfarin the day prior to surgery and provide bridge therapy with low molecular weight heparin  
C) Discontinue warfarin 2 days prior to surgery and restart it 2 days postoperatively unless there is a bleeding complication  
D) Discontinue warfarin 2 days prior to surgery and restart it 5 days postoperatively unless there is a bleeding complication  
E) Discontinue warfarin 5 days prior to surgery and restart it 12–24 hours postoperatively unless there is a bleeding complication

A 48-year-old female smoker presents with solid, but not liquid, dysphagia that causes her to feel as if food is “getting stuck.” She sometimes regurgitates this food. When you ask her where it feels like the food is sticking she points to a location below the suprasternal notch.

The most appropriate next step is

A) a fluoroscopic swallowing study  
B) barium radiography  
C) CT of the chest  
D) endoscopy  
E) esophageal manometry
130. A 7-year-old female is brought to your office by her mother for follow-up of an urgent care visit. The child has a 5-day history of abdominal pain and low-grade fevers to 100.1°F. Her mother took her to an urgent care clinic last night when the patient developed the rash shown below. The rash is not pruritic or painful. She does not have any sick contacts, urinary symptoms, or changes in bowel habits.

A physical examination is normal except for the rash and minimal diffuse abdominal tenderness. A CBC and basic metabolic panel are normal and a urinalysis is notable only for microhematuria (30–40 RBCs/hpf) and mild proteinuria (30 mg/dL).

The following laboratory studies were obtained at the urgent care clinic.

<table>
<thead>
<tr>
<th>Test</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic metabolic panel</td>
<td>Normal</td>
</tr>
<tr>
<td>Urinalysis</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Yellow/clear</td>
</tr>
<tr>
<td>Leukocyte esterase</td>
<td>Negative</td>
</tr>
<tr>
<td>Nitrite</td>
<td>Negative</td>
</tr>
<tr>
<td>Protein</td>
<td>30 mg/dL (normal negative)</td>
</tr>
<tr>
<td>Glucose</td>
<td>Negative</td>
</tr>
<tr>
<td>Bilirubin</td>
<td>Negative (normal)</td>
</tr>
<tr>
<td>RBCs</td>
<td>34/hpf (N &lt; 4)</td>
</tr>
<tr>
<td>WBCs</td>
<td>4/hpf (N &lt; 5)</td>
</tr>
<tr>
<td>Bacteria</td>
<td>None</td>
</tr>
<tr>
<td>Squamous epithelial cells</td>
<td>&lt; 1 (normal)</td>
</tr>
<tr>
<td>Ketones</td>
<td>Negative (normal)</td>
</tr>
<tr>
<td>Blood</td>
<td>Large (normal negative)</td>
</tr>
<tr>
<td>Urine Gram stain</td>
<td>No bacteria, no PMNs</td>
</tr>
<tr>
<td>Urine culture</td>
<td>Negative × 24 hours</td>
</tr>
</tbody>
</table>

In addition to close follow-up, which one of the following is the next appropriate step in the management of this child?

A) Supportive care only
B) Amoxicillin for 10 days
C) Prednisone tapered over 10 days
D) A biopsy of a skin lesion
E) Referral to a nephrologist for consideration of a renal biopsy

131. An 18-month-old female is brought to your office in January for evaluation of a cough and fever. She has no chronic medical conditions. She abruptly developed a barking cough and hoarseness with a low-grade fever 2 days ago. The cough is worse at night. She has been drinking normally but is not interested in eating. On examination she is alert and resists the examination. Her respiratory rate and effort are normal. She has no stridor or wheezing.

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

A) A nasal swab for influenza testing
B) A chest radiograph
C) A single dose of oral dexamethasone
D) Azithromycin (Zithromax)
E) Oseltamivir (Tamiflu)
132. You are reviewing the home health care progress report of a 68-year-old female who was hospitalized with pneumonia 2 months ago. The patient moved to the area to live with her daughter following treatment for breast cancer 5 years earlier. Before the hospitalization her only medical needs had been for preventive services, treatment for hypertension, and surveillance for problems related to her chemotherapy and for return of her cancer. During the recent hospitalization oxygen supplementation was required to maintain healthy oxygen saturation levels, and after failing several attempts at weaning, home oxygen service was arranged.

You ask the home health nurse to test the patient’s oxygen saturation after 1 hour on room air and the nurse reports that the patient’s oxygen saturation is now consistently above 90% on room air. The care plan provided by the home health service includes a recommendation for the continuation of supplemental oxygen.

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

A) Order arterial blood gas studies to confirm her oxygenation status
B) Discontinue oxygen supplementation
C) Discontinue daytime use of oxygen and continue nighttime oxygen
D) Continue oxygen use, but only as needed when short of breath
E) Continue oxygen use to obtain a saturation >92% on room air

133. A 27-year-old female with a past medical history of polycystic ovary syndrome (PCOS) would like to become pregnant. Which one of the following treatments for PCOS is associated with greater live-birth and ovulation rates?

A) Finasteride (Proscar)
B) Letrozole (Femara)
C) Metformin (Glucophage)
D) Spironolactone (Aldactone)

134. A 58-year-old male with a history of tobacco and alcohol abuse presents with the sudden onset of many well circumscribed brown, oval, rough papules with a “stuck-on” appearance on his trunk and proximal extremities. On examination you also note an unintentional 6-kg (13-lb) weight loss over the last 3 months and conjunctival pallor. A review of systems is positive for more frequent stomachaches, decreased appetite, and mild fatigue.

You order a laboratory workup. Which one of the following would be most appropriate at this point?

A) Reassurance that the skin lesions are benign
B) A skin biopsy
C) Referral to a dermatologist
D) CT of the abdomen and pelvis
E) Upper and lower endoscopy
135. A previously healthy 6-year-old male is brought to your office because he has a fever. After a complete history and physical examination you are concerned that the child has Rocky Mountain spotted fever.

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

A) Supportive care only  
B) Amoxicillin  
C) Doxycycline  
D) Rifampin (Rifadin)

136. A 38-year-old female presents for ongoing management of type 2 diabetes mellitus, obesity, and chronic abdominal pain related to her history of recurrent pancreatitis. She says that her self-monitored blood glucose has been running in the range of 200–300 mg/dL on most occasions. She is not currently taking any medications but has tried metformin (Glucophage) and extended-release metformin (Glucophage XR) unsuccessfully in the past. On both occasions she experienced worsening abdominal pain and diarrhea. She does not feel she can manage insulin and requests an oral medication. Her hemoglobin A1c in your office today is 9.0%.

In addition to lifestyle and nutrition counseling, which one of the following would be the best treatment at this time?

A) Restart metformin  
B) Start empagliflozin (Jardiance)  
C) Start liraglutide (Victoza)  
D) Start sitagliptin (Januvia)

137. According to the American Academy of Pediatrics guidelines, when school personnel suspect that a child has head lice, which one of the following is the most appropriate management strategy?

A) The child should be sent home until treated, and a notice should be sent to the parents of the child’s classmates that a case of lice has occurred at the school  
B) The child should be sent home and may return to school after an over-the-counter treatment has been started  
C) The child should be sent home and may return to school after treatment prescribed by a licensed clinician has been started  
D) The child should be sent home and may return to school once treatment has been completed and the child is free of all nits and lice  
E) The child should remain in class and should not be treated unless there is a clear diagnosis and live lice are seen
138. Which one of the following comorbidities would falsely lower the hemoglobin A\textsubscript{1c} level in a patient with type 2 diabetes mellitus?

A) Vitamin B\textsubscript{12} deficiency  
B) Iron deficiency anemia  
C) Hemolytic anemia  
D) Chronic kidney disease  
E) A history of splenectomy

139. A 52-year-old male with a long-standing history of hypertension, COPD, type 2 diabetes mellitus, and bipolar disorder is brought to your office by his daughter because of a new onset of tremors. He is currently taking aspirin, hydrochlorothiazide, atenolol (Tenormin), glyburide (DiaBeta), lithium, inhaled albuterol, and inhaled tiotropium (Spiriva). Except for a recent episode of dehydration, his medication has worked well and no medication changes have been made within the past 2 years. On examination his heart rate is 52 beats/min and a neurologic examination reveals mild ataxia and coarse tremors. The remainder of the physical examination is normal.

Which one of the following is the most likely cause of his clinical findings?

A) Albuterol  
B) Atenolol  
C) Lithium  
D) Tiotropium

140. A previously healthy 57-year-old patient who smokes is hospitalized and treated with a fluoroquinolone for community-acquired pneumonia. Which one of the following could be expected with a 5-day course of antibiotics compared to a longer course in patients such as this?

A) Slower clinical improvement  
B) Higher hospital readmission rates  
C) Higher mortality rates  
D) Slower resumption of normal activity  
E) No difference in clinical outcome

141. A 45-year-old female has a history of intermittent asthma and her only medication is an albuterol (Proventil, Ventolin) inhaler. Over the past 2 months her asthma has limited her activities. She is using her inhaler daily and waking up at night once or twice a week with a cough.

Which one of the following would be the preferred medication to control her asthma?

A) Fluticasone (Flovent)  
B) Salmeterol (Serevent Diskus)  
C) Fluticasone/salmeterol (Advair)  
D) Montelukast (Singular)
142. In addition to group B *Streptococcus* (GBS), which one of the following is the most common cause of neonatal sepsis?

A) *Escherichia coli*  
B) Group A *Streptococcus*  
C) *Listeria monocytogenes*  
D) *Staphylococcus aureus*  
E) *Streptococcus pneumoniae*

143. The U.S. Preventive Services Task Force recommends which one of the following screening options for major depressive disorder (MDD) in adolescents 12–18 years of age?

A) Do not screen because the harms outweigh the benefits  
B) Do not screen because valid screening tools are not available for this population  
C) Do not screen because reliable treatment options are not effective unless MDD is clinically apparent  
D) Screen if systems are in place for diagnosis, treatment, and follow-up  
E) The evidence is currently insufficient to recommend for or against screening

144. An otherwise healthy 64-year-old male comes to your office accompanied by his wife because of tinnitus that has affected both ears for the last 3 years. It has been most troublesome at bedtime. His wife says that he is becoming irritable and depressed because he is bothered by the buzzing in his ears many times during the day. His only medication is allopurinol (Zyloprim) for the prevention of gout.

The most likely identifiable cause of this patient’s tinnitus is

A) medication  
B) Meniere’s disease  
C) temporomandibular joint dysfunction  
D) sensorineural hearing loss  
E) impacted cerumen

145. A 49-year-old male is concerned about lesions on his penis that he has noticed over the past 6 months. He was circumcised as a child and has had the same female sexual partner for 5 years. He does not have any pain, itching, or dysuria. On examination you note multiple reddish-blue papules on the scrotum and a few similar lesions on the shaft of the penis.

The most likely diagnosis is

A) pearly penile papules  
B) lichen nitidus  
C) lichen sclerosus  
D) angiokeratomas  
E) squamous cell carcinoma in situ (Bowen’s disease)
146. A 36-year-old female presents with a 10-year history of daily headaches. The headaches are bilateral, have a pressure and tightening quality, and are not aggravated by activity. They tend to worsen as the day progresses. There is no associated prodrome, nausea, or sensitivity to light or noise. A neurologic examination is normal.

Which one of the following has been shown to reduce the severity and duration of this type of headache?

A) Amitriptyline  
B) OnabotulinumtoxinA (Botox)  
C) Propranolol  
D) Sertraline (Zoloft)  
E) Topiramate (Topamax)

147. A 38-year-old female with a 5-year history of diabetes mellitus has developed a “pins and needles” sensation in her feet. Which one of the following is considered first-line therapy for her condition?

A) Acupuncture  
B) Lidocaine 5% spray  
C) Oxycodone (Roxicodone)  
D) Pregabalin (Lyrica)  
E) Venlafaxine (Effexor XR)

148. A 32-year-old female sees you for evaluation of hair loss. On examination she has a smooth, circular area of complete hair loss on her scalp with no other skin changes.

Which one of the following would you recommend?

A) An oral antifungal agent  
B) Topical minoxidil (Rogaine)  
C) Topical immunotherapy  
D) Topical corticosteroids  
E) Intralesional corticosteroids

149. You are evaluating a 64-year-old female in the emergency department for pyelonephritis. Her past medical history is negative and she has previously been in good health. The patient appears acutely ill but is oriented. On examination her weight is 100 kg (220 lb), her temperature is 38.9°C (102.0°F), her pulse rate is 110 beats/min, her respiratory rate is 24/min, her blood pressure is 136/72 mm Hg, and her oxygen saturation is 94% on room air. Initial laboratory findings include a venous lactate level of 4.0 mmol/L (N 0.6–1.7).

You decide to start normal saline intravenously. Which one of the following would be the most appropriate initial rate?

A) 100 mL/hr  
B) 150 mL/hr  
C) 200 mL/hr  
D) 3000 mL over 30 minutes  
E) 3000 mL over 3 hours
150. A 54-year-old female sees you for a wellness examination. Her last screening mammography 10 years ago revealed dense breasts but was otherwise normal.

A past history of which one of the following would indicate the need for MRI of the breasts?

A) Very dense breasts  
B) Morbid obesity  
C) Combination estrogen/progesterone therapy for the last 3 years  
D) Chest radiation for Hodgkin’s disease  
E) Radioiodine treatment for Graves disease

151. You prescribe amoxicillin suspension, 480 mg twice daily for 10 days, for a child who weighs 12 kg (26 lb). To decrease the risk of a dosing error with this prescription, you ask your nurse to provide the parents with appropriate education and

A) a written copy of the prescription  
B) a disposable teaspoon  
C) a medication cup  
D) an oral syringe

152. A 26-year-old female presents with a skin rash and chronic diarrhea. She reports being previously diagnosed with eczema, and while the rash has responded well to topical corticosteroids it flares when they are stopped. The skin rash is very itchy and appears as mildly erythematous papules and vesicles clustered on the elbows and knees, as well as the posterior neck and scalp. A comprehensive metabolic panel is normal, and a CBC reveals a mild microcytic, hypochromic anemia. Antinuclear antibodies are negative, a TSH level is normal, and a tissue transglutaminase antibody test is positive.

Which one of the following is the most likely diagnosis?

A) Cutaneous lupus erythematosus  
B) Dermatitis herpetiformis  
C) Eczema  
D) Eczema herpeticum  
E) Lichen simplex chronicus

153. You see a 26-year-old male for the first time. He has a history of major depression over the past 4–5 years. He currently does not take any medications. His psychiatric history reveals at least two episodes of mania, most recently 1 year ago when he was hospitalized during the episode.

Which one of the following is CONTRAINDICATED as monotherapy in treating this patient’s depression at this time?

A) Divalproex (Depakote)  
B) Fluoxetine (Prozac)  
C) Lamotrigine (Lamictal)  
D) Lithium  
E) Quetiapine (Seroquel)
154. A 35-year-old white female presents with recurrent wheezing and coughing over the past few weeks, and recent production of brown sputum plugs. She is a regular patient of yours and has a long history of asthma and multiple allergies. She has been treated four times in the last 3 months for asthma exacerbations and generally feels better the first day she takes her corticosteroid, but any attempt at tapering leads to a recurrence of symptoms. She previously had good control of her asthma, although she has required regular use of a high-dose inhaled corticosteroid and a long-acting β-agonist. In spite of just completing a course of levofloxacin (Levaquin) for suspected pneumonia she returns today with a recurrence of the same symptoms.

A physical examination is unremarkable with the exception of diffuse expiratory wheezing. She has no fever or other abnormal vital signs. A chest radiograph shows opacities in the upper and middle lobes and a CBC is concerning for eosinophilia.

Which one of the following is the most likely diagnosis?

A) Allergic bronchopulmonary aspergillosis
B) Community-acquired pneumonia
C) Pulmonary embolism
D) Medication nonadherence

155. An 89-year-old female with a history of hypertension and glaucoma is brought to the emergency department by her family with shortness of breath. She has been trying to get her home ready for sale prior to moving into an assisted living facility. She says that she has not been sleeping well for weeks because she is worried about the move.

On admission the patient has a blood pressure of 140/92 mm Hg, a pulse rate of 86 beats/min, a respiratory rate of 26/min, a temperature of 36.6°C (97.9°F), and an oxygen saturation of 95% on room air. A physical examination is normal other than faint basilar crackles. A chest radiograph shows a slightly prominent cardiac silhouette, peribronchial cuffing, and coarse perihilar lung markings. An EKG reveals a normal sinus rhythm with global T-wave inversion of the precordial and limb leads. Her troponin I peaks at 0.953 ng/mL (N 0.000–0.780). Echocardiography reveals a normal size right ventricle with moderate right ventricular hypokinesis, left ventricular apical ballooning, a left ventricular ejection fraction estimated at 30%, and a moderately increased pulmonary artery pressure estimated at 43 mm Hg. A radionuclide myocardial perfusion imaging study is normal.

Which one of the following is the most likely diagnosis?

A) Acute coronary syndrome
B) Acute pericarditis
C) Cardiac amyloidosis
D) Takotsubo cardiomyopathy
E) Viral myocarditis
156. Which one of the following is the leading cause of cancer death in men in the United States?

A) Colorectal cancer  
B) Liver cancer  
C) Lung cancer  
D) Non-melanoma skin cancer  
E) Prostate cancer

157. You see a patient who is being treated for opioid use disorder with buprenorphine. Which one of the following can be used as adjuvant treatment to reduce stress-related opioid cravings and increase abstinence?

A) Clonidine (Catapres)  
B) Methadone  
C) Naloxone  
D) Naltrexone (Vivitrol)  
E) Nifedipine (Procardia)

158. A 5-month-old female is brought to your office for evaluation of a fever to 103.1°F over the past 2 days. Her immunizations are up to date. On examination she does not appear ill. Her vital signs include a rectal temperature of 39.0°C (102.2°F), a heart rate of 90 beats/min, a respiratory rate of 40/min, and an oxygen saturation of 98% on room air. The child is alert and responsive, appears well hydrated, and has no rash or petechiae. The HEENT examination, including fontanelles, is normal, the chest is clear, there are no murmurs, and the abdomen is soft.

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

A) No further testing or treatment at this visit, with close outpatient follow-up  
B) A urinalysis and culture, with close outpatient follow-up  
C) A CBC with differential, a urinalysis and culture, and close outpatient follow-up  
D) A CBC, a urinalysis and culture, a chest radiograph, a lumbar puncture, and consideration of inpatient monitoring  
E) A CBC with differential, blood cultures, a urinalysis and culture, a chest radiograph, a lumbar puncture, and empiric inpatient antibiotic treatment

159. As the newly appointed medical director in your primary care community health center, you identify antibiotic stewardship as a priority. You communicate with all clinical and administrative staff members to express a consistent message to patients about appropriate indications for antibiotic use.

Which one of the following is an example of an action aimed at improving antibiotic prescribing practices?

A) Avoiding the use of in-house rapid strep testing for pediatric patients  
B) Considering patient expectations and satisfaction when prescribing antibiotic therapy  
C) Ensuring that patients with common cold symptoms are seen for evaluation  
D) Reducing the use of clinical decision support tools in the electronic health record  
E) Writing a delayed antibiotic prescription when appropriate
160. The presence of RBC casts on microscopic examination of a spun urine sediment is pathognomonic for which one of the following conditions?

A) Acute glomerulonephritis  
B) Acute papillary necrosis  
C) Acute pyelonephritis  
D) Acute tubular necrosis  
E) Nephrotic syndrome

161. A 15-year-old male sees you after injuring his right index finger while playing volleyball. He has pain and a flexion deformity at the distal interphalangeal (DIP) joint. Which one of the following would be an indication for further evaluation before splinting?

A) The patient wants to continue athletic activities  
B) The patient first presented for treatment 3 weeks after the injury  
C) The patient is unable to passively fully extend the joint  
D) The patient is unable to actively fully extend the joint  
E) A radiograph shows a bony avulsion of 10% of the joint space

162. A 42-year-old male presents with a fever, cough, and chest pain. A rapid influenza test is positive. Which one of the following would be most appropriate for the management of this patient’s pleuritic chest pain?

A) Colchicine (Colcrys)  
B) Hydrocodone  
C) Ibuprofen  
D) Prednisone  
E) Tramadol (Ultram)

163. A 55-year-old male sees you for an annual health maintenance visit. He is a former smoker and has a history of type 2 diabetes mellitus, hypertension, and hyperlipidemia. He had a normal colonoscopy at age 50, and had an ST-elevation myocardial infarction 2 years ago treated with a drug-eluting stent. He is currently asymptomatic and does not have any chest pain, hypoglycemia, dyspepsia, melena, or rectal bleeding. His medications include metformin (Glucophage), 2000 mg daily; glimepiride (Amaryl), 2 mg daily; bisoprolol (Zebeta), 5 mg daily; losartan/hydrochlorothiazide (Hyzaar), 50 mg/12.5 mg daily; rosvastatin (Crestor), 20 mg daily; clopidogrel (Plavix), 75 mg daily; and aspirin, 81 mg daily. His blood pressure is 128/76 mm Hg and his heart rate is 63 beats/min. A physical examination is unremarkable. His hemoglobin A1c is 6.4%.

You recommend that the patient stop taking

A) aspirin  
B) clopidogrel  
C) aspirin and clopidogrel  
D) metformin
164. In a 60-year-old patient who has not previously received pneumococcal vaccine, which one of the following would be an indication for both 13-valent pneumococcal conjugate vaccine (PCV13, Prevnar 13) and 23-valent pneumococcal polysaccharide vaccine (PPSV23, Pneumovax 23)?

A) Alcoholism
B) Chronic renal failure
C) Cigarette smoking
D) COPD
E) Diabetes mellitus

165. A 36-year-old male presents with a 2-day history of painless right-sided facial droop. There are no associated symptoms and his medical history is otherwise unremarkable. An examination is remarkable for an unfurrowed right brow, mouth droop, a sagging right lower eyelid, and a complete inability to move the muscles of the right face and forehead. No other weakness is elicited and no rash is seen.

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

A) Reassurance only
B) Valacyclovir (Valtrex) alone
C) A tapering dose of prednisone alone
D) Valacyclovir and a tapering dose of prednisone
E) Immediate transfer to the emergency department

166. A 35-year-old female presents with fatigue. She has been falling asleep at work for the past 6 weeks. She is married with two children and works as a nurse at the community hospital. Since she returned to work 12 weeks ago after maternity leave, her infant has had multiple respiratory infections and has not slept well through the night. Her menstrual cycle has been irregular and heavy for the past several months. A CBC and TSH level are normal.

Which one of the following laboratory tests would be appropriate at this visit?

A) 25-Hydroxyvitamin D
B) β-hCG
C) D-dimer
D) A serum antibody test for Lyme disease

167. In a patient presenting with truncal obesity, hypertension, type 2 diabetes mellitus, hirsutism, osteopenia, and skin fragility, which one of the following tests is needed to confirm the diagnosis of Cushing syndrome?

A) A dexamethasone suppression test
B) Inferior petrosal sinus sampling
C) Plasma corticotropin
D) Plasma free cortisol
E) Urinary free cortisol
168. A 42-year-old female presents with shortness of breath that has slowly worsened over the past 6 months. She can now walk only 10 feet without becoming short of breath. She does not have a cough or chest pain. Her history is significant only for obesity. She smoked one pack of cigarettes per day for 20 years and quit smoking 6 years ago. Her blood pressure is 138/88 mm Hg, pulse rate 92 beats/min, respiratory rate 18/min, and oxygen saturation 92% on room air. Her BMI is 42.4 kg/m².

Her heart has a regular rate and rhythm with no murmurs and her lungs are clear to auscultation. Her lower extremities have bilateral 1+ edema. A chest radiograph is normal. Spirometry reveals a decreased FVC with a normal FEV₁/FVC ratio. A CBC, a TSH level, and a basic metabolic panel are all normal except for a serum bicarbonate level of 35 mEq/L (N 22–29).

These findings are most consistent with

A) asthma  
B) COPD  
C) obstructive sleep apnea  
D) obesity hypoventilation syndrome  
E) pulmonary fibrosis

169. You see a 58-year-old female who received a drug-eluting stent 10 days ago during a hospitalization for acute coronary syndrome and coronary artery disease. She asks for recommendations about anticoagulation. You determine that she is not at high risk for bleeding.

Which one of the following would you recommend?

A) Long-term aspirin use  
B) Clopidogrel (Plavix) and aspirin for 30 days and then aspirin alone  
C) Clopidogrel alone for 1 year and then aspirin alone  
D) Clopidogrel and aspirin for 1 year and then aspirin alone  
E) Prasugrel (Effient) for 1 year with no anticoagulation after that

170. A 45-year-old female presents with throbbing right-sided heel pain that started a few weeks ago. She says the pain is worst in the morning and seems to improve during the day but will return after a long day on her feet. She does not have a history of trauma, change in exercise, unexplained fever, or unintended weight loss.

On examination the patient’s vital signs are normal. You note pain on palpation of the right medial calcaneal tuberosity and along the plantar fascia, and pain with passive dorsiflexion of the right foot. The skin over the foot reveals no sign of trauma, lesions, or masses.

Which one of the following is the most likely cause of this patient’s heel pain?

A) The heel spur  
B) A calcaneal stress fracture  
C) Heel pad syndrome  
D) Plantar fasciitis  
E) Sever’s disease
171. A 36-year-old female singer presents with a 10-day history of hoarseness. She has never smoked and does not take any medications. Her vital signs are normal. An oropharyngeal examination is normal, her chest is clear to auscultation, and there is no cervical adenopathy and no masses. She is anxious to be able to sing again as soon as possible.

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

A) No talking, whispering, or throat clearing for 48 hours  
B) No singing or loud talking for 5–7 days  
C) Nebulized hypertonic saline treatments 3 times daily for 2–3 days  
D) Nebulized ribavirin twice daily for 3 days  
E) Inhaled corticosteroids twice daily for 5 days

172. A 74-year-old female with a long-standing history of coronary artery disease is hospitalized for pneumonia. The patient improves with treatment and is hemodynamically stable. An EKG performed on the third day of hospitalization is shown below.

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

A) Cardiac rhythm monitoring with no additional treatment  
B) Atropine  
C) Transcutaneous pacing  
D) Transvenous pacing

173. While sitting in the waiting room a patient develops the acute onset of diffuse hives, itching, and flushing; swelling of the lips, tongue, and uvula; and bilateral wheezing. He becomes weak and almost passes out.

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

A) Corticosteroids  
B) Diphenhydramine (Benadryl)  
C) Epinephrine  
D) Glucagon  
E) Normal saline

174. A 50-year-old male with hypertension who is not at increased risk for gastrointestinal bleeding should begin low-dose aspirin at what 10-year risk level for cardiovascular disease?

A) 1%  
B) 7.5%  
C) 10%  
D) 15%  
E) 20%
175. A U.S. hospital or birthing center seeking to be certified as “Baby-Friendly” by the Baby-Friendly Hospital Initiative must satisfy which one of the following criteria in addition to meeting other requirements?

A) Demonstrating proper use of an infant car seat to parents prior to discharge  
B) Providing no other food or fluids to breastfeeding infants without a medical indication  
C) Providing a pacifier to each baby prior to discharge  
D) Providing easy access to a variety of infant formulas  
E) Providing on-site daycare facilities for staff

176. A 50-year-old gravida 2 para 2 who is 3 years post menopausal presents with fatigue, headache, galactorrhea, and loss of libido. Your evaluation reveals elevated serum prolactin and a pituitary adenoma of 5–6 mm.  

You recommend

A) bromocriptine (Parlodel)  
B) estrogens  
C) haloperidol  
D) testosterone  
E) neurosurgical consultation

177. Referral for bariatric surgical evaluation is indicated for patients with a BMI of

A) 35 kg/m\(^2\) and mild cognitive impairment  
B) 36 kg/m\(^2\) and type 2 diabetes mellitus  
C) 37 kg/m\(^2\) and no other medical problems  
D) 40 kg/m\(^2\) and active alcohol abuse  
E) 42 kg/m\(^2\) and uncontrolled schizophrenia

178. A 75-year-old patient is admitted to the hospital. The Joint Commission National Patient Safety Goals program requires medication reconciliation for this patient both on admission and at the time of discharge.  

The primary intent of this reconciliation is to detect

A) potentially inappropriate medication use in the elderly  
B) high-risk medication use  
C) medication discrepancies  
D) polypharmacy  
E) adverse drug effects
179. A 29-year-old male smoker presents with a 10-day history of a cough. He also had a low-grade fever for 2 days that has resolved. He has had some mild rhinorrhea and has noted that the cough has become productive of greenish sputum over the past 3–4 days. He has not tried any medication. An examination reveals some mild rhinorrhea but his lungs are clear.

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

A) Supportive care only  
B) A chest radiograph  
C) Albuterol (Proventil, Ventolin)  
D) Antibiotic therapy  
E) An inhaled corticosteroid  

180. According to the recommendations of the American Heart Association, which one of the following patients requires endocarditis prophylaxis?

A) A 10-year-old female with a previous history of Kawasaki disease without valvular dysfunction  
B) A 22-year-old female who underwent surgical repair of a ventricular septal defect 1 year ago  
C) A 28-year-old female with mitral valve prolapse without regurgitation  
D) A 35-year-old female with a history of infectious endocarditis in her 20s that was related to intravenous drug use  
E) A 42-year-old female with a history of rheumatic fever with chorea who has normal cardiovascular findings  

181. A 69-year-old male presents with acute right hip pain, which has been worsening over the past week and is now causing difficulty walking. He has had occasional hip pain in the past but this is more severe than previous episodes. He has no history of trauma and he feels well otherwise. His medical history includes hypertension, hyperlipidemia, osteoarthritis, and psoriasis. His current medications include lisinopril/hydrochlorothiazide (Zestoretic), aspirin, and adalimumab (Humira).

An examination reveals normal vital signs and a BMI of 29.3 kg/m². The joint is not red or swollen. There is no tenderness over the greater trochanter, groin, or buttock. Active and passive range of motion of the hip is limited in all directions due to pain. A radiograph shows mild degenerative changes of the hip joint. A C-reactive protein level is mildly elevated.

Which one of the following would be indicated at this point to rule out a serious cause of joint pain?

A) A radionuclide bone scan  
B) Arthrocentesis  
C) CT  
D) MR arthrography  
E) MRI
182. Which one of the following is the most appropriate psychotherapy for patients with obsessive-compulsive disorder?

   A) Traditional psychotherapy  
   B) Cognitive-behavioral therapy  
   C) Psychoanalysis  
   D) Psychodynamic therapy

183. A 63-year-old female is concerned about her long-term use of medication. She has been taking omeprazole (Prilosec), 20 mg daily for the past 4 months, and tells you that it works well to relieve her symptoms of heartburn and regurgitation. She notes, however, that if she misses a dose her symptoms return.

You tell her that long-term proton pump inhibitor use is associated with which one of the following complications?

   A) Gastrointestinal malignancy  
   B) Hip fracture  
   C) Myocardial infarction  
   D) Nephrotic syndrome  
   E) Vitamin D deficiency

184. A 4-year-old male is brought to your office for a well child examination. The patient has no significant medical history. The mother has noted new skin lesions first appearing on the back, with a new lesion behind the right knee. She has not used any new detergents or skin or hair care products. She has not made any changes in the patient’s diet. The child does not have pruritus.

The examination reveals a temperature of 37.2°C (99.0°F), a pulse rate of 80 beats/min, and a blood pressure within normal limits. The examination is unremarkable except for nonerythematous flesh-colored, dome-shaped papules with a central indentation, on the lower back and popliteal fossa.

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

   A) Observation only  
   B) Consistent use of emollients and avoiding frequent hot baths  
   C) Use of a topical low-dose corticosteroid cream once daily until resolved  
   D) Use of a topical antifungal cream until resolved  
   E) Paring, followed by topical salicylic acid or cryotherapy
185. A 34-year-old male has a 3-day history of a runny nose, postnasal drainage, sinus congestion, and left-sided facial pain. He also reports a mild cough and difficulty sleeping due to the congestion. He is afebrile and the examination reveals inflammation of the nasal mucosa, purulent rhinorrhea, and mild left maxillary sinus tenderness to percussion.

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

A) Amoxicillin/clavulanate (Augmentin)
B) Levofloxacin (Levaquin)
C) Loratadine (Claritin)
D) Mometasone (Nasonex)

186. At what age should a patient at average risk be switched from a universal screening strategy for colon cancer to a more individualized strategy?

A) 45  
B) 55  
C) 65  
D) 75  
E) 85

187. An 18-month-old male is brought to your office for a well child check. He is walking only with assistance. You and the parents are concerned about gross motor delay.

Which one of the following findings would be most suggestive of muscular dystrophy in this patient?

A) A cross-legged “scissoring” posturing  
B) Head lag when sitting up  
C) Hyperreflexia in the legs  
D) Partial hemiparesis of the lower extremities  
E) Toe walking

188. Which one of the following is most commonly associated with oligohydramnios?

A) Anencephaly  
B) Esophageal atresia  
C) Hydrops  
D) Maternal α-thalassemia  
E) Posterior urethral valves
189. You see a 47-year-old female for follow-up of a rash. She is a carpenter and was seen 4 days ago for increasing redness and tenderness of her anterior shin after hitting the area with a board 3 days earlier. She was afebrile during that visit and the area was red but not fluctuant. She chose observation rather than treatment at that time. The patient smokes 10 cigarettes daily. Past medical, surgical, and family histories are otherwise negative. Screening for diabetes mellitus was normal last year.

Today the patient’s anterior shin is still tender. She is afebrile and other vital signs are unremarkable. The extent of the infection was drawn 4 days ago with an indelible marker by your partner. Currently the area of redness extends beyond this border. There is no fluctuance or drainage of the wound. The skin appears mildly indurated.

Which one of the following would be best to provide coverage against *Streptococcus pyogenes* or methicillin-resistant *Staphylococcus aureus* (MRSA) in this patient?

A) Amoxicillin/clavulanate (Augmentin) and ciprofloxacin (Cipro)
B) Cephalexin and dicloxacillin
C) Dicloxacillin and fosfomycin (Monorol)
D) Doxycycline and trimethoprim/sulfamethoxazole (Bactrim)
E) Trimethoprim/sulfamethoxazole and cephalexin

190. A 65-year-old male brings in results from a health fair screening. He was advised to see you because he had a hemoglobin level of 10.2 g/dL (N 14.0–18.0) and a mean corpuscular volume of 80 \( \mu \text{m}^3 \) (N 80–94). A review of systems is unremarkable except for recent fatigue, and a physical examination is also unremarkable. You order laboratory testing, with the following results:

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
<th>Normal Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ferritin</td>
<td>15 ng/mL</td>
<td>20–150</td>
</tr>
<tr>
<td>Vitamin B(_{12})</td>
<td>420 pg/mL</td>
<td>200–900</td>
</tr>
<tr>
<td>Folate</td>
<td>12 ng/mL</td>
<td>2–20</td>
</tr>
<tr>
<td>Reticulocyte index</td>
<td>0.3%</td>
<td>0.5–1.0</td>
</tr>
</tbody>
</table>

The most likely diagnosis is

A) iron deficiency anemia
B) vitamin B\(_{12}\) deficiency
C) anemia of chronic disease
D) hemolysis
E) myelodysplastic anemia

191. The mother of a newborn infant is concerned because her baby’s eyes are sometimes crossed. Assuming the intermittent eye crossing persists, which one of the following is the most appropriate age for ophthalmologic referral?

A) 10–14 days
B) 6 months
C) 12 months
D) 24 months
192. A 47-year-old male presents with a 3-day history of fever, chills, low back pain, and urinary frequency. He does not have any nausea, vomiting, or abdominal pain. There is no significant past medical history.

The patient’s vital signs include a temperature of 38.1°C (100.6°F), a pulse rate of 88 beats/min, and a respiratory rate of 14/min. The examination reveals a mildly tender lower abdomen with no guarding or rebound tenderness; no costovertebral angle tenderness; and an enlarged, homogeneous, exquisitely tender prostate.

Which one of the following is indicated to help guide this patient’s treatment?

A) A serum prostate-specific antigen level
B) A culture of prostate secretions after massage of the prostate
C) A culture of midstream voided urine
D) CT of the abdomen and pelvis with intravenous and oral contrast
E) An ultrasound-guided prostate biopsy

193. A 57-year-old female is admitted to the hospital with lower lobe pneumonia. She has no history of diabetes mellitus. She has not met sepsis criteria but had a blood glucose level of 172 mg/dL in the emergency department.

Insulin should be started if this patient has a persistent blood glucose level greater than or equal to

A) 120 mg/dL
B) 140 mg/dL
C) 160 mg/dL
D) 180 mg/dL

194. A healthy 33-year-old male sees you for a pretravel consultation. He plans to attend a 4-week intensive Spanish language course in Antigua, Guatemala. You discuss immunizations, malaria prophylaxis, injury prevention, and traveler’s diarrhea.

Which one of the following interventions is most likely to prevent traveler’s diarrhea?

A) Avoiding food from street vendors
B) Avoiding the use of ice in beverages
C) Taking a probiotic
D) Taking a prophylactic antibiotic
E) Washing hands frequently
195. A 52-year-old male smoker presents to your office in January with worsening respiratory symptoms over the past 24 hours, along with a rapid onset of fever and chills, nausea, myalgias, and sore throat. He has a history of mild chronic bronchitis and hypertension, and his medications include tiotropium (Spiriva) inhaled daily; lisinopril/hydrochlorothiazide (Zestoretic), 20/12.5 mg daily; and albuterol (Proventil, Ventolin) as needed.

On examination the patient has a temperature of 38.8°C (101.8°F), a heart rate of 102 beats/min, a respiratory rate of 24/min, and an oxygen saturation of 94% on room air. He is ill-appearing and pale. Examination of his throat reveals mild erythema, and chest auscultation reveals bilateral bronchovesicular breath sounds with no crackles or wheezing. The examination is otherwise unremarkable. Laboratory and radiology services are not available.

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

A) Observation only, with follow-up in a few days
B) Azithromycin (Zithromax)
C) Oseltamivir (Tamiflu)
D) Penicillin VK
E) Prednisone

196. A 33-year-old gravida 2 para 2 presents with a 1-year history of amenorrhea, hot flashes, and vaginal dryness. She previously had normal menses and takes no medications. Her past medical and surgical histories are negative. The patient is 178 cm (70 in) tall and her BMI is 22.0 kg/m². Her vital signs are normal. A physical examination is normal except for vaginal dryness. Laboratory studies reveal a negative urine pregnancy test, normal TSH and prolactin levels, and elevated LH and FSH levels.

The most likely diagnosis is

A) intrauterine synechiae (Asherman syndrome)
B) functional hypothalamic amenorrhea
C) polycystic ovary syndrome
D) primary ovarian insufficiency
E) Turner’s syndrome

197. A 62-year-old female presents for a health maintenance visit. She is interested in staying up to date on her preventive care recommendations. She smoked for 4 years during college. Her BMI is 23.0 kg/m². She feels well and does not have any specific health concerns. She had a colonoscopy 4 years ago and no polyps were found. A screening mammogram 6 months ago was normal.

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

A) A urinalysis to detect asymptomatic bacteriuria
B) Measurement of hemoglobin A₁c
C) Screening for hepatitis A and B viruses
D) Screening for hepatitis C virus
E) Lung cancer screening with low-dose CT of the lungs without contrast
198. A 69-year-old male presents for follow-up of hypertension treated with spironolactone (Aldactone) and amlodipine (Norvasc). His past medical history is remarkable only for a kidney stone several years ago. A physical examination is unremarkable. A comprehensive metabolic panel is unremarkable except for a calcium level of 12.0 mg/dL (N 8.0–10.0).

Which one of the following is the most likely cause of his elevated calcium level?

A) Excessive ingestion of calcium supplements
B) His current medication regimen
C) Occult malignancy
D) Primary hyperparathyroidism
E) Vitamin D deficiency

199. A 7-month-old male is admitted to the hospital for respiratory syncytial virus bronchiolitis. His temperature is 37.9°C (100.2°F), pulse rate 160 beats/min, respiratory rate 70/min, and oxygen saturation 92% on room air. Auscultation of the lungs reveals diffuse wheezing and crackles accompanied by nasal flaring and retractions.

Which one of the following interventions would most likely be beneficial?

A) Bronchodilators
B) Corticosteroids
C) Epinephrine
D) Nasogastric fluids
E) Oxygen supplementation to maintain O₂ saturation above 95%

200. A 30-year-old male presents with intermittent right upper quadrant pain after meals. He has been in moderate pain for the past 3 hours. On examination the patient’s vital signs are normal except for a temperature of 39.2°C (102.6°F). He appears toxic. Examination of the abdomen reveals a positive Murphy’s sign.

Laboratory Findings

<table>
<thead>
<tr>
<th>Test</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>WBCs</td>
<td>3000/mm³ (N 4300–10,800)</td>
</tr>
<tr>
<td>ALT (SGPT)</td>
<td>132 U/L (N 10–55)</td>
</tr>
<tr>
<td>AST (SGOT)</td>
<td>123 U/L (N 9–25)</td>
</tr>
<tr>
<td>Alkaline phosphatase</td>
<td>200 U/L (N 45–115)</td>
</tr>
<tr>
<td>Bilirubin</td>
<td>2.6 mg/dL (N 0.0–1.0)</td>
</tr>
<tr>
<td>Lipase</td>
<td>15 U/dL (N 3–19)</td>
</tr>
</tbody>
</table>

Ultrasonography reveals cholelithiasis. Other findings include an enlarged gallbladder, thickening of the gallbladder wall, and a common bile duct diameter of 11 mm.

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

A) Acute cholangitis
B) Acute viral hepatitis
C) Cholangiocarcinoma
D) Gallstone pancreatitis
201. A 73-year-old female presents with a 3-day history of pain, numbness, and weakness in her right arm and shoulder. She reports that the problem began when she went out for a walk, tripped on an asphalt ledge, and fell to the ground. She was able to get herself back up and walk home but has had upper extremity problems since then. Her chronic medical conditions include early Alzheimer’s dementia and hyperlipidemia. After a full examination you order radiographs (shown below).

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

A) Figure-of-eight bandaging  
B) Physical therapy  
C) Shoulder reduction  
D) Sling immobilization  
E) Surgical decompression

202. The U.S. Preventive Services Task Force recommends which one of the following for women who are planning on or are capable of becoming pregnant?

A) Testing for hepatitis C  
B) Annual pelvic examinations  
C) Folic acid, 0.4–0.8 mg daily  
D) Vitamin B₁₂, 1000 μg daily  
E) Vitamin D, 400–800 IU daily

203. An 11-year-old female is brought to your office for a well child visit. The mother is concerned because the patient’s back seems to have a curve. The patient is not aware of this although she has frequent back pain.

An examination is notable for a BMI above the 95th percentile for her age, and breast bud development. Menarche has not occurred. When she leans forward with her arms outstretched there is a 12° curve in her spine with a rib hump. Radiography reveals a measured Cobb angle of 20°.

Which one of the following indicates a need for referral to a specialist?

A) Back pain  
B) A Cobb angle of 20°  
C) Female sex  
D) Obesity  
E) Premenarchal status
204. A healthy 43-year-old executive presents with problems falling asleep and staying asleep. Doxepin (Silenor) and extended-release melatonin have not helped.

In addition to behavioral interventions, which one of the following would be the most appropriate pharmacologic therapy for this patient’s insomnia at this time?

A) Diphenhydramine (Benadryl)
B) Doxylamine (Unisom)
C) Eszopiclone (Lunesta)
D) Olanzapine (Zyprexa)
E) Zaleplon (Sonata)

205. A 46-year-old male presents with a persistent cough that has been present for several months and was not preceded by an upper respiratory infection. He does not have a history of asthma, does not smoke, and takes no medications. His symptoms consist of short bursts of coughing that produce a small amount of mucoid sputum during the day. He does not have emesis or nausea. The cough sometimes wakes him at night but does not seem to be specific to any particular posture. He does not have a fever, shortness of breath, wheezing, heartburn, or nasal symptoms. A thorough physical examination is normal and a chest radiograph appears normal.

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

A) Amoxicillin/clavulanate (Augmentin)
B) An empiric trial of a proton pump inhibitor
C) CT of the chest
D) CT of the sinuses
E) Referral for bronchoscopy

206. A 25-year-old female comes to your office at 30 weeks gestation for a routine obstetric follow-up. Her pregnancy has been uncomplicated except for a lack of insurance. She is an immigrant from Guatemala and does not speak English. You have used a telephone interpreting service for her previous visits, but today her 15-year-old niece is with her and she says that she would be happy to interpret for you.

Which one of the following would be most appropriate?

A) Have the niece ask the patient for permission to act as interpreter
B) Proceed with the visit, since it is unlikely that you will need to discuss complicated medical issues
C) Confirm the niece’s significant understanding of English, then have her interpret
D) Recommend the use of the telephone interpreting service as best medical practice
E) Tell her that it is illegal to use interpreters who are not certified
207. A 65-year-old female presents for follow-up of a DXA scan for osteoporosis screening. Results of the scan reveal osteopenia, with a T-score of –2.0.

Treatment for osteopenia is indicated when the 10-year risk of a major fracture reaches

A) 5%
B) 10%
C) 20%
D) 35%

208. A 21-year-old gravida 1 para 0 is diagnosed with overt hyperthyroidism early in the first trimester. The most appropriate management at this time is

A) observation only
B) methimazole (Tapazole)
C) propylthiouracil
D) radioactive iodine
E) thyroidectomy

209. A 55-year-old male presents with severe pain, swelling, and erythema in his left first metatarsophalangeal joint. His symptoms started yesterday and he has never had this problem in the past. He has a history of hypertension, but normal renal function and no diabetes mellitus. There is no overlying skin lesion or obvious source of infection.

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

A) Allopurinol (Zyloprim)
B) Cephalexin (Keflex)
C) Colchicine (Colcrys)
D) Febuxostat (Uloric)

210. A 30-year-old male is treated with topical medications for his papulopustular rosacea with only partial improvement. The preferred antibiotic is

A) amoxicillin
B) cephalexin (Keflex)
C) doxycycline
D) erythromycin
E) trimethoprim/sulfamethoxazole (Bactrim)
211. A 75-year-old female sees you because of a bulge at the vaginal opening. A pelvic examination confirms descent of the vaginal wall to just beyond the hymen. This protrusion is bothering her and interfering with her quality of life. She has had two vaginal deliveries. She is sexually active and has not had any pelvic surgery.

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

A) Kegel exercises  
B) A ring pessary  
C) A space-occupying pessary  
D) Hysteropexy  
E) Hysterectomy

212. A mother brings in her 2-week-old infant for a well child check. She reports that she is primarily breastfeeding him, with occasional formula supplementation.

Which one of the following should you advise her regarding vitamin D intake for her baby?

A) Breastfed infants do not need supplemental vitamin D  
B) He does not need supplemental vitamin D if he is taking at least 16 oz of formula per day  
C) Vitamin D supplementation should not be started until he is at least 6 months old  
D) He should be given 400 IU of supplemental vitamin D daily  
E) Intake of vitamin D in excess of 200 IU/day is potentially toxic

213. A 70-year-old male comes to your office for preoperative clearance for a right total hip replacement. He is a nonsmoker and has a history of mild hypertension controlled with amlodipine (Norvasc). The history indicates that he is able to perform 7–8 METS of activity without any concerning symptoms. A physical examination, including vital signs, is normal.

Your evaluation should include which one of the following tests?

A) A chest radiograph  
B) Coagulation testing  
C) An EKG  
D) Liver function studies  
E) Renal function studies
214. A 12-year-old female is brought to your office with a 3-week history of left groin pain that is most bothersome after she participates in gym class at her middle school. She does not recall a specific injury and does not participate in extracurricular sports. She had an upper respiratory infection about a month ago but has otherwise been well.

An examination reveals a BMI at the 95th percentile for her age. Her vital signs are within normal limits. A musculoskeletal examination is remarkable for limited internal rotation of the hip.

Which one of the following is the most likely diagnosis?

A) Adductor muscle strain  
B) Apophysitis of the anterior superior iliac spine  
C) Legg-Calvé-Perthes disease  
D) Slipped capital femoral epiphysis  
E) Transient synovitis

215. A 36-year-old male presents with a 4-month history of persistent nasal congestion and rhinorrhea. On examination he has clear nasal discharge and edema of the nasal mucosa but no nasal polyps are noted. His current medications include intranasal fluticasone (Flonase).

Which one of the following would be the most appropriate management of his chronic symptoms?

A) Recommend neti pot nasal irrigation  
B) Add oral amoxicillin  
C) Add oral prednisone  
D) Replace fluticasone with budesonide (Rhinocort) nasal spray

216. A 45-year-old male with a 30-pack-year smoking history reports a chronic cough with a small amount of phlegm production and dyspnea with strenuous exercise. You order spirometry, which shows a pre- and postbronchodilator FEV₁/FVC ratio of 0.6 and an FEV₁ of 85% of predicted.

Which one of the following agents would be the best initial pharmacologic management?

A) An inhaled corticosteroid  
B) A short-acting anticholinergic  
C) A long-acting anticholinergic  
D) A long-acting β₂-agonist  
E) Theophylline
217. A 50-year-old female sees you for follow-up of her hypertension. At her last visit 4 weeks ago you started her on lisinopril (Prinivil, Zestril), 10 mg daily, because of a blood pressure of 158/92 mm Hg and confirmed hypertension on ambulatory blood pressure monitoring. She is tolerating the medication well and has no side effects. She does not take any other medications. Today her blood pressure is 149/90 mm Hg, which you confirm on repeat measurement. This is also consistent with her home measurements. At her last visit a basic metabolic panel was normal.

You repeat a basic metabolic panel today and the results are normal except for a BUN of 25 mg/dL (N 8–23) and a creatinine level of 1.5 mg/dL (N 0.6–1.1). At her last visit her BUN was 12 mg/dL and her creatinine level was 0.7 mg/dL.

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

A) Continue her current treatment regimen
B) Increase lisinopril to 20 mg daily
C) Continue lisinopril at the current dosage and add amlodipine (Norvasc), 5 mg daily
D) Discontinue lisinopril and begin amlodipine, 5 mg daily
E) Discontinue lisinopril and begin losartan (Cozaar), 25 mg daily

218. A 50-year-old female presents with pain in her right forefoot. She recently ran her first full marathon after several years of inactivity and says the pain started gradually over the last few weeks of her training and has slowly gotten worse. You order radiographs of the foot, which show a stress fracture of the second metatarsal.

You would recommend

A) resumption of regular activity if the pain does not recur with activity after 1 week of rest
B) no weight bearing on the right foot for 6 weeks
C) no weight bearing for a few days, followed by a walking boot, then a rigid-soled shoe in 4–6 weeks
D) a walking boot for 12 weeks
E) referral to an orthopedic surgeon for further evaluation
219. A healthy 55-year-old white male with a family history of coronary artery disease sees you for a routine health maintenance visit. He asks you what he could do to decrease his risk of cardiovascular disease. He is a nonsmoker, does not drink alcohol, and has no history of substance abuse. His BMI is normal and the physical examination is otherwise unremarkable. His vital signs include a heart rate of 80 beats/min, a blood pressure of 119/70 mm Hg, a respiratory rate of 15/min, and a temperature of 37.0°C (98.6°F).

Laboratory Findings

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fasting glucose</td>
<td>92 mg/dL</td>
</tr>
<tr>
<td>Total cholesterol</td>
<td>190 mg/dL</td>
</tr>
<tr>
<td>LDL-cholesterol</td>
<td>98 mg/dL</td>
</tr>
<tr>
<td>HDL-cholesterol</td>
<td>50 mg/dL</td>
</tr>
<tr>
<td>Triglycerides</td>
<td>145 mg/dL</td>
</tr>
</tbody>
</table>

His calculated 10-year risk for cardiovascular disease is 5.4%. Which one of the following has the best evidence to prevent cardiovascular disease in a patient such as this?

A) Moderate-intensity exercise, 150 minutes weekly
B) A low-dose statin
C) Aspirin, 81 mg daily
D) Fish oil supplements
E) Niacin supplements

220. An asymptomatic 42-year-old female sees you for a routine evaluation. On examination her uterus is irregularly enlarged to the size seen at approximately 8 weeks gestation. Pelvic ultrasonography shows several uterine fibroid tumors measuring <5 cm. The patient does not desire future fertility.

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

A) Observation only
B) An oral contraceptive
C) A gonadotropin-releasing hormone (GnRH) agonist
D) Laparoscopic myomectomy
E) Hysterectomy

221. A 34-year-old female sees you because of cramping diarrhea for the past several months following resection of her terminal ileum as treatment for Crohn’s disease. She is not aware of any exposure to individuals with similar symptoms. She has not had any fever, chills, nausea, vomiting, or myalgias, and she has not noticed any blood in her stool. She is passing several loose stools daily, mostly after meals. She has not been able to identify any clear relationship to the type of food she eats.

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

A) A dairy-free diet
B) Cholestyramine (Questran) daily
C) A *Lactobacillus* probiotic supplement (Lactinex) 4 times daily
D) Loperamide (Imodium) as needed
E) Psyllium fiber (Metamucil) twice daily
222. A 48-year-old male comes to your office for follow-up of recently diagnosed panic attacks. As part of his treatment plan he is taking sertraline (Zoloft), 50 mg daily, and working with a mental health provider who has diagnosed posttraumatic stress disorder associated with a traumatic childhood. He reports that his sleep continues to be interrupted by nightmares.

Which one of the following additional medications may provide long-term control of his symptoms?

A) Atenolol (Tenormin)
B) Lorazepam (Ativan)
C) Prazosin (Minipress)
D) Risperidone (Risperdal)
E) Zolpidem (Ambien)

223. A 55-year-old female presents with a 3-month history of right shoulder pain. The pain has begun to limit some daily activities such as brushing her hair and reaching high shelves, and it is waking her up at night, especially when she lies on her right side.

On examination the shoulder appears normal. There is moderate subacromial tenderness, a positive painful arc at 90°, normal range of motion and abduction strength, and a positive Hawkins impingement sign. You diagnose rotator cuff impingement syndrome.

You consider performing a subacromial corticosteroid injection. Which one of the following is the most likely result?

A) More pain relief and functional improvement compared to NSAIDs
B) More effective pain relief compared to physical therapy
C) More durable relief if an image-guided intra-articular injection is used
D) A possibility of temporary pain relief, but no change in the long-term outcome

224. A patient is being discharged from the hospital following an acute non–ST-elevation myocardial infarction. He is currently being treated with aspirin, lisinopril (Prinivil, Zestril), and metoprolol. An echocardiogram performed in the hospital was normal and a lipid panel included a total cholesterol level of 200 mg/dL and a triglyceride level of 225 mg/dL. On examination he has a pulse rate of 68 beats/min and a blood pressure of 130/80 mm Hg.

Which one of the following additional medications has been shown to improve survival in patients like this?

A) Amlodipine (Norvasc)
B) Atorvastatin (Lipitor)
C) Gemfibrozil (Lopid)
D) Isosorbide mononitrate
E) Spironolactone (Aldactone)
225. Acne appearing at which one of the following ages should prompt detailed endocrine laboratory testing for possible underlying systemic disease?

A) 3 weeks
B) 7 months
C) 5 years
D) 9 years
E) 13 years

226. A 30-year-old white male presents to the emergency department with a 4-day history of fever to 101°F, a sore throat, rhinorrhea, and cough. An examination reveals rhinorrhea and a boggy nasal mucosa, but is otherwise unremarkable. A chest radiograph shows a questionable infiltrate.

Which one of the following would help determine if antibiotic treatment would be appropriate?

A) A C-reactive protein level
B) A procalcitonin level
C) A WBC count with differential
D) An erythrocyte sedimentation rate
E) CT of the chest

227. A 5-year-old male is brought to your office after passing an intestinal worm. He lives on a farm with cattle, pigs, and dogs. He has never traveled very far from home. He does not have any respiratory symptoms or diarrhea, but has experienced some abdominal bloating. A picture of the worm taken by his mother is shown below.

Which one of the following is the infecting organism?

A) Ascaris lumbricoides (roundworm)
B) Enterobius vermicularis (pinworm)
C) Giardia lamblia
D) Necator americanus (hookworm)
E) Taenia solium (tapeworm)
Item #227
228. A 55-year-old male veteran sees you for a routine health maintenance visit. He is up to date on recommended immunizations. His father was diagnosed with colon cancer at age 70 and his family history is otherwise negative. The patient underwent a colonoscopy at age 50 and has a copy of his pathology results, which describe a single hyperplastic polyp taken from the rectum.

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

A) Annual fecal immunochemical testing (FIT) starting now
B) Repeat colonoscopy now
C) Repeat colonoscopy at age 60
D) Referral to a gastroenterologist for further management

229. Additional workup or referral to an endocrinologist for evaluation of precocious puberty would be indicated in which one of the following patients?

A) A 7-year-old female with some pubic hair
B) An 8-year-old female with breast buds
C) An 8-year-old male with some pubic hair and axillary odor
D) An 8-year-old male with penile enlargement
E) A 10-year-old female who has recently begun having menses

230. An obese 37-year-old white female sees you because of fatigue. She is otherwise asymptomatic and has normal vital signs. A complete physical examination is unremarkable with the exception of obesity. A CBC shows no anemia, but her WBC count is 12,500/mm$^3$ (N 4500–11,000). A TSH level and a comprehensive metabolic panel are normal. She does not take any medications and has not had any recent illnesses.

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

A) Reassurance that her leukocytosis is likely caused by her obesity and counseling about weight loss
B) A repeat CBC with differential and a review of the peripheral smear
C) A blood culture
D) Flow cytometric testing
E) Referral to a hematologist for further workup

231. The drug class of choice for the management of breathlessness in end-of-life care is

A) anticholinergics
B) antipsychotics
C) benzodiazepines
D) corticosteroids
E) opiates
232. A 34-year-old male presents with low back pain and stiffness that has been slowly worsening over the past 6 months. It is especially bothersome at night and in the morning when he gets out of bed. It improves with physical activity. He has taken ibuprofen, 400 mg several times a day, which provides moderate pain relief but is not working as well as it used to. He does not have any other joint pain, there is no history of trauma, and he is otherwise well. His BMI is 24.8 kg/m². Radiographs of the lumbar spine show mild degenerative changes of the lumbar vertebrae without other abnormalities.

Which one of the following additional tests would most likely lead to a specific diagnosis?

A) An erythrocyte sedimentation rate  
B) C-reactive protein  
C) Antinuclear antibody  
D) HLA-B27  
E) Rheumatoid factor

233. An 80-year-old male sees you for the first time. He is asymptomatic except for some fatigue. His pulse rate is 50 beats/min. An EKG shows a prolonged PR interval.

Which one of the following medications in his current regimen is the most likely explanation for these findings?

A) Donepezil (Aricept)  
B) Escitalopram (Lexapro)  
C) Lisinopril (Prinivil, Zestril)  
D) Memantine (Namenda)  
E) Zolpidem (Ambien)

234. A 14-year-old female is brought to your office for an annual well child check and sports preparticipation physical examination. She says she does a lot of running during basketball practices and games but has trouble controlling her weight. Most of her family is overweight. She does not have any difficulty participating in sports, and has no symptoms such as chest pain, shortness of breath, or headaches. She has no significant past medical history.

On examination the patient’s height is 154 cm (61 in) and she weighs 63 kg (139 lb). Her BMI is 26.4 kg/m², which places her in the 90th percentile for her age. Her blood pressure is 130/85 mm Hg, which places her between the 95th and 99th percentile for her age, height, and sex. Her chart reveals that her blood pressure was at this level at the last two visits. The physical examination is otherwise normal.

In addition to counseling and support for weight loss, which one of the following would be most appropriate at this point?

A) Informing the patient and her parents that she is prehypertensive and having her return for a blood pressure check in 3 months  
B) Plasma renin and catecholamine levels  
C) An imaging study of the renal arteries  
D) A fasting basic metabolic panel, a lipid profile, and a urinalysis  
E) Antihypertensive drug therapy
A 55-year-old male is hospitalized because of altered mental status. His group home caregiver reports a 1-week history of the patient being confused and unable to perform his activities of daily living. He has a history of hypertension, COPD, and bipolar disorder, and his medications include losartan (Cozaar), inhaled tiotropium (Spiriva), and valproic acid (Depakene).

On examination the patient’s vital signs are normal and he is oriented to person, but not to time or place. The remainder of the physical examination is within normal limits. Laboratory findings, including liver enzymes and renal function tests, are normal except for an elevated ammonia level. Ultrasonography of the abdomen does not show any liver abnormalities. Lactulose therapy is started.

Which one of the following is the most likely cause of this patient’s elevated ammonia level?

A) Valproic acid  
B) Occult upper gastrointestinal bleeding  
C) Portal vein thrombosis  
D) Gilbert syndrome

A 75-year-old male with a history of hypertension, TIA, and atrial fibrillation sees you for follow-up. Ten days ago he was on vacation in another state when he developed chest pain. He went to a local hospital where he was diagnosed with an ST-elevation myocardial infarction (STEMI) and was taken immediately for cardiac catheterization. He had a drug-eluting stent placed in his left anterior descending artery. He brings some discharge paperwork with him, including a medication list, but has not yet seen a local cardiologist. He is concerned that he is taking too many blood thinners. He feels well and does not have any chest pain, shortness of breath, or excessive bleeding or bruising.

Prior to his STEMI the patient was taking lisinopril (Prinivil, Zestril), 10 mg daily; warfarin (Coumadin), 2.5 mg daily; and metoprolol succinate (Toprol-XL), 25 mg daily. Upon discharge he was instructed to continue all of those medications and to add clopidogrel (Plavix), 75 mg daily, and aspirin, 81 mg daily.

The patient’s vital signs and physical examination are normal except for an irregularly irregular rhythm on the cardiovascular examination. His INR is 2.5.

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

A) Continue the current regimen  
B) Discontinue aspirin  
C) Discontinue clopidogrel  
D) Discontinue warfarin  
E) Decrease warfarin with a goal INR of 1.5–2.0
237. A 38-year-old white female presents with abdominal pain and insists that she be referred for surgical evaluation. She has a history of multiple unexplained physical symptoms that began in her late teenage years. She is vague about past medical evaluations, but a review of her extensive medical record reveals multiple normal blood and imaging tests, several surgical procedures that have failed to alleviate her symptoms, and frequent requests for refills of narcotic analgesics.

This patient’s history is most compatible with

A) illness anxiety disorder
B) malingering
C) panic disorder
D) generalized anxiety disorder
E) somatic symptom disorder

238. A 20-year-old college student comes to the urgent care clinic with right knee pain and swelling after injuring her knee in a recreational basketball game. Her feet were planted when another player collided with her, causing her upper torso to rotate. She felt immediate pain in the knee and was unable to complete the game.

Which one of the following is the most accurate and appropriate maneuver to detect an anterior cruciate ligament tear?

A) The anterior drawer test
B) The lever sign test
C) The Lachman test
D) The McMurray test
E) The pivot shift test
239. A 54-year-old male is concerned about testosterone deficiency. He has erectile dysfunction with impaired erections and decreased libido. He has also noted hair loss on his legs, breast tenderness, and fatigue. He has chronic renal disease and compensated heart failure, and he takes opioids for chronic pain. Five years ago he had a non–ST-elevation myocardial infarction and has done well with medical management.

The patient’s morning testosterone level is low on two separate readings and you want to initiate testosterone replacement.

Laboratory Findings

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated glomerular filtration rate</td>
<td>58 mL/min/1.73 m²</td>
</tr>
<tr>
<td>Creatinine</td>
<td>2.0 mg/dL (N 0.7–1.3)</td>
</tr>
<tr>
<td>Hematocrit</td>
<td>55% (N 42–52)</td>
</tr>
<tr>
<td>Prostate-specific antigen</td>
<td>3.9 ng/dL (N 0.0–4.0)</td>
</tr>
</tbody>
</table>

Which one of the following is an ABSOLUTE contraindication to starting treatment with testosterone in this patient?

A) The history of coronary artery disease
B) Benign prostatic hyperplasia
C) Chronic renal disease
D) Compensated heart failure
E) Polycythemia

240. A 62-year-old female comes to your office for evaluation of pain in her right thumb and wrist associated with sewing. She does not have any injury, numbness, tingling, or weakness. An examination reveals an otherwise healthy-appearing female with normal vital signs and no deformity or swelling in her wrists or hands. She has tenderness to palpation at the first dorsal compartment over the radial styloid and has pain with active and passive stretching of the thumb tendons over the radial styloid. She is very worried that she will have to stop sewing and asks if there is anything she could try to alleviate her symptoms.

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

A) Reassurance that it will likely improve on its own within about a year
B) A corticosteroid injection into the first extensor compartment
C) Immobilization in a thumb spica splint and an NSAID for 1–4 weeks
D) Radiographs of the thumb and wrist
E) Referral to an orthopedic surgeon