

American Board of Family Medicine



IN-TRAINING EXAMINATION

Publication or reproduction in whole or in part is strictly prohibited.
Copyright © 2024 The American Board of Family Medicine. All rights reserved.

1. A 34-year-old female with intellectual disability, hypothyroidism, and bipolar disorder presents for routine follow-up. Her case worker notes that she has been excessively thirsty and urinating more than usual over the past several months despite limiting her fluids. She also wakes at night to urinate. Laboratory studies prior to her visit reveal a therapeutic lithium level, as well as normal creatinine, electrolyte, and blood glucose levels.

Which one of the following is most likely present in this patient's case?

- A) Diabetes insipidus
 - B) Interstitial cystitis
 - C) Overactive bladder
 - D) Psychogenic polydipsia
 - E) Syndrome of inappropriate antidiuretic hormone secretion
2. A 70-year-old female sees you at the request of her surgeon to discuss anticoagulation management prior to a scheduled cholecystectomy. She has a past medical history of atrial fibrillation, stage 3a chronic kidney disease, hypertension, depression, and cerebrovascular disease. She had an ischemic stroke 1 year ago. Her current medications include the following:

Amlodipine (Norvasc)
Losartan (Cozaar)
Metoprolol succinate (Toprol-XL)
Sertraline (Zoloft)
Warfarin

Her vital signs include a blood pressure of 140/82 mm Hg, a heart rate of 90 beats/min, and an oxygen saturation of 96% on room air. A cardiovascular examination reveals an irregularly irregular rhythm. The remainder of the examination findings are unremarkable. An INR today is 2.2.

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

- A) Continuing warfarin with a goal INR of 1.4–1.6
- B) Discontinuing warfarin 5 days prior to surgery and bridging with aspirin
- C) Discontinuing warfarin 5 days prior to surgery and bridging with clopidogrel (Plavix)
- D) Discontinuing warfarin 5 days prior to surgery and bridging with low-molecular-weight heparin
- E) Discontinuing warfarin 5 days prior to surgery without bridging therapy

3. A 30-year-old female with obesity and tobacco use disorder presents for evaluation of a persistent painful lump in her axilla. After an appropriate evaluation you diagnose mild hidradenitis suppurativa.

In addition to weight loss and smoking cessation counseling, which one of the following treatment options would be most appropriate?

- A) Topical clindamycin gel (Cleocin T)
 - B) Topical diclofenac gel
 - C) Topical triamcinolone cream
 - D) Oral azithromycin (Zithromax)
 - E) Oral meloxicam
4. A 48-year-old female with a history of ductal carcinoma in situ diagnosed in her early 40s presents to the urgent care clinic because of heavy vaginal bleeding. The bleeding started 8 days ago as a regular menstrual period, but it has worsened and today she started passing clots. She does not take any medications.

You estimate her blood loss to be >100 mL today. On examination she has a blood pressure of 114/65 mm Hg and a pulse rate of 84 beats/min. The uterus is slightly enlarged with red blood in the os, but the examination findings are otherwise normal. A CBC is significant for a hemoglobin level of 8.2 g/dL (N 12.0–16.0) and a normal platelet count. An hCG test is negative.

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

- A) Oral high-dose progestins
- B) Depot medroxyprogesterone acetate (Depo-Provera CI)
- C) Intravenous conjugated estrogen
- D) Intravenous ketorolac
- E) Intravenous tranexamic acid

5. A 30-year-old female with a medical history of anxiety and seasonal allergies presents for evaluation of palpitations and a racing heartbeat that has worsened over the last 3–4 days. Recently, her escitalopram (Lexapro) dosage was increased to 20 mg daily and she started using fluticasone propionate nasal spray (Flonase) and oral cetirizine (Zyrtec), 10 mg daily. A CBC, comprehensive metabolic panel, and TSH level are normal. A urine pregnancy test is negative. An EKG today shows a heart rate of 85 beats/min and a QTc interval of 500 milliseconds.

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

- A) Reassurance only
 - B) Discontinuing cetirizine
 - C) Discontinuing escitalopram
 - D) Discontinuing fluticasone
 - E) Echocardiography
6. Which one of the following medications has been shown to increase the resolution of metabolic dysfunction–associated steatotic liver disease (MASLD), formerly known as nonalcoholic fatty liver disease?
- A) Glyburide
 - B) Metformin
 - C) Pioglitazone (Actos)
 - D) Repaglinide
 - E) Vitamin D (cholecalciferol)
7. A 45-year-old male presents for a health maintenance examination. He has a history of hypertension that is well controlled on lisinopril (Zestril).

Based on guidelines from the U.S. Preventive Services Task Force, this patient should be screened for which one of the following?

- A) Cardiovascular disease with EKG
- B) Carotid artery disease with carotid ultrasonography
- C) Colon cancer with colonoscopy
- D) Prostate cancer with a prostate-specific antigen level
- E) Vitamin D deficiency with a vitamin D level

8. Laser-assisted in-situ keratomileusis (LASIK) surgery is performed to treat
- A) cataracts
 - B) closed-angle glaucoma
 - C) myopia
 - D) presbyopia
 - E) retinal detachment
9. A 65-year-old female is found to have a T-score of -3.3 on a DEXA scan that is performed as part of her Welcome to Medicare evaluation. She has a 30-pack-year smoking history but quit smoking 5 years ago. An examination reveals a thin female but is otherwise unremarkable. A CBC, a comprehensive metabolic panel, and thyroid studies are unremarkable. X-rays reveal evidence of an old compression fracture of the thoracic spine.

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

- A) Oral alendronate (Fosamax)
 - B) Oral raloxifene (Evista)
 - C) Subcutaneous denosumab (Prolia)
 - D) Subcutaneous teriparatide (Forteo)
 - E) Intravenous zoledronic acid (Reclast)
10. A 48-year-old female presents to the urgent care clinic approximately 1 hour after spilling hot water on her left forearm while draining pasta. She has a past medical history of type 2 diabetes, hypertension, and major depression. She is not allergic to any antibiotics and is up to date on tetanus vaccination.

On examination her vital signs are normal. You determine that she has a partial-thickness (second-degree) burn involving approximately a 4×5 -cm area on the posterior and lateral aspects of the left forearm.

In addition to oral medications for pain management and topical antiseptics, you should prescribe which one of the following?

- A) No additional medications
- B) Amoxicillin/clavulanate (Augmentin)
- C) Clindamycin (Cleocin)
- D) Levofloxacin
- E) Sulfamethoxazole/trimethoprim (Bactrim)

11. Which one of the following medications is most likely to interfere with the results of screening for primary hyperaldosteronism?

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

12. An 80-year-old female presents for follow-up of urge urinary incontinence after having completed a course of pelvic floor physical therapy with minimal improvement. Her medical history includes hyperlipidemia controlled with atorvastatin (Lipitor) and chronic insomnia treated with doxepin (Silenor). A physical examination, basic metabolic panel, and urinalysis are all normal. She requests a trial of a medication for her overactive bladder.

Which one of the following would be most likely to improve her symptoms, while minimizing the risk for adverse side effects?

- A) Conjugated estrogens (Premarin)
- B) Duloxetine (Cymbalta)
- C) Mirabegron (Myrbetriq)
- D) Oxybutynin
- E) Tolterodine (Detrol)

13. A 63-year-old female with a medical history of hypertension, depression, fibromyalgia, and giant cell arteritis presents with a 3-week history of progressive cough and shortness of breath. She has been taking prednisone for the last 3 months and is tapering the dosage. Her current dosage is 25 mg daily.

The patient's vital signs include a temperature of 38.1 °C (100.6 °F), an oxygen saturation of 88% on room air, and a respiratory rate of 28/min. On examination, her lungs are clear, and a chest radiograph shows bilateral perihilar interstitial pulmonary infiltrates. You recommend hospital admission and intravenous antibiotics. Cultures are pending.

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

- A) Azithromycin (Zithromax) and ceftriaxone
- B) Levofloxacin and metronidazole
- C) Piperacillin/tazobactam (Zosyn) and vancomycin
- D) Azithromycin, cefepime, and vancomycin
- E) Ceftriaxone, doxycycline, and sulfamethoxazole/trimethoprim

14. A 32-year-old female comes to your office with her husband after a recent weeklong episode of elevated mood and energy that meets the diagnostic criteria for a manic episode. They both say that she has never had any episodes of depression, low mood, or anhedonia.

This patient's presentation is most consistent with which one of the following disorders?

- A) Bipolar I
 - B) Bipolar II
 - C) Borderline personality
 - D) Cyclothymic
 - E) Disruptive mood dysregulation
15. A 35-year-old female presents for evaluation of bilateral breast pain that varies in intensity with her menstrual cycle. She drinks 2 cups of caffeinated coffee per day and does not take any regular medications. Her past medical history is unremarkable and she does not have any family history of breast cancer. A physical examination, including a clinical breast examination, is normal. A urine hCG test is negative.

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

- A) A trial of dietary caffeine elimination
 - B) A trial of topical diclofenac
 - C) Prolactin and TSH levels
 - D) Ultrasonography
 - E) Diagnostic mammography
16. Which one of the following is a possible adverse effect of short-term systemic corticosteroids?
- A) Hair loss
 - B) Hyperkalemia
 - C) Hypoglycemia
 - D) Hypotension
 - E) Mood disturbance

17. A 32-year-old male comes to your office because of a gradual onset of right ankle pain. He works in a warehouse and walks extensively during his 12-hour shifts. The pain is located on the medial side of the ankle and worsens throughout his shift. His medical history is notable for well-controlled hypertension and a BMI of 39 kg/m².

On examination the patient has difficulty performing the single-limb heel raise test. You note a positive “too many toes” sign, as well as pes planus. You diagnose posterior tibial tendinopathy.

In addition to arch supports, which one of the following should you recommend next?

- A) A stretching program
 - B) Eccentric exercises
 - C) Oral corticosteroids
 - D) Corticosteroid injection
 - E) Percutaneous needle tenotomy
18. A 35-year-old female presents to your clinic with a 5-day history of sinus congestion, postnasal drainage, and a productive cough with clear sputum. She has a history of depression, for which she takes sertraline (Zoloft), and no previous history of respiratory symptoms or diagnoses. She smokes socially. Her vital signs include a blood pressure of 120/70 mm Hg, a heart rate of 87 beats/min, a respiratory rate of 16/min, and an oxygen saturation of 99% on room air.

On examination the patient has clear rhinorrhea, posterior pharynx erythema, frontal sinus tenderness to palpation, and clear lung fields. She has recurrent coughing episodes but does not show any signs of respiratory distress.

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

- A) Honey
- B) Amoxicillin/clavulanate (Augmentin)
- C) Dextromethorphan
- D) Hydrocodone/homatropine (Hycodan)
- E) Prednisone

19. A 44-year-old male with a history of hypertension presents to the urgent care clinic after he was noted to have a blood pressure of 175/105 mm Hg at a workplace screening event. He has not established medical care since relocating last year and has not been taking his previously prescribed medications. His blood pressure in the clinic is 189/119 mm Hg after sitting for 10 minutes and being positioned appropriately. He does not have chest pain, shortness of breath, headache, or vision changes. Physical examination findings are unremarkable.

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

- A) A urine drug screen
 - B) A stat troponin level
 - C) Reinitiation of his antihypertensive medication
 - D) Clonidine, 0.3 mg orally
 - E) Transfer to the emergency department
20. An otherwise healthy 12-year-old is brought to your office by a parent because the child has had an itchy scalp for the last 2 months. The patient has tried multiple dandruff shampoos and is now using tea tree oil without relief. On examination you note several 1- to 2-cm annular lesions on the scalp with small black dots and scale. There is tender lymphadenopathy of the occipital scalp.

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

- A) Obtaining a scraping for culture
 - B) Initiating topical fluocinonide solution
 - C) Initiating topical ketoconazole shampoo
 - D) Initiating oral itraconazole (Sporanox)
 - E) Initiating oral terbinafine
21. Which one of the following is associated with at least 6 months of exclusive breastfeeding in infants?
- A) Higher incidence of infant peanut allergy
 - B) Higher infant HDL-cholesterol levels
 - C) Lower risk for infant atopic dermatitis
 - D) Lower maternal incidence of endometrial cancer
 - E) Lower maternal incidence of hypothyroidism

22. A 30-year-old male comes to your office because of a nonpainful lump in his genitalia that has been present for a few years. He shares that he and his partner have been trying to conceive for 2 years. On examination you note a nontender “bag of worms” mass in the left scrotum.

This patient’s condition is concerning for which one of the following reasons?

- A) It may become painful
 - B) It may be contributing to his infertility
 - C) It is associated with a higher risk for testicular cancer
 - D) It is indicative of an inguinal hernia
 - E) It requires treatment with antibiotics
23. A previously healthy 38-year-old female presents with an acute onset of near-syncope and shortness of breath. An examination reveals a BMI of 34 kg/m², a temperature of 36.9 °C (98.4 °F), an oxygen saturation of 92% on room air, a respiratory rate of 24/min, a heart rate of 105 beats/min, and a blood pressure of 118/70 mm Hg. She has some tenderness and swelling of her left lower leg.

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

- A) An arterial blood gas measurement
 - B) A D-dimer level
 - C) Echocardiography
 - D) CT angiography of the chest
 - E) A ventilation-perfusion (V/Q) scan
24. A 64-year-old male with obesity sees you for follow-up. He started semaglutide (Wegovy) 6 months ago and has lost 6% of his starting weight. He has a 1-month history of worsening dizziness upon standing. In addition to semaglutide, his current medications include atorvastatin (Lipitor), escitalopram (Lexapro), and lisinopril (Zestril).

You note a fine tremor in his hand when he holds up his phone to show you his home blood pressure readings. On examination his blood pressure while sitting is 112/64 mm Hg. Three minutes after standing, his systolic blood pressure drops by 25 mm Hg and his pulse rate increases by 15 beats/min. A CBC is normal and an EKG shows sinus rhythm.

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

- A) Discontinuing escitalopram
- B) Discontinuing lisinopril
- C) Discontinuing semaglutide
- D) Adding carbidopa/levodopa (Sinemet)
- E) Adding midodrine

25. A 69-year-old female comes to your office for a routine health maintenance visit. She drinks 1 glass of wine every night with dinner, walks 30 minutes per day, and does not smoke. Her medical history is significant for knee osteoarthritis. She has never had surgery and does not take any medications except as-needed ibuprofen.

On examination she has a BMI of 28 kg/m^2 , a blood pressure of 112/78 mm Hg, and a heart rate of 82 beats/min. Other than bilateral knee crepitus, the physical examination findings are unremarkable. Laboratory findings include:

Total cholesterol	165 mg/dL
HDL-cholesterol	32 mg/dL
LDL-cholesterol	109 mg/dL
Triglycerides	120 mg/dL
Hemoglobin A _{1c}	7.5%

Her calculated 10-year risk of cardiovascular disease is 13.2%.

In addition to appropriately treating her diabetes mellitus, which one of the following is recommended by the U.S. Preventive Services Task Force regarding statin use in this patient?

- A) No statin at this time
- B) A low-intensity statin
- C) A moderate-intensity statin
- D) A high-intensity statin

26. A 53-year-old female sees you for follow-up of an emergency department (ED) visit for abdominal pain. CT of the abdomen in the ED did not identify the cause of her pain but did reveal a 3-cm homogeneous right adrenal mass. Her abdominal pain has since resolved.

Her medical history includes stage 2 hypertension, prediabetes, menopause, and moderate obesity with a BMI of 35 kg/m². She does not have any history of malignancy and is up to date on mammography and colon cancer screenings.

According to the American College of Radiology and the American Association of Clinical Endocrinology, which one of the following would be the most appropriate next step regarding this patient's adrenal mass?

- A) Reassurance and no further evaluation unless symptoms develop
 - B) Repeating CT with adrenal protocol in 1 year
 - C) Ordering a 1-g dexamethasone suppression test and, if normal, repeating CT imaging in 6 months
 - D) Ordering urine metanephrines and, if normal, recommending CT-guided biopsy
 - E) Ordering adrenal MRI and biochemical testing for evidence of adrenal hyperfunctioning
27. A 30-year-old soccer player presents with a hyperextension injury of his right wrist after falling and landing on his outstretched hand. On examination the wrist is swollen and tender over the anatomic snuffbox. A plain radiograph shows soft tissue swelling.

In addition to ice and elevation, which one of the following is the most appropriate initial treatment?

- A) Gutter splint
 - B) Thumb spica splint
 - C) Volar splint
 - D) Short arm cast
 - E) Long arm cast
28. A 33-year-old gravida 1 para 1 presents to your office requesting contraceptive management. She recently experienced an acute stroke due to a hypertensive emergency. She is not interested in permanent sterilization at this time and asks your advice regarding the most appropriate contraception given her medical history.

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

- A) A combined oral contraceptive
- B) A progestin-only oral contraceptive
- C) Depot medroxyprogesterone acetate (Depo-Provera CI)
- D) A copper IUD (Paragard)
- E) A levonorgestrel IUD (Mirena)

29. A 60-year-old female presents to your office with a 5-day history of pain inside her mouth. She has a medical history of hypertension, dyslipidemia, asthma, and hypothyroidism. A physical examination reveals several patches of white plaques in her mouth. You scrape the plaques off with a tongue depressor and find inflamed, erythematous tissue under them.

Which one of the following medications, if included in this patient's regimen, may have contributed to the development of this condition?

- A) Atorvastatin (Lipitor)
 - B) Beclomethasone dipropionate (Qvar RediHaler)
 - C) Ipratropium bromide (Atrovent)
 - D) Isosorbide mononitrate
 - E) Losartan/hydrochlorothiazide (Hyzaar)
30. A 65-year-old male presents to the emergency department with a large amount of painful hematochezia over the last 24 hours. His medical history is significant for chronic, generalized osteoarthritis, for which he takes the maximum daily dosage of ibuprofen.

The patient is noticeably pale. On examination he has a blood pressure of 80/40 mm Hg and a pulse rate that is 135 beats/min and regular. An abdominal examination is remarkable for diffuse tenderness over the umbilical area. Bowel sounds are hyperactive. There is no significant abdominal distention.

Aggressive fluid resuscitation and transfusions are initiated. The gastroenterologist thinks that it is unsafe to proceed with endoscopy, given the patient's current medical instability.

Which one of the following would be most appropriate to perform instead of endoscopy?

- A) Radiography of the abdomen
- B) Ultrasonography of the abdomen
- C) CT angiography of the abdomen and pelvis
- D) Technetium Tc 99m-labeled red blood cell scintigraphy
- E) Laparoscopy

31. A patient presents with right-sided facial weakness. You suspect Bell palsy, but an assessment suggests a central brain lesion.

A central brain lesion would result in which one of the following findings on the affected side?

- A) Ability to wrinkle the forehead
- B) Inability to close the eye
- C) Normal extraocular movements
- D) Flattening of the nasolabial fold
- E) Drooping of the mouth

32. A 54-year-old female with Hashimoto thyroiditis sees you for follow-up. She does not report any clinical symptoms, but her TSH level is $<0.1 \mu\text{U/mL}$ (N 0.5–5.0) and her free T_4 level is elevated at 1.9 ng/dL (N 0.6–1.6). Her only medication is levothyroxine (Synthroid), and she reports taking more than the prescribed dosage to help with weight loss. You tell her that this may have several dangerous outcomes.

Which one of the following adverse reactions is the most likely to occur with misuse of this medication?

- A) Atrial fibrillation
- B) Exophthalmos
- C) Goiter
- D) Seizure
- E) Tetany

33. Which one of the following community design features can be used to encourage people to walk more?

- A) Frequently sought destinations (eg, school, work, stores) located at least 1 mile away from residential areas
- B) High-quality public transit systems
- C) High-speed roadways that route traffic through neighborhoods
- D) Moving sidewalks and escalators

34. A 60-year-old transgender female comes to your office for a preventive care visit. You review her organ inventory and note that she has hormonally augmented breast tissue; a vulva and a vagina that were constructed via the penile inversion technique, including an orchiectomy; and a prostate. Her BMI is 23 kg/m². She does not have any significant medical history other than the gender-affirming procedures and her only medication is a transdermal estradiol patch (Climara), 0.05 mg weekly. She is monogamous with her cisgender female partner and has never smoked.

Based on U.S. Preventive Services Task Force guidelines, which one of the following preventive care options should be discussed at this time?

- A) A digital rectal examination
 - B) An anal Papanicolaou smear
 - C) Prostate-specific antigen testing
 - D) Mammography
 - E) Bone density screening
35. A 48-year-old female with a history of Crohn disease that has been poorly controlled for the past 4–6 months is admitted to the hospital. She has a BMI of 15 kg/m² and has unintentionally lost more than 18% of her body weight in this same span of time. Her potassium level is 3.3 mEq/L (N 3.5–5.2) and her phosphorous level is 2.6 mg/dL (N 3.0–4.5).

In addition to treating her Crohn disease, you should address her malnourished condition by initiating thiamine followed by refeeding and electrolytes using which one of the following strategies?

- A) Providing less than her expected calorie requirements and replenishing electrolytes immediately
 - B) Providing her full expected calorie requirements and replenishing electrolytes immediately
 - C) Providing her full expected calorie requirements and delaying replenishment of electrolytes for 6 hours
 - D) Providing more than her expected calorie requirements and replenishing electrolytes immediately
 - E) Providing more than her expected calorie requirements and delaying replenishment of electrolytes for 6 hours
36. A 62-year-old female sees you for follow-up of bilateral lower extremity edema that worsens throughout the day. A BNP level, TSH level, comprehensive metabolic panel, urinalysis, chest x-ray, EKG, and lower extremity venous ultrasound have all been normal.

Which one of the following diagnoses should you consider in this patient?

- A) Celiac disease
- B) Cushing syndrome
- C) Lyme disease
- D) Obstructive sleep apnea
- E) Raynaud disease

37. A 42-year-old female sees you for routine follow-up of adrenal insufficiency diagnosed 2 years ago. Today she reports a 2-month history of fatigue, decreased energy, difficulty concentrating, and nausea. She has also had an unintentional 5-lb weight loss over the past 3 months. She takes oral hydrocortisone, 10 mg in the morning and 5 mg in the afternoon. She is adherent to her medication regimen and has not had any illnesses in the past year.

Which one of the following would be the most appropriate initial step in the management of this patient's adrenal insufficiency?

- A) Increasing the hydrocortisone dosage
 - B) A random cortisol level
 - C) A cortisol stimulation test
 - D) CT of the adrenal glands
38. Which one of the following findings on a HINTS (head-impulse, nystagmus, test of skew) examination suggests a central etiology for a patient with vertigo?
- A) Saccade when the patient's head is thrust 10° to the right and left while the patient's eyes are fixed on the examiner's nose
 - B) Spontaneous nystagmus that is unidirectional and horizontal
 - C) Suppression of nystagmus with visual fixation
 - D) Vertical deviation upon uncovering a covered eye while the patient is looking straight ahead
39. A 32-year-old female sees you to request breast cancer screening after learning that her 45-year-old sister was diagnosed with breast cancer. She has no other known history of breast cancer. The patient does not have a family history of ovarian, tubal, or peritoneal cancers. Menarche occurred at 13 years of age and she has never been pregnant. On examination there is no nipple discharge or axillary lymphadenopathy and she has no palpable breast masses.

Based on U.S. Preventive Services Task Force guidelines, which one of the following should you recommend as the next step in evaluation?

- A) Monthly breast self-examinations
- B) Screening mammography
- C) Screening breast ultrasonography
- D) Genetic counseling

40. A 55-year-old female presents with numbness and tingling in the ring and little fingers of her right hand. She also reports weakness when gripping objects and difficulty spreading her fingers apart. A physical examination reveals weakness of the first dorsal interosseous muscle and clawing of the ring and little fingers. A Tinel sign is positive over the medial epicondyle of the right elbow.

Which one of the following is the most likely diagnosis?

- A) Axillary nerve compression
 - B) Carpal tunnel syndrome
 - C) Cubital tunnel syndrome
 - D) Median nerve neuropathy
 - E) Radial tunnel syndrome
41. An 80-year-old male who is taking furosemide (Lasix), 80 mg, for heart failure presents to the emergency department (ED) with a gradual onset of somnolence. He is found to be hyponatremic with a serum sodium level of 104 mEq/L (N 135–145).

You should order the administration of which one of the following?

- A) 100 mL of 3% sodium chloride over 10 minutes
 - B) 150 mL of 5% sodium chloride over 30 minutes
 - C) 500 mL of 3% sodium chloride over 30 minutes
 - D) 1 L of 0.9% sodium chloride over 1 hour
 - E) 1 L of 3% sodium chloride over 1 hour
42. A 45-year-old female presents for evaluation of a 3-month history of left knee pain. She commutes by bicycle and is now finding it painful to cycle or even walk. On examination she does not have any deformity, and there is normal range of motion of the hips and knees. She has bilateral knee crepitus, pain on flexion of the left knee, and point tenderness that is noted 2 cm proximal to the left lateral joint line while flexing the knee.

Which one of the following is the most likely diagnosis?

- A) Iliotibial band syndrome
- B) Lateral compartment osteoarthritis
- C) Patellar tendinitis
- D) Patellofemoral syndrome
- E) Pes anserine bursitis

43. You see an expectant mother for a prenatal visit. She has heard of sudden infant death syndrome and asks for advice on sleeping arrangements.

You tell her that infants should sleep

- A) in a crib and on their backs in the parents' room
 - B) in a crib and on their stomachs in the parents' room
 - C) in a crib and on their backs in their own room
 - D) in the parents' bed and on their backs
 - E) in the parents' bed and on their stomachs
44. A 55-year-old female presents to your office because of a several-month history of progressively worsening fatigue, weakness, and unexplained weight loss. Physical examination findings are remarkable for hyperpigmentation of the skin and buccal mucosa. Initial laboratory studies reveal a low morning cortisol level.

Which one of the following is the most likely diagnosis?

- A) Addison disease
 - B) Cushing disease
 - C) Pheochromocytoma
 - D) Primary hyperaldosteronism
 - E) Syndrome of inappropriate antidiuretic hormone secretion
45. A 65-year-old male presents to your office for a Welcome to Medicare visit. The whisper test is abnormal with both ears.

In addition to difficulty hearing and participating in day-to-day conversation, the patient is at increased risk for which one of the following health problems due to his hearing loss?

- A) Benign paroxysmal positional vertigo
- B) Dementia
- C) Ear infection
- D) Heart failure
- E) Temporomandibular joint dysfunction

46. A 32-year-old female presents with concerns regarding infertility. She has been married for 3 years and has been attempting to conceive for the past 18 months. She reports early menarche at age 10 and a long-standing history of dysmenorrhea and heavy bleeding. These symptoms improved when she was using oral contraceptive therapy in her 20s. Transvaginal ultrasound results are inconclusive.

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

- A) A 6-month trial of oral contraceptive therapy
 - B) A trial of aromatase inhibitor therapy such as letrozole (Femara)
 - C) Placement of a levonorgestrel-releasing IUD (Mirena)
 - D) Diagnostic laparoscopic surgery to confirm the diagnosis
47. A 70-year-old male presents to the emergency department with a sudden onset of severe abdominal pain that radiates to his back. The patient has a history of stroke, hypertension, and type 2 diabetes. He has a 40-pack-year smoking history. A physical examination reveals a pulsatile mass just above the umbilicus. CT of the abdomen confirms the diagnosis.

Which one of the following is the greatest risk factor for developing this condition?

- A) Cigarette smoking
 - B) Hypertension
 - C) Male sex
 - D) Stroke
 - E) Type 2 diabetes
48. Of the following, which one is the most effective abortive treatment for cluster headache?
- A) Hydromorphone (Dilaudid)
 - B) Ketorolac
 - C) Ondansetron
 - D) Propranolol
 - E) Sumatriptan (Imitrex)

49. A 4-month-old female is brought to your office for a well child check. She is here with her mother and 2 older brothers, who are also your patients. The family looks forward to swimming at the local outdoor community pool, going to the beach, and gardening this summer.

Which one of the following should you recommend to reduce this family's risk for skin cancer related to sun exposure?

- A) Applying sunscreen with an SPF ≥ 15 to the infant before taking her outside
- B) Avoiding going to the pool during the middle of the day, and encouraging them to take breaks in the shade
- C) Going to the beach only on cloudy days when ultraviolet rays are absent
- D) Wearing a baseball cap for sun protection when gardening

50. A 36-year-old female presents with a medical history of hypertension, hyperlipidemia, obesity, and 3 miscarriages. She is not currently pregnant. She was recently discharged from the hospital with her second deep vein thrombosis (DVT) in the past several years. A workup for the underlying cause of her thrombophilia is positive for antiphospholipid antibodies.

Which one of the following medications would be most appropriate for the long-term treatment of this patient's DVT?

- A) Apixaban (Eliquis)
- B) Aspirin
- C) Clopidogrel (Plavix)
- D) Enoxaparin (Lovenox)
- E) Warfarin

51. A generally healthy 5-month-old female is brought to your office by her parent for follow-up of a worsening, painless, red lesion on her right earlobe that has been present since birth. The parent is concerned because the lesion has rapidly increased in size over the last few months. A physical examination reveals a nontender, bluish-red, exophytic plaque on the right earlobe (shown below).

Which one of the following would be an appropriate treatment for this condition?

- A) Topical hydrocortisone 0.5%, twice daily
- B) Oral propranolol hydrochloride, 2–3 mg/kg daily
- C) Embolization
- D) Excisional surgery

52. A 24-year-old female sees you for treatment of significant depression and associated hypomanic symptoms. She has been experiencing racing thoughts, agitation, and a decreased need for sleep.

Which one of the following is CONTRAINDICATED in this patient?

- A) Cariprazine (Vraylar) monotherapy
- B) Quetiapine (Seroquel) monotherapy
- C) Sertraline (Zoloft) monotherapy
- D) Lurasidone (Latuda) plus valproic acid
- E) Quetiapine plus lithium

53. A 59-year-old male presents to your office accompanied by his wife for evaluation of a 6-month history of worsening weakness. He reports having difficulty lifting light items to the top shelf at work. His wife adds that he has recently been clumsier around the house.

The patient's vital signs are normal today. On physical examination you note mild dysarthria during conversation, proximal weakness of the upper extremities that is more pronounced on the left, hyperreflexia of the biceps tendon reflex bilaterally, atrophy of the quadriceps that is more pronounced on the right, and absent reflexes of the patellar tendon.

Which one of the following is the most likely diagnosis?

- A) Amyotrophic lateral sclerosis
- B) Guillain-Barré syndrome
- C) Hypothyroidism
- D) Multiple sclerosis
- E) Myasthenia gravis



Item #51

54. A 49-year-old female presents to your office with severe left ear pain. The patient describes the pain as sharp and deep inside her ear and reports that it has been occurring occasionally for several years. The pain has become more constant over the last 2 months, and she currently rates it as 8 out of 10 on a pain scale. She has not previously sought an evaluation.

On physical examination you find a normal ear canal and tympanic membrane. The patient is only able to open her mouth 2 finger widths, has clicking over the left temporomandibular joint with opening, and has pain with palpation of the submandibular musculature.

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

- A) Reassurance that her ear is normal, and follow-up in 4 weeks if symptoms have not improved
 - B) A trial of naproxen and cyclobenzaprine
 - C) Noncontrast CT of the facial bones
 - D) Referral to an otolaryngologist for further evaluation
 - E) Referral to a maxillofacial surgeon for consideration of jaw realignment surgery
55. A 6-month-old male is brought to your office by his parents for a well baby examination. This is the patient's first visit to your office as his family recently immigrated to the United States. The infant appears to be developing normally, but the parents are concerned because they have not observed a right testicle.

On examination you are able to palpate the left testicle in the normal location. The right testicle is not located in the scrotum but is palpable along the inguinal canal. It can be moved into the upper scrotum but requires constant tension to remain in this position and immediately retracts after release.

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

- A) Reassurance that the condition will resolve spontaneously
- B) Follow-up in 2 months
- C) An ultrasound of the scrotum and pelvis
- D) Referral to an endocrinologist
- E) Referral to a urologist

56. A 23-year-old kindergarten teacher presents with a 2-day history of fever up to 102 °F, a sore throat, headache, and swollen glands. She has not had a runny nose or cough. Her throat is hyperemic and has tonsillar exudates. The anterior cervical nodes are enlarged and tender, but there is no other lymphadenopathy. She requests an antibiotic to prevent complications and to reduce the likelihood of spreading the infection to her students. A throat swab for group A *Streptococcus* is positive.

Which one of the following is true regarding the use of antibiotics in this patient?

- A) Her current symptoms will not be reduced
 - B) Her risk for developing poststreptococcal glomerulonephritis will not change
 - C) Her risk for developing rheumatic fever will not change
 - D) She will remain contagious for 7–10 days even with treatment
57. A 23-year-old female presents to your office for evaluation of amenorrhea. A pregnancy test is positive, and you determine that she is at 6 weeks' gestation based on her last menstrual period. She has a history of acne, allergic rhinitis, gastroesophageal reflux, and anxiety. The patient's current medications include the following:

Adapalene 0.1% gel (Differin Gel) daily
Famotidine (Pepcid), 20 mg as needed
Fluticasone propionate (Flonase), 50 µg daily
Hydroxyzine (Vistaril), 25 mg as needed
Polyethylene glycol (MiraLAX), 17 g as needed

Which one of the patient's current medications should be discontinued at this time?

- A) Adapalene
- B) Famotidine
- C) Fluticasone propionate
- D) Hydroxyzine
- E) Polyethylene glycol

58. A 17-year-old male sustains an injury while playing in a high school football game. As the sideline physician, you determine that he needs to be transported to the emergency department with neck stabilization. He is awake, talking, and in no acute distress. There is no concern for airway compromise.

Depending on the nature of his other injuries, which one of the following pieces of protective equipment should you remove before transporting the patient?

- A) Only the helmet if required
 - B) Only the shoulder pads if required
 - C) Both the helmet and the shoulder pads
 - D) Neither the helmet nor the shoulder pads
59. A 16-year-old female presents for a routine checkup. During the visit, she discloses that she is sexually active and wants to discuss contraceptive options. However, she is hesitant to inform her parents, fearing their disapproval.

Which one of the following is the most ethical course of action?

- A) Providing the patient with contraception without informing her parents, and respecting her confidentiality by not noting this discussion in her medical record
 - B) Offering confidential counseling and contraceptive options while encouraging open communication with her parents
 - C) Insisting on parental involvement in the decision-making process, emphasizing the importance of open communication
 - D) Referring the patient to a mental health professional to address her concerns about parental disapproval before discussing contraception
 - E) Refusing to discuss contraception without parental consent, citing the patient's age
60. A previously healthy 72-year-old female presents to your office 7 days after hospitalization for an acute ischemic stroke diagnosed by MRI. The inpatient evaluation confirmed that she experienced a minor noncardioembolic ischemic stroke. She was not a candidate for reperfusion therapy and did not receive rtPA. Her family reports that her speech impairment and confusion have completely resolved and that she is now back to her baseline.

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

- A) A direct oral anticoagulant
- B) Low-molecular-weight heparin
- C) A vitamin K antagonist
- D) Single antiplatelet therapy
- E) Dual antiplatelet therapy

61. In patients with posttraumatic stress disorder, which one of the following medications is most effective for the treatment of midsleep awakening due to hyperarousal or nightmares?
- A) Amitriptyline
 - B) Clonazepam (Klonopin)
 - C) Fluoxetine (Prozac)
 - D) Prazosin (Minipress)
 - E) Extended-release venlafaxine (Effexor XR)
62. A 2-year-old male is brought to the emergency department after a generalized seizure that lasted for 3 minutes and was witnessed by his parent. An examination is significant for a temporal temperature of 38.8 °C (101.8 °F), runny nose, and cough. He does not have any previous history of seizure. A neurologic examination is benign.

Which one of the following would be the most appropriate management regarding this patient's seizure?

- A) Reassurance and return precautions
 - B) A CBC and comprehensive metabolic panel
 - C) Oral levetiracetam (Keppra)
 - D) Rectal diazepam (Diastat)
 - E) Electroencephalography
63. A 35-year-old male with a medical history of hypertension and a family history of hypercholesterolemia and coronary artery disease sees you for routine follow-up of hypertension. His blood pressure is controlled on hydrochlorothiazide, 25 mg daily, and losartan (Cozaar), 50 mg daily. He has a BMI of 30 kg/m² and quit smoking tobacco 2 years ago.

According to the U.S. Preventive Services Task Force, which one of the following is recommended for the primary prevention of cardiovascular disease in this patient?

- A) Aspirin, 81 mg daily
- B) Low- to moderate-intensity statin therapy
- C) Moderate-intensity exercise for 120 minutes per week
- D) Referral to behavioral counseling interventions to promote a healthy diet and physical activity

64. A 68-year-old male presents with dependent edema and an ulcer over the medial malleolus secondary to venous insufficiency. The dorsalis pedis pulse is intact.

Which one of the following would be the most appropriate management of this patient's edema and ulcer?

- A) A nongraduated compression stocking with 10–20 mm Hg pressure at the ankle
 - B) A graduated compression stocking with 30–40 mm Hg pressure at the ankle
 - C) A graduated compression stocking with 50–60 mm Hg pressure at the ankle
 - D) An Unna boot
65. Hypocalcemia can cause which one of the following?
- A) Constipation
 - B) Hypertension
 - C) Paresthesias
 - D) Respiratory suppression
 - E) Tachycardia
66. A 60-year-old male who had an ST-elevation myocardial infarction 9 months ago presents for routine follow-up. He has been receiving medical therapy and had been attending cardiac rehabilitation at his community hospital until recently. He reports gradually increasing dyspnea on exertion but is still able to work as a computer programmer and has no problems performing activities of daily living. He has developed mild edema. On cardiac examination you note a heart murmur that was not present 3 months ago. The murmur is holosystolic, grade 3/6, loudest at the cardiac apex, and radiates to the axilla.

Which one of the following is the most likely etiology of this murmur?

- A) Aortic stenosis
- B) Mitral regurgitation
- C) Mitral stenosis
- D) Pericardial effusion
- E) Tricuspid regurgitation

67. A 32-year-old male is hospitalized with a 1-week history of an acute illness. His signs and symptoms include a fever of 38.9 °C (102.0 °F), axillary and inguinal lymphadenopathy, sore throat, arthralgias, myalgias, headache, and a skin rash. He has a history of intravenous drug use, but says his last use was 2 weeks ago. He does not have a history of travel outside the United States, tick bites, or occupational exposure.

On examination you note pharyngeal edema and erythema without tonsillar enlargement. Shallow, sharply demarcated ulcers are noted on the oral mucosa. He has a generalized rash that began 3 days after the onset of fever and has the appearance of pityriasis rosea. Nontender nodes are noted in the axillae and groin.

Laboratory studies reveal mild anemia, thrombocytopenia, and a slight elevation of liver enzymes. His WBC count is 3000/mm³ (N 4300–10,800). A rapid plasma reagin test, office testing for mononucleosis, rapid antibody HIV testing, blood cultures, and hepatitis studies are all negative.

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

- A) Herpes simplex virus IgM testing
 - B) An HIV viral load
 - C) A Western blot for HIV
 - D) Prednisone
 - E) A skin lesion biopsy
68. An asymptomatic 20-year-old female who is sexually active with a new male partner requests testing for sexually transmitted infections. She has had 2 sex partners and uses the subdermal etonogestrel implant (Nexplanon) for contraception.

Based on U.S. Preventive Services Task Force guidelines, she should be screened for which one of the following?

- A) Bacterial vaginosis
- B) Infection with *Chlamydia trachomatis* and *Neisseria gonorrhoeae*
- C) Infection with genital herpes simplex virus
- D) Infection with HPV
- E) Infection with *Mycoplasma genitalium*

69. A 42-year-old female presents with a 4-month history of diffuse pain, fatigue, and sleep disturbances. She says that the pain is the most bothersome symptom. After an extensive history and physical examination, you determine that fibromyalgia is the most likely underlying cause. In addition to encouraging exercise and cognitive behavioral therapy, you opt to initiate pharmacotherapy.

Which one of the following pharmacologic agents is most likely to improve her pain?

- A) Acetaminophen
 - B) Gabapentin (Neurontin)
 - C) Naproxen
 - D) Pregabalin (Lyrica)
 - E) Tramadol
70. A hemoglobin level ≤ 8 g/dL would be an appropriate RBC transfusion threshold for which one of the following hospitalized patients?
- A) A 19-year-old with symptomatic sickle cell pain crisis
 - B) A 63-year-old who is hemodynamically stable after a major trauma
 - C) A 79-year-old with inoperable femur and hip fractures
 - D) An 81-year-old who underwent cardiac bypass surgery 3 days ago
 - E) An 85-year-old with diverticulosis and chronic anemia
71. You see a 45-year-old male with a history of opioid use disorder for a health maintenance examination. The patient has successfully remained in a treatment program using methadone, and an examination is normal. He has not had a recent EKG.

You order an EKG because which one of the following is a very rare but serious complication of methadone treatment?

- A) Paroxysmal atrial fibrillation
- B) QTc prolongation
- C) First-degree heart block
- D) Second-degree Mobitz type II heart block
- E) Complete heart block

72. Lymphadenopathy in which one of the following sites in a 55-year-old male would suggest malignancy?
- A) Anterior cervical
 - B) Posterior cervical
 - C) Axillary
 - D) Inguinal
 - E) Supraclavicular
73. A 15-year-old patient who was recently hospitalized for anorexia nervosa sees you for a follow-up visit in your clinic to discuss the next steps in treatment. Which one of the following therapies is the recommended next step in treatment for this patient?
- A) Self-guided treatment
 - B) Cognitive behavioral therapy
 - C) Focal psychodynamic psychotherapy
 - D) Interpersonal psychotherapy
 - E) Family-based therapy
74. A 67-year-old female presents for an annual health maintenance examination. She has a history of GERD, asthma, and hypothyroidism. Her last colonoscopy revealed tubular adenomas. She has smoked 1 pack of cigarettes per day since age 20. She does not have any current medical concerns.
- Which one of the following would be most appropriate for this patient?
- A) Urinalysis screening for bladder cancer
 - B) Stool DNA testing (Cologuard) for colon cancer
 - C) Cytology and HPV co-testing for cervical cancer
 - D) Annual EKG screening for coronary artery disease
 - E) Annual low-dose CT screening for lung cancer
75. Which one of the following is the best agent for controlling edema related to chronic kidney disease?
- A) Chlorthalidone
 - B) Furosemide (Lasix)
 - C) Hydrochlorothiazide
 - D) Mannitol (Osmitol)
 - E) Spironolactone (Aldactone)

76. A 32-year-old female presents with a 1-week history of constant right upper quadrant pain. She underwent a nonemergent outpatient laparoscopic cholecystectomy 3 months ago with an unremarkable recovery and has followed her regular diet for more than 2 months. Her medical history includes seasonal allergies, migraine without aura, and 2 uncomplicated deliveries of healthy infants. Her medications include a monophasic oral contraceptive, as-needed sumatriptan (Imitrex), and as-needed loratadine (Claritin). A review of systems is positive for mild nausea and itching without a rash. She has just completed her withdrawal bleed for this contraceptive cycle. Her vital signs are normal.

A physical examination reveals mild tenderness to palpation in the right upper quadrant, and scleral icterus. The patient had not noticed this tenderness prior to examination. Her skin appears faintly icteric. Laboratory studies reveal the following:

CBC	normal
Urine hCG	negative
Urine dipstick	2+ urobilinogen
Bilirubin	6.5 mg/dL (N 0.2–1.2)
Lipase	normal
AST	50 U/L (N 0–35)
ALT	66 U/L (N 0–45)
Alkaline phosphatase	1382 U/L (N 30–120)
Gamma-glutamyl transferase	120 U/L (N 0–30)

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

- A) Ascending cholangitis
- B) Choledocholithiasis of the common bile duct
- C) Metabolic dysfunction–associated steatohepatitis (nonalcoholic steatohepatitis)
- D) Oral contraceptives
- E) Stricture following her surgery

77. A 24-month-old male is brought to your office by his parent. During the examination you notice that he seems to speak fewer words than expected and is very hard to understand. He does not use 2-word phrases, cannot point to any body parts, and has difficulty pointing to items in a book. On further questioning the parent confirms that the toddler speaks fewer than 50 words. Both English and German are spoken in his home.

Which one of the following factors puts this patient at risk for the likely diagnosis?

- A) Being the first born
 - B) Being the last born
 - C) A birth weight ≥ 5000 g (11 lb)
 - D) Growing up in a multilingual household
 - E) Male sex
78. A 73-year-old female presents with chronic diarrhea. You suspect microscopic colitis and order colonoscopy.

Based on the suspected diagnosis, you should expect which one of the following colonoscopy findings?

- A) Granulomas
 - B) Normal mucosa
 - C) Patchy ulcerations
 - D) Pseudomembranes
79. A 24-year-old male presents to your clinic to request suture repair of a 3-cm laceration on his arm caused by an accidental cut with a clean knife the night before. The wound is not actively bleeding and there are not any signs of infection.

It would be acceptable to proceed with primary closure up to how many hours after the injury occurred?

- A) 2
- B) 10
- C) 18
- D) 24
- E) 36

80. Which one of the following causes of bloody diarrhea should prompt further evaluation for hemolytic uremic syndrome?

- A) *Campylobacter* bacteria
- B) *Entamoeba histolytica*
- C) *Salmonella* bacteria
- D) Shiga toxin-producing *Escherichia coli*
- E) *Shigella* bacteria

81. Which one of the following cardiovascular changes reflects normal physiology of pregnancy in the first trimester?

- A) Decreased resting heart rate
- B) Increased afterload
- C) Increased preload
- D) Increased systemic vascular resistance
- E) Increased systolic blood pressure

82. A physically active 25-year-old male presents with foot pain after an injury. X-rays are obtained.

A proximal fracture at which one of the following metatarsals would be at the greatest risk for nonunion?

- A) First
- B) Second
- C) Third
- D) Fourth
- E) Fifth

83. A 70-year-old male with well-controlled hypertension reports that he slipped and fell in his bedroom 2 weeks ago. The fall did not result in any injuries. He has heard that tai chi is effective at reducing fall risk in older adults, but no classes are offered locally. He asks about other options to prevent future falls.

You should tell this patient that in older adults, evidence shows that any type of exercise

- A) decreases fall risk for women but not men
- B) decreases health-related quality of life
- C) reduces the rate of falls
- D) reduces the rate of falls requiring hospital admission

84. A 76-year-old male with a history of hypothyroidism, type 2 diabetes, remote partial ileocolectomy, and a Schatzki ring treated with dilation presents for follow-up. The review of symptoms is negative, but his spouse has noted some new memory impairment. The patient consumes a healthy vegetarian diet that includes dairy. Recent laboratory studies are significant for a vitamin B₁₂ deficiency. His current medications include:

Atorvastatin (Lipitor) Insulin glargine (Lantus) Levothyroxine (Synthroid) Liraglutide (Victoza)

Which one of the following factors in this patient would be the most likely cause of a vitamin B₁₂ deficiency?

- A) Diet
 - B) Diabetic therapy
 - C) Statin therapy
 - D) Esophageal condition
 - E) Surgical history
85. A 68-year-old male with coronary artery disease, major depression, and hypertension presents for routine follow-up. He currently smokes a half-pack of cigarettes per day and asks what options are available to help with smoking cessation.

Which one of the following would be the most effective treatment for smoking cessation?

- A) Bupropion (Wellbutrin SR) only
 - B) Varenicline only
 - C) Bupropion plus nicotine gum (Nicorette Gum)
 - D) Varenicline plus nicotine gum
 - E) The nicotine patch (Nicoderm CQ) plus nicotine gum
86. A 78-year-old male with a history of hypertension, type 2 diabetes, ongoing tobacco use, and carotid endarterectomy presents to the emergency department with bloody diarrhea and severe lower abdominal pain. Which one of the following is the most likely diagnosis?

- A) Angiodysplasia
- B) Arteriovenous malformation
- C) Colon cancer
- D) Irritable bowel syndrome
- E) Ischemic colitis

87. A 35-year-old male presents to the urgent care clinic this morning after he became lost while hiking and was trapped outdoors overnight. He stayed in freezing temperatures with no preparation and was wearing light daytime clothing. He reports a sensation of pins and needles and very sensitive skin in his left index and middle fingers. On examination his vital signs are normal, including a core temperature of 37.0 °C (98.6 °F). His skin is normal except for his left index and middle fingers, which appear pale.

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

- A) Slow rewarming by remaining indoors at room temperature
 - B) Rapid rewarming using body heat by placing the hand in the axilla
 - C) Rapid rewarming in front of a dry heat source
 - D) Rapid rewarming in a warm water bath
 - E) Rapid rewarming using small chemical heating pads
88. A patient is considering hormonal contraception, and you counsel her regarding the potential for abnormal uterine bleeding. Which one of the following contraceptives is most associated with abnormal uterine bleeding that is less likely to improve with time?
- A) A combined oral contraceptive with continuous dosing
 - B) A combined oral contraceptive with cyclic dosing
 - C) Medroxyprogesterone acetate (Depo-Provera CI)
 - D) An etonogestrel implant (Nexplanon)
 - E) A levonorgestrel IUD (Mirena)
89. A 55-year-old female presents with lateral hip pain. You suspect greater trochanteric pain syndrome and prescribe anti-inflammatory medications and physical therapy.

If her pain does not respond to these measures, which one of the following alternative diagnoses is most likely?

- A) Femoroacetabular impingement
- B) Gluteus medius tendon tear
- C) Ischiofemoral impingement
- D) Labral tear
- E) Piriformis syndrome

90. A 15-year-old male is brought to your office for a sports preparticipation evaluation. You obtain a medical history and perform a physical examination, including elements from the American Heart Association's (AHA) 14-point screening evaluation.

According to the AHA 14-point screening evaluation, which one of the following findings would warrant an EKG prior to clearing this patient for participation in sports?

- A) Elevated systemic blood pressure
 - B) Complete recovery from mild COVID-19 diagnosed 14 days ago
 - C) A family history of coronary artery bypass surgery in a 65-year-old grandfather
 - D) A family history of mitral stenosis due to rheumatic heart disease in a 45-year-old aunt
 - E) A coach's request for an EKG
91. A 50-year-old male sees you for follow-up of hypertension. His only medications are hydrochlorothiazide and lisinopril (Zestril). He does not smoke cigarettes or drink alcohol, and he does not have any concerns today. Examination findings are unremarkable. A comprehensive metabolic panel is normal, but a CBC reveals a platelet count of $110,000/\text{mm}^3$ (N $150,000\text{--}450,000$). A repeat platelet count is $115,000/\text{mm}^3$.

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

- A) A prothrombin time and partial thromboplastin time
- B) A peripheral blood smear
- C) A serum haptoglobin level
- D) Serum protein electrophoresis
- E) Bone marrow aspiration

92. A 68-year-old male presents to your office because of a sudden onset of pain and cold sensation in the right lower leg that began 3 hours ago. He rates his pain as 9 out of 10. He has a past medical history of hypertension, coronary artery disease with a coronary artery bypass graft 3 years ago, and stage 3a chronic kidney disease. He currently smokes cigarettes.

His vital signs include a blood pressure of 160/85 mm Hg, a heart rate of 99 beats/min with regular rhythm, a respiratory rate of 18/min, and an oxygen saturation of 94% on room air. An examination reveals a right lower leg that is cold at the midcalf and right foot without palpable or Doppler pedal pulses. Doppler imaging reveals a venous hum. His capillary refill is very slow, and there is a loss of pinprick sensation in all of the toes of the right foot. His motor ability is maintained. You hear a possible faint bruit over the right femoral artery.

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

- A) Urgent outpatient echocardiography
 - B) Urgent outpatient arteriography of the right leg
 - C) Emergent referral to the emergency department (ED) for evaluation by a vascular subspecialist
 - D) Aspirin, 650 mg, plus sublingual nitroglycerin, and ambulance transfer to the ED
 - E) Hospital admission for heparin infusion
93. A 23-month-old toddler is brought to the clinic with a temperature of 38.2 °C (100.7 °F). The parents say the child has been urinating more frequently. A urine dipstick and culture confirm a urinary tract infection.

After treatment with an antibiotic, which one of the following would be the most appropriate next step?

- A) A repeat urine culture
- B) Antibiotic prophylaxis
- C) Renal and bladder ultrasonography
- D) A voiding cystourethrogram
- E) A dimercaptosuccinic acid (DMSA) renal scan

94. A 38-year-old female with uncontrolled hypertension, prediabetes, and polycystic ovary syndrome sees you for follow-up. Her past surgical history includes a cesarean delivery and a tubal ligation. She is concerned because she has not had any menstrual bleeding in the past 5 months. A urine pregnancy test today is negative.

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

- A) No medication
- B) Drospirenone/ethinyl estradiol (Yaz) daily
- C) Levonorgestrel/ethinyl estradiol (Jolessa) continuous cycle daily
- D) Medroxyprogesterone (Provera) for 10 days every 3 months
- E) A copper IUD (Paragard)

95. A 65-year-old patient presents to your office for an annual health maintenance examination. You discuss vaccination recommendations, and the patient reports having received the live zoster vaccine 8 years ago.

Which one of the following should you recommend regarding herpes zoster (shingles) vaccination?

- A) No further vaccination
- B) No further vaccination if laboratory testing reveals immunity
- C) One dose of recombinant zoster vaccine (Shingrix)
- D) Two doses of recombinant zoster vaccine
- E) Two doses of live varicella vaccine (Varivax)

96. Which one of the following studies should be obtained in all toddlers with suspected physical abuse?

- A) A fundoscopic examination
- B) Skeletal survey radiography
- C) Head CT without contrast
- D) Abdominal CT with contrast
- E) A bone scan

97. A 72-year-old female presents with suspected tinnitus. She describes a long-standing, low-grade ringing in both ears that seems to be worsening over time. She started using hearing aids last month for a recent diagnosis of presbycusis, but the tinnitus has not improved. It is nonpulsatile and not associated with any other symptoms including headache, numbness, tingling, or weakness. Examination findings, including a neurologic examination and an ear examination, are normal except for her known hearing loss.

Which one of the following has the best evidence of improving quality of life in patients such as this?

- A) Carbamazepine (Tegretol)
 - B) Acupuncture
 - C) Cognitive behavioral therapy
 - D) Transcranial magnetic stimulation
 - E) Surgical microvascular decompression
98. A 72-year-old female presents with pain in her right foot after missing a step while descending a staircase. She was leading with her right foot when she stumbled. On examination she has tenderness in the right dorsal and plantar midfoot. Foot x-rays are normal. An image of the right plantar foot is shown below.

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

- A) Non-weight bearing status, plus CT or MRI
 - B) Corticosteroid injection
 - C) Heel splints and physical therapy
 - D) Rigid ankle support and physical therapy
 - E) Rigid ankle support and referral to an orthopedic surgeon
99. A previously healthy 67-year-old female presents with a 3-month history of new progressive low and middle back pain despite physical therapy and analgesics. She has also noted an onset of fatigue and weight loss. Results of a CBC and comprehensive metabolic panel are notable for normocytic anemia, hypercalcemia, and an elevated creatinine level.

Which one of the following tests would help confirm the suspected diagnosis?

- A) Anti-cyclic citrullinated peptide (anti-CCP) antibody
- B) Antimitochondrial antibody
- C) Creatine phosphokinase
- D) Erythrocyte sedimentation rate
- E) Serum free light chains



Item #98

100. The U.S. Preventive Services Task Force recommends screening which one of the following groups for obstructive sleep apnea (OSA)?

- A) All adults >50 years of age
- B) All adults who have ≥ 1 first-degree relative with documented OSA
- C) All adults who have a BMI ≥ 35 kg/m²
- D) All adults who have hypertension
- E) No groups should be routinely screened

101. A 62-year-old male presents to your office with a 3-month history of increasing dyspnea and cough. He has a history of allergic rhinitis and uses fluticasone propionate nasal spray (Flonase) daily. He has a 15-pack-year smoking history but quit more than 20 years ago. He has a family history of asthma in both his mother and 1 sibling.

Examination findings include a respiratory rate of 18/min and an oxygen saturation of 92% on room air. His lung sounds are diminished with scattered rhonchi and no wheezes. The remainder of the examination findings are normal. Spirometry shows an FEV₁/FVC ratio of 0.6 and the FEV₁ is 70% of predicted with no improvement with a bronchodilator.

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

- A) Asthma
- B) Bronchiectasis
- C) COPD
- D) Heart failure
- E) Pulmonary fibrosis

102. A 17-year-old student athlete is brought to your office for evaluation of a head injury that occurred earlier today. The patient was playing soccer when she performed a header and struck the ball with her head. She reports a frontal headache and mild nausea. Neurologic examination findings are normal.

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

- A) A rest period of at least 24–48 hours
- B) A brief course of prednisone
- C) Returning to normal daily activities only when she is symptom-free
- D) Head CT

103. A 68-year-old male presents for his annual Medicare wellness visit. A routine alcohol screen finds that he consumes 2 drinks every night, but twice per month he consumes 5 or more drinks. However, the screening does not reveal symptoms of alcohol use disorder.

Which one of the following would be the most appropriate clinical response to address his alcohol use?

- A) No intervention
 - B) A brief counseling intervention
 - C) Disulfiram
 - D) Naltrexone
 - E) Referral for cognitive behavioral therapy
104. A 25-year-old primigravida at 30 weeks' gestation presents with a 2-week history of intense pruritus of the palms and soles. The pregnancy has otherwise been uncomplicated. There are no skin lesions on examination. A CBC is unremarkable, but a metabolic panel is notable for the following:

ALT	85 U/L (N 7–55)
AST	75 U/L (N 8–48)
Alkaline phosphatase	140 U/L (N 45–114)
Bilirubin	1.8 mg/dL (N 0.1–1.2)

Which one of the following tests is most likely to confirm the diagnosis?

- A) An acute hepatitis profile
 - B) A bile acid level
 - C) A gamma-glutamyl transferase level
 - D) Ultrasonography of the liver
 - E) A punch biopsy of the skin
105. Which one of the following endocrine abnormalities is associated with an increased rate of hidradenitis suppurativa?
- A) Diabetes mellitus
 - B) Hyperparathyroidism
 - C) Hyperthyroidism
 - D) Hypopituitarism
 - E) Hypothyroidism

106. A new vaccine is being developed. The risk for infection after vaccination is 19%. The risk for infection without vaccination is 47%.

What is the relative risk of the subjects who received the newly manufactured vaccine?

- A) 0.10
- B) 0.28
- C) 0.40
- D) 0.66
- E) 0.90

107. A 39-year-old female presents to discuss long-standing dysmenorrhea and menorrhagia. Her symptoms have been present for years and have not significantly changed. She is up to date on cervical cancer screening and does not have any risk factors for sexually transmitted infections. She has given birth once and does not wish to conceive again. She has a medical history of hypertension that is well controlled on amlodipine (Norvasc). On bimanual examination you note a slightly enlarged uterus with some mild tenderness and no cervical motion tenderness. You suspect adenomyosis.

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

- A) Transvaginal ultrasonography
- B) CT of the pelvis
- C) MRI of the pelvis
- D) Hysteroscopy
- E) Endometrial biopsy

108. A 76-year-old female presents to the emergency department after a fall when stepping out of the shower. Her past medical history is notable for hypothyroidism, severe asthma, and a low BMI. Her vital signs are normal, but she is unable to bear weight on the left lower extremity. The left lower extremity is shortened and externally rotated with intact neurovascular status. The left anterior groin is also tender to palpation.

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

- A) Radiography of the hip and pelvis
- B) Ultrasonography of the left leg to evaluate for a blood clot
- C) CT of the hip and pelvis
- D) MRI of the left hip
- E) Evaluation by a physical therapist

109. A 26-year-old nulliparous female presents for an evaluation after she discovered a breast mass while showering. An examination confirms a 4 × 3-cm nonpainful mass in the upper outer quadrant of the right breast.

Which one of the following should you recommend?

- A) Screening mammography of the breast
- B) Diagnostic mammography of the breast
- C) Ultrasonography of the breast
- D) MRI of the breast
- E) Surgical referral for excision and biopsy

110. A 30-year-old female with no past medical history presents for a routine health maintenance examination. Although she currently has a sedentary lifestyle, she is motivated to begin an exercise program to improve her health and reduce her risk for cardiovascular disease. She asks for specific examples of exercise plans that would be most likely to provide this benefit.

According to guidelines from the American College of Cardiology/American Heart Association, 5 days per week of which one of the following would be the most appropriate recommendation for this patient?

- A) 10 minutes of running
- B) 20 minutes of brisk walking
- C) 30 minutes of water aerobics
- D) 40 minutes of stretching
- E) 50 minutes of casual walking

111. A 6-year-old female is brought to the urgent care clinic for evaluation of a cough that has persisted for more than 2 months. The cough is dry and nonproductive and seems worse when she goes outside in the cold weather. She has not had any recent illnesses. She does not have any wheezing or shortness of breath. Her vital signs and an examination are normal. A chest x-ray is unremarkable.

Which one of the following next steps in evaluation should be recommended to determine the most likely underlying cause?

- A) Reassurance that no further testing is needed at this time
- B) Polymerase chain reaction testing for pertussis
- C) Spirometry
- D) Bronchoscopy
- E) 24-hour esophageal pH monitoring

112. A 45-year-old female sees you to discuss chronic insomnia. She typically falls asleep fairly easily but awakens throughout the night and has difficulty falling back asleep. Her episodes of wakefulness are not caused by restless legs, pain, urinary frequency, or snoring. She has tried cognitive behavioral therapy and melatonin without improvement and would like to try a prescription medication that is not habit forming.

Which one of the following medications has the best evidence of efficacy and safety to help improve her insomnia?

- A) Diphenhydramine
- B) Doxepin (Silenor)
- C) Quetiapine (Seroquel)
- D) Temazepam (Restoril)
- E) Trazodone

113. A healthy 16-year-old male presents to your office for a sports preparticipation evaluation. The patient's parent has a close family friend with diabetes mellitus and asks you about screening the adolescent for the condition. He has no signs or symptoms of diabetes.

Which one of the following is the current U.S. Preventive Services Task Force recommendation regarding screening for prediabetes and type 2 diabetes in children and adolescents?

- A) They should not be screened
- B) They should be screened only if they have a strong family history of type 2 diabetes
- C) They should be screened only if they have morbid obesity
- D) They should routinely be screened
- E) There is not enough evidence to make a recommendation for or against screening

114. A 30-year-old gravida 2 para 2 sees you for evaluation of bothersome palpitations. She is 2 weeks post partum and is breastfeeding the infant. Her medications include ferrous sulfate and sertraline (Zoloft).

On physical examination she has a temperature of 36.7 °C (98.1 °F), a blood pressure of 130/82 mm Hg, and a respiratory rate of 12/min. Her heart rate is 120 beats/min with occasional extra heartbeats noted. Examination findings are otherwise normal. A CBC and comprehensive metabolic panel are normal, and a TSH level is 0.2 µU/mL (N 0.5–4.0). An EKG reveals tachycardia and occasional premature atrial contractions.

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

- A) Observation only
- B) Discontinuing sertraline
- C) Adding an antithyroid medication
- D) Adding a β -blocker
- E) A radioactive iodine uptake scan

115. A 4-year-old male with sickle cell disease is brought to the emergency department with left upper quadrant abdominal pain. He has a hemoglobin level of 7.0 g/dL, and his usual hemoglobin level is 10.0 g/dL. A reticulocyte count is elevated above his normal, and his platelet count is 125,000/mm³ (N 150,000–400,000).

Which one of the following is the most likely etiology?

- A) Acute chest syndrome
- B) Acute pain crisis
- C) Aplastic anemia
- D) Splenic sequestration
- E) An upper gastrointestinal bleed

116. A 58-year-old female presents with concerns about hair loss. She has noticed increased hair shedding over the last few years and has recently noticed hair thinning. On examination she has thinning at the center frontal hairline. You diagnose female pattern hair loss. She is interested in a topical or systemic treatment.

Which one of the following would be the most appropriate initial pharmacologic treatment for this patient's hair loss?

- A) Topical estradiol
 - B) Topical minoxidil (Rogaine)
 - C) Transdermal testosterone (AndroGel)
 - D) Oral medroxyprogesterone (Provera)
 - E) Oral spironolactone (Aldactone)
117. A 55-year-old female who is hospitalized for acute pancreatitis and alcohol intoxication expresses a desire for discharge against medical advice on day 2 of her admission. Which one of the following additional factors would represent a CONTRAINDICATION to immediate discharge in this case?

- A) A current manifestation of mild alcohol withdrawal syndrome
- B) A history of major depression with a past suicide attempt
- C) An inability to demonstrate appreciation of her medical situation
- D) A lack of health insurance
- E) An unstable housing situation

118. A 55-year-old female sees you because of weakness in the left leg. She has a history of hypertension, type 2 diabetes, osteoarthritis of the knees, and degenerative disk disease of the cervical and lumbar spines. An examination is notable for focal weakness on dorsiflexion of her left foot and extension of her toes, and a neurologic examination is otherwise normal.

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

- A) Cervical myelopathy
- B) Diabetic neuropathy
- C) L4 nerve root impingement
- D) Peroneal nerve compression
- E) Tarsal tunnel syndrome

119. A 71-year-old male with no significant past medical history presents to establish care now that he has health insurance. He has not seen a doctor in more than 20 years. He has no symptoms or current health concerns, and he does not take any medications. He quit smoking 18 years ago after smoking 2 packs per day for 30 years. He rarely drinks alcohol and regularly bicycles for exercise. He has not been sexually active since his partner died 12 years ago. He has a blood pressure of 129/89 mm Hg, a heart rate of 86 beats/min, a respiratory rate of 16/min, and a BMI of 26 kg/m². Physical examination findings are normal.

Based on U.S. Preventive Services Task Force guidelines, which one of the following screening tests is recommended for this patient?

- A) Bone density testing
 - B) Hemoglobin A_{1c}
 - C) Hepatitis C antibody testing
 - D) HIV testing
 - E) Low-dose chest CT
120. A fully vaccinated 4-year-old female is brought to your office in September because of a 10-day history of febrile upper respiratory illness. During that time, she tested negative for COVID-19, influenzas A and B, *Streptococcus*, and respiratory syncytial virus. She appeared to be slowly improving, but today she has begun to report pain in her right shoulder and thigh. This morning she refused to eat her breakfast and choked on her milk. She was unable to dress unassisted today.

On examination she is afebrile with normal vital signs, appears tired, and is not speaking as clearly as usual. She has clear nasal discharge, no adenopathy, normal tympanic membranes, a supple neck, and clear lungs. There is no heart murmur. She can rise from her chair but cannot bear weight on her right leg. Her grip strength is good bilaterally, but she cannot raise her right arm against gravity. Reflexes at the right biceps and patella are absent. Her tongue muscles appear weak on examination. You realize her sleepy appearance is due to a mild degree of bilateral ptosis.

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

- A) Starting oral amoxicillin/clavulanate (Augmentin)
- B) Starting oral prednisone
- C) Checking IgG and IgM levels for Epstein-Barr virus and cytomegalovirus
- D) Obtaining MRI of the right hip
- E) Sending her to the emergency department for hospital admission

121. While performing a mental status examination, you request that the patient spell “world” backward. This test assesses which one of the following mental status components?

- A) Attention
- B) Executive function
- C) Memory
- D) Orientation
- E) Visuospatial proficiency

122. A 3-month-old male is brought to your office by his parents with a 6-week history of stridor that worsens when the infant is lying down and when he eats. On examination the infant appears well and is in no respiratory distress. His lungs are clear, and his growth curve is stable at the 85th percentile for both weight and length. You note subtle stridor with each inhalation that is more pronounced when he feeds.

Which one of the following is the most likely diagnosis?

- A) Bacterial tracheitis
- B) Croup
- C) Epiglottitis
- D) Foreign body aspiration
- E) Laryngomalacia

123. A 35-year-old female presents with a swollen right index finger after accidentally slamming the car door on the finger yesterday. She has constant pain of the distal finger but no throbbing under her fingernail. On examination the end of the right index finger is swollen, and she has a small subungual hematoma. She is able to flex and extend the distal interphalangeal (DIP) joint with some pain, but has normal strength. An x-ray shows a transverse fracture across the distal phalanx that does not involve the joint.

Which one of the following is the optimal treatment plan for this patient?

- A) Ice, NSAIDs, and DIP flexion as tolerated
- B) Draining the subungual hematoma and bandaging the finger
- C) Buddy taping the finger for 3–4 weeks
- D) Splinting the DIP joint in full extension for 4–6 weeks
- E) Referral to an orthopedic surgeon

124. Which one of the following is an effective topical treatment for postinflammatory hyperpigmentation in persons with Fitzpatrick skin types IV, V, and VI?

- A) Ammonium lactate 12% lotion (Lac-Hydrin)
- B) Clindamycin 1% gel (Clindagel)
- C) Hydrocortisone 1% cream (Cortizone-10)
- D) Hydroquinone 4% cream
- E) Metronidazole 0.75% gel

125. A 12-year-old female is brought to your clinic for a sports preparticipation evaluation for volleyball. Her family history is significant for a paternal grandfather with cardiovascular disease. In early childhood, she was diagnosed with atopic dermatitis and mild intermittent asthma that is controlled with a short-acting bronchodilator. The review of systems is unremarkable except for occasional shortness of breath when she is exposed to cats. On examination in a supine position, a systolic nonradiating murmur is best heard over the left upper sternal border. The murmur decreases with the Valsalva maneuver.

Which one of the following is the most likely diagnosis?

- A) An atrial septal defect
- B) Hypertrophic obstructive cardiomyopathy
- C) Mitral valve prolapse
- D) A pulmonary flow murmur
- E) Tricuspid stenosis

126. A 36-year-old patient presents to the emergency department (ED) for the third time this month for fevers $\geq 101^\circ\text{F}$. Extensive workups at past visits have not identified an etiology. The patient does not take any medications and has not traveled recently. Today a C-reactive protein level and an erythrocyte sedimentation rate are elevated, but a CBC, urinalysis, and chest x-ray are normal. Blood cultures are pending and prior cultures have been negative. A complete physical examination is unremarkable with no sign of localized infection or disease.

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

- A) Oral naproxen, 500 mg
- B) Intravenous ceftriaxone, 1 g, plus intravenous azithromycin (Zithromax), 500 mg
- C) Fluorodeoxyglucose (FDG)-PET/CT
- D) Exploratory laparotomy
- E) Bone marrow biopsy

127. A 72-year-old male presents to the emergency department (ED) with a 2-day history of nausea, vomiting, and diarrhea. The symptoms developed after the recent repair of an inguinal hernia, and his surgeon advised him to come to the ED. The patient has a history of chronic heart disease, hypertension, and diabetes mellitus with kidney disease. His medications include atorvastatin (Lipitor), amlodipine (Norvasc), and dapagliflozin (Farxiga). He does not drink alcohol or use illicit drugs. On presentation he is lucid and making jokes with the staff. His vital signs in the ED include a blood pressure of 110/60 mm Hg, a heart rate of 110 beats/min, and an oxygen saturation of 96% on room air. Physical examination findings are unremarkable. He receives intravenous ondansetron, 4 mg, and laboratory studies are pending.

Several hours later, the patient appears drowsy and has difficulty focusing. He fluctuates between lethargy and rambling about unrelated topics. Despite conservative treatment for the suspected condition, he starts displaying severe agitation, putting himself and the staff members at risk for harm.

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

- A) Diazepam (Valium)
 - B) Haloperidol
 - C) Lorazepam (Ativan)
 - D) Risperidone (Risperdal)
 - E) Sertraline (Zoloft)
128. A 69-year-old male with a history of coronary artery disease sees you for follow-up after hospitalization for new-onset atrial fibrillation. After some difficulty with low blood pressure with other rate control agents, he was discharged on amiodarone.

This patient should be monitored for amiodarone toxicity with which one of the following?

- A) An amiodarone plasma level
- B) A blood glucose level
- C) A CBC with differential
- D) Pulmonary function testing
- E) Urinalysis

129. A 39-year-old female presents for a postpartum visit 2 months after a preterm delivery that was complicated by chronic hypertension and a bicornuate uterus. She does not smoke cigarettes.

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

- A) Oral levonorgestrel/ethinyl estradiol
- B) An etonogestrel/ethinyl estradiol vaginal ring (NuvaRing)
- C) An etonogestrel subdermal implant (Nexplanon)
- D) A levonorgestrel IUD (Mirena)
- E) A copper IUD (Paragard)

130. A 77-year-old female with a medical history of atrial fibrillation, COPD, depression, and hypothyroidism presents for follow-up of a recent visit to the emergency department (ED) for a fall in which she hit her head on the edge of a dresser. CT of the head in the ED was negative for intracranial bleeding and she received staples for a scalp laceration.

Which one of the following medications in this patient's current regimen is most likely to increase her fall risk?

- A) Apixaban (Eliquis)
- B) A budesonide/formoterol inhaler (Symbicort)
- C) Fluoxetine (Prozac)
- D) Levothyroxine (Synthroid)
- E) Prednisone

131. A 42-year-old female who has undergone a bilateral prophylactic mastectomy and a bilateral salpingo-oophorectomy due to a known *BRCA* mutation sees you for follow-up. She is experiencing symptoms of vasomotor instability and dyspareunia. She asks about hormone replacement therapy.

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

- A) No hormone therapy
- B) Estrogen monotherapy until age 50
- C) Estrogen and progesterone therapy until age 50
- D) Estrogen and progesterone therapy after age 50

132. A 5-month-old infant is brought to the urgent care clinic by her parent for evaluation of cough and fever. The parent reports that their 2 school-aged children came home with colds 5 days ago. Home tests were negative for COVID-19. Last night the 5-month-old infant developed a runny nose, sneezing, cough, and fever. The infant has also been sleeping more and nursing less.

The infant's vital signs are notable for a temperature of 38.8 °C (101.8 °F), a pulse rate of 140 beats/min, a respiratory rate of 26/min, and an oxygen saturation of 94% on room air. On examination you note mild grunting but no nasal flaring or supraclavicular retractions. Auscultation of the lungs reveals a prolonged expiratory phase with diffuse wheezing and coarse breath sounds.

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

- A) Adequate hydration and nutrition
- B) Azithromycin (Zithromax)
- C) Dexamethasone
- D) Viral testing
- E) A chest x-ray

133. A 27-year-old comatose female is brought to the emergency department. There is no history of trauma.

An overdose of which one of the following would most likely account for a decreased respiratory rate of 10/min?

- A) Anticonvulsants
- B) Antipsychotics
- C) Ethanol
- D) Opioids
- E) Sedative-hypnotics

134. A 65-year-old male sees you for an annual health maintenance examination. His past medical history is significant for hypertension and hyperlipidemia, which are both well controlled with medication. He had a myocardial infarction 10 years ago that was treated with angioplasty and he sees a cardiologist regularly. He has smoked 1 pack of cigarettes per day since age 16. His current medications include:

Low-dose aspirin Hydrochlorothiazide Lisinopril (Zestril) Rosuvastatin (Crestor)

He currently walks 2000–3000 steps daily. In addition to recommending smoking cessation, you suggest a goal of more than 5000 steps daily. He tells you that his calves hurt when he walks more than 100 yards and he has to stop and rest before he can continue.

If the suspected diagnosis is confirmed with testing, then which one of the following would be the most appropriate initial treatment?

- A) A supervised exercise program
 - B) Cilostazol
 - C) Pentoxifylline
 - D) Revascularization
135. A 28-year-old nulligravida sees you for preconception advice. She and her husband would like to conceive in the next 6 months. She asks what she can do to prepare for pregnancy. She tells you that she has milk with breakfast and yogurt with lunch most of the time.

Which one of the following should you recommend?

- A) A urine dipstick and culture with preemptive treatment
- B) Calcium carbonate, 500 mg twice daily
- C) Folic acid, 400 µg daily
- D) Vitamin B₁₂ (cyanocobalamin), 1000 µg daily
- E) Vitamin D₃ (cholecalciferol), 2000 IU daily

136. A 52-year-old male presents with right knee pain after falling from his bicycle earlier today. The patient states that he fell to the right when his bicycle tires slid on wet pavement but is uncertain of the exact mechanism of injury. He says that he can bear weight on the right leg, but the knee has been swollen and tender since the injury.

On examination you observe moderate joint effusion without redness of the knee joint, and a range of motion of 80°–180°. There is tenderness to palpation over the patella with no other bony tenderness noted. There is no ligamentous laxity. The patient is able to ambulate in the examination room with a notable limp.

According to the Ottawa knee rule, this patient is at high risk for fracture and imaging is indicated because of which one of the following factors?

- A) His age
 - B) His range of motion
 - C) A limping gait
 - D) Moderate joint effusion
 - E) Tenderness over the patella
137. Medicaid is the largest health insurance program in the United States based on its number of enrolled recipients. Which one of the following statements is true regarding Medicaid?
- A) Fewer than half of all states have participated in the Medicaid expansion associated with the Affordable Care Act
 - B) Its federal funding decreased during the COVID-19 pandemic
 - C) It is the predominant insurer for long-term care
 - D) The racial and ethnic group distribution of Medicaid recipients reflects that of the U.S. population

138. A male patient is brought to your office by his adult granddaughter due to concerns that he has had a stroke. He was found with left arm and leg weakness 3 days ago, and he had fallen several times. His symptoms resolved after the first day. The patient drinks and smokes heavily. He has a history of traumatic brain injury with prolonged seizure from a fall while intoxicated 10 years ago, and he has been taking phenytoin (Dilantin) since that time.

An oral examination is significant for very poor dentition and a healing mucosal injury to the posterior left side of his tongue. Noncontrast CT of the head shows no hemorrhage, mass, or sign of ischemia, but reveals mild encephalomalacia in the right cerebral hemisphere.

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

- A) Conversion disorder
 - B) Hemiplegic migraine
 - C) Hypoglycemia
 - D) Multiple sclerosis
 - E) Postictal paralysis (Todd paralysis)
139. A 45-year-old female sees you for a refill of her asthma medication. She takes 1 puff of her albuterol inhaler (Proventil, Ventolin) daily prior to exercising. She wakes up at night a couple of times per week with dyspnea, which is relieved with another puff from her albuterol inhaler. Her most recent asthma exacerbation requiring oral corticosteroids was 4 months ago. She has not been hospitalized for an asthma exacerbation since she was a child.

Which one of the following should be prescribed for this patient to reduce severe asthma exacerbations?

- A) An interleukin-5 antagonist
- B) A leukotriene receptor antagonist
- C) A long-acting β -agonist (LABA)
- D) A long-acting muscarinic antagonist
- E) An inhaled corticosteroid/LABA combination

140. A 40-year-old female presents to the urgent care clinic because of significant fatigue, malaise, nausea, and intermittent vomiting. She is also experiencing recurrent fever and abdominal pain and says that her symptoms started a couple of weeks ago while she was in South America. Now her urine is dark and her spouse has noted a yellow tinge to her skin and the white of her eyes, prompting today's acute visit. Her vital signs are normal. A physical examination is unremarkable except for hepatomegaly and jaundice.

Which one of the following test results would confirm the suspected diagnosis?

- A) Anti-hepatitis A IgG antibodies
- B) Anti-hepatitis A IgM antibodies
- C) Anti-hepatitis B surface antibodies
- D) A serum creatinine level of 2.5 mg/dL (N 0.6–1.1)
- E) Elevated serum transaminase levels

141. A healthy 15-year-old female is brought to your office for a well adolescent visit. She does not have any health concerns or preexisting medical conditions.

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

- A) A vision examination
- B) Depression screening
- C) A CBC
- D) A lipid panel
- E) HPV testing

142. A 62-year-old male presents to your office with chest pain that began after he ate his usual breakfast of bacon and eggs this morning. He describes the pain as a substernal tightness that worsens with activity and radiates to his left arm. He reports dyspnea and nausea but no emesis.

On examination the patient is diaphoretic and appears to be in slight distress. He has a temperature of 37.0 °C (98.6 °F), a pulse rate of 106 beats/min, a respiratory rate of 22/min and nonlabored, a blood pressure of 110/70 mm Hg, and an oxygen saturation of 92% on room air. The lungs are clear, and the heart is regular without any murmurs. Examination of the abdomen is notable for tenderness to palpation in the right upper quadrant, normal bowel sounds, no rebound or guarding, and a negative Murphy sign. Examination of the extremities reveals no edema and 1+ pedal pulses. A neurologic examination shows no focal deficits and a normal gait. An EKG shows a left bundle branch block that was not present on an EKG 1 year ago. His pain improves with the administration of chewable aspirin, 162 mg, and sublingual nitroglycerin.

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

- A) A high-sensitivity cardiac troponin level in your office
 - B) Coronary CT angiography
 - C) Referral to a cardiologist for treadmill stress testing
 - D) Transportation to a hospital capable of urgent coronary intervention
143. A 29-year-old female was recently treated for an uncomplicated urinary tract infection. She presents to your office with recurrence of an itchy rash on her elbow and lower back (shown below).

Which one of the following is the most likely diagnosis?

- A) Drug eruption
 - B) Pityriasis rosea
 - C) Psoriasis
 - D) Seborrheic dermatitis
 - E) Tinea corporis
144. A 64-year-old male with stage 3b chronic kidney disease (CKD) sees you for recommended follow-up screenings. Which one of the following is most likely to be found in a patient with chronic kidney disease–mineral and bone disorder (CKD-MBD)?
- A) An elevated 25-hydroxyvitamin D level
 - B) An elevated calcium level
 - C) An elevated phosphate level
 - D) A low parathyroid hormone level



Item #143



Item #143

145. A 62-year-old male who currently receives chemotherapy for colon cancer presents to the emergency department with a 1-week history of worsening nausea and vomiting. He has been vomiting all oral intake for the past day, and he has not had a bowel movement in the past week. He reports severe, diffuse, crampy, intermittent abdominal pain that improves after vomiting. He has not had any fevers or chills. The physical examination is significant for abdominal distention, minimal bowel sounds, and diffuse tenderness.

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

- A) Ultrasonography of the right upper quadrant
 - B) CT of the abdomen and pelvis with contrast
 - C) A PET/CT scan
 - D) A HIDA scan
 - E) Magnetic resonance cholangiopancreatography (MRCP) of the abdomen
146. Which one of the following medication classes reduces heart failure–related hospitalizations in patients without diabetes mellitus?
- A) Calcium channel blockers
 - B) DPP-4 inhibitors
 - C) Insulin
 - D) SGLT2 inhibitors
 - E) Statins
147. A 46-year-old female with a BMI of 36 kg/m² and a history of bilateral tubal ligation presents with intermenstrual bleeding. An endometrial biopsy reveals endometrial hyperplasia with atypia.

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

- A) Oral progesterone
- B) Combined oral contraceptives
- C) A levonorgestrel IUD (Mirena)
- D) Uterine MRI
- E) Hysterectomy

148. A 3-year-old male with a peanut allergy is brought to your office by his parents for a well child visit. His parents ask if there is anything they can do to prevent a peanut allergy if they have more children in the future.

Which one of the following would be the most appropriate recommendation to decrease the risk for food allergies in children?

- A) Early sequential exposure to allergenic food between 4 and 6 months of life
 - B) Exclusive breastfeeding for the first 3–4 months of life
 - C) Regular antibiotics in the first 2 years of life
 - D) Restricted cow's milk supplementation during the first 3 months of life
 - E) A restricted maternal diet during pregnancy and breastfeeding
149. A 30-year-old female comes to your office to establish care. She reports symptoms consistent with possible mild chronic malabsorption. A review of past records reveals that she was previously tested for celiac disease with an IgA tissue transglutaminase (tTG) level, which was negative. The review of systems is positive for chronic recurrent sinus infections. Examination of the head and neck, lungs, and abdomen is unremarkable.

Which one of the following is the most appropriate next step to evaluate for a potential cause of this patient's chronic abdominal and upper respiratory symptoms?

- A) A repeat IgA tTG level
- B) A total IgA level
- C) Vitamin D and B₁₂ levels
- D) A 24-hour fecal fat collection study
- E) CT of the abdomen and pelvis

150. A 54-year-old postmenopausal female with a past medical history of hypertension, nicotine dependence, and obesity sees you to establish care. Her medications include hydrochlorothiazide, losartan (Cozaar), and metformin. She smokes 1 pack of cigarettes per day and drinks 1 glass of wine each night. She returns 1 week later to discuss the results of laboratory studies.

The laboratory studies demonstrate a positive hepatitis C antibody. Reflex testing reveals hepatitis C virus genotype and a hepatitis C viral load of 253,351 IU/mL. The AST level, ALT level, creatinine level, and INR are within normal limits. Tests for HIV, hepatitis A, and hepatitis B are negative. You calculate a Fibrosis-4 (FIB-4) score of 0.93, indicating a lack of advanced fibrosis. You initiate vaccination for hepatitis A and B.

Which one of the following would be the most appropriate timing to initiate treatment with glecaprevir/pibrentasvir (Mavyret)?

- A) At this visit
- B) After she has abstained from alcohol for 3 months
- C) If a repeat hepatitis C viral load is increased in 3 months
- D) After completing the hepatitis A and B vaccination series
- E) If a Doppler ultrasound of the liver is negative for a hepatic vein thrombosis

151. A 63-year-old male with a medical history of diabetes mellitus presents to an urgent care clinic with nausea, vomiting, and abdominal pain. His spouse reports that the patient began having trouble breathing during the short drive to the clinic. He has an insulin pump, and his spouse says it has been malfunctioning. On examination the patient is lethargic, tachycardic, and appears volume depleted. You note Kussmaul respirations and abdominal tenderness. After initiating intravenous fluids, you obtain an initial laboratory evaluation with the following results:

Glucose	190 mg/dL
Sodium	135 mEq/L (N 135–145)
Potassium	5.1 mEq/L (N 3.5–5.2)
Chloride	102 mEq/L (N 98–107)
Creatinine	1.30 mg/dL (N 0.50–1.04)
Osmolality	300 mOsm/kg H ₂ O (N 280–305)
Bicarbonate	10 mEq/L (N 19–29)
Anion gap	23 mEq/L (N <18)
Urine ketones	4+
Urine glucose	4+

Which one of the following medications may be contributing to this clinical picture?

- A) Atorvastatin (Lipitor)
- B) Canagliflozin (Invokana)
- C) Lisinopril (Zestril)
- D) Metformin
- E) Semaglutide (Ozempic)

152. A 45-year-old gravida 2 para 2 with a history of irregular menses and bilateral tubal ligation presents with a 2-month history of bilateral milky nipple discharge. Her last menstrual period was 1 week ago. She does not take any medications. A physical examination reveals a small amount of milky nipple discharge bilaterally with no breast masses. A urine pregnancy test is negative. Laboratory testing reveals normal thyroid and kidney function, and a prolactin level of 95 ng/mL (N 5–20). Pituitary MRI with gadolinium shows a 7-mm enhancing mass.

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

- A) Bromocriptine (Parlodel)
- B) Cabergoline
- C) Levonorgestrel/ethinyl estradiol
- D) Metoclopramide (Reglan)
- E) Risperidone (Risperdal)

153. An 18-year-old male with no significant past medical history presents for a sports preparticipation evaluation prior to his high school senior football season. On cardiac auscultation, you detect a previously undocumented systolic murmur.

Which one of the following additional characteristics of this murmur, if present, would raise concern for hypertrophic cardiomyopathy and necessitate additional testing prior to clearing this patient for sports participation?

- A) Decreased intensity with an isometric handgrip
- B) Decreased intensity with the Valsalva maneuver
- C) Increased intensity with moving from squatting to standing
- D) Increased intensity with passive leg raise

154. A 45-year-old male presents to your office for evaluation of acute penile pain. He has had painful erections for the past several days, and the current erection has lasted 5 hours. He has a history of sickle cell disease and diabetes mellitus. His only medication is daily metformin. On examination the patient appears quite uncomfortable and has a full erection with significant tenderness along the sides of the penile shaft.

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

- A) Analgesia within 30 minutes
- B) A penile blood gas measurement
- C) Intracavernosal alprostadil (Caverject)
- D) Intracavernosal phenylephrine (Vazculep)
- E) Urgent evaluation by a urologist

155. A 71-year-old male presents with an episode of reddish-brown urine. He has no other urinary tract symptoms. A urine dipstick is heme-positive and a microscopic urine examination reveals RBCs too numerous to count. He has a 35-pack-year smoking history.

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

- A) Cytology
- B) CT urography only
- C) CT urography plus cystoscopy
- D) Urinary tract ultrasonography plus cystoscopy
- E) Urinary tract MRI plus cystoscopy

156. A 32-year-old male presents with frequent episodes of palpitations, sweating, dizziness, and paresthesias associated with an impending sense of doom. These symptoms have occurred several times per week and have disrupted his performance at work. After an appropriate evaluation, you diagnose panic disorder.

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

- A) Bupropion
- B) Buspirone
- C) Escitalopram (Lexapro)
- D) Hydroxyzine (Vistaril)
- E) Lorazepam (Ativan)

157. A 46-year-old male sends you a message in the patient portal asking how to prevent acute altitude sickness during his upcoming ski trip. He has no significant medical history and no previous history of altitude sickness. He will be sleeping at a resort located at an altitude of 3000 m (9843 ft) above sea level and the slopes have a peak altitude of 4500 m (14,764 ft) above sea level. He plans to start skiing the day after arrival and does not have time to gradually acclimatize to the change in altitude.

Which one of the following would be most appropriate regarding the prevention of altitude sickness?

- A) Overhydration to dilute the urine
- B) Full genome sequencing to identify alleles associated with altitude sickness
- C) Acetazolamide, 125 mg twice daily
- D) Dexamethasone, 6 mg daily
- E) Ibuprofen, 800 mg 3 times daily

158. A 60-year-old male has an enlarging erythematous 1.0-cm papule with a central keratotic plug on the dorsum of his arm. Superficial biopsy shows keratoacanthoma.

This type of lesion requires further diagnosis and treatment because it may be associated with which one of the following?

- A) Actinic keratosis
 - B) Basal cell carcinoma
 - C) Cutaneous squamous cell carcinoma
 - D) Malignant melanoma
159. A 72-year-old male with a medical history of dilated cardiomyopathy with an ejection fraction (EF) of 30%, type 2 diabetes, and benign prostatic hyperplasia comes to your clinic for follow-up. His most recent echocardiogram shows an improved EF of 55%–60%. His current medications include the following:

Carvedilol (Coreg), 25 mg twice daily
Dapagliflozin (Farxiga), 10 mg daily
Furosemide (Lasix), 20 mg daily
Metformin, 500 mg twice daily
Sacubitril/valsartan (Entresto), 97/103 mg twice daily
Spironolactone (Aldactone), 25 mg daily

The patient walks 2 miles daily and does not have any dyspnea. On examination his blood pressure is 118/76 mm Hg, his pulse rate is 64 beats/min, and his respiratory rate is 12/min and regular. His lungs are clear bilaterally, and his heart sounds are regular with no S₃/S₄ heart sounds or murmurs. His lower extremities show no edema. He has a creatinine level of 0.8 mg/dL (N 0.7–1.3) and a hemoglobin A_{1c} of 7.0%. A urinalysis is negative for microalbuminuria.

Which one of the following is recommended at this time for management of this patient's cardiomyopathy?

- A) No change to his current regimen
- B) Changing spironolactone to as-needed for edema
- C) Discontinuing carvedilol
- D) Discontinuing dapagliflozin
- E) Discontinuing sacubitril/valsartan

160. A right hand–dominant 9-year-old male is brought to your office by his parents after falling from a piece of playground equipment and landing on his left hand. He is in significant pain and there is visible swelling of the distal left forearm. An examination reveals intact distal sensation and capillary refill. He is given oral NSAIDs. X-rays reveal a unicortical irregularity at the distal radial metaphysis without displacement. You diagnose a buckle fracture.

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

- A) No treatment
 - B) Immobilization in a prefabricated removable splint for 2–3 weeks
 - C) Immobilization in a short arm cast for 6 weeks
 - D) Immobilization in a long arm cast for 6 weeks
 - E) Referral to an orthopedic surgeon
161. A 25-year-old farmworker from Central America who has been working in the United States for 3 years consults you regarding immunizations. He does not recall receiving any childhood vaccines. He is currently undergoing chemotherapy for non-Hodgkin lymphoma. His next chemotherapy session is in 2 weeks, and he would like to receive as many vaccinations as possible.

Which one of the following vaccines would be CONTRAINDICATED in this patient at this time?

- A) COVID-19
 - B) Hepatitis B
 - C) MMR
 - D) Pneumococcal
 - E) Tdap
162. A 74-year-old male with no significant past medical history comes to your office because of pain in his left lower extremity. The patient's leg was recently immobilized in a cast because of a fibular fracture. Doppler ultrasonography reveals a thrombosis of the iliac vein.

Which one of the following is indicated for this patient?

- A) No anticoagulation
- B) Anticoagulation for 3 months
- C) Anticoagulation for 6 months
- D) Anticoagulation for 12 months
- E) Extended anticoagulation with no set stop date

163. A 60-year-old patient presents with a 3-month history of gustatory dysfunction and says that nothing tastes normal. Which one of the following nutritional deficiencies could be responsible for this patient's taste disorder?

- A) Calcium
- B) Selenium
- C) Vitamin B₃
- D) Vitamin D
- E) Vitamin E

164. A 40-year-old female presents with symptoms of heartburn and regurgitation of sour-tasting fluid into her throat after meals. She experiences these symptoms at least twice per week and says that they have been significantly affecting her quality of life. She has tried lifestyle modifications, including elevating the head of her bed and avoiding trigger foods, without significant relief.

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

- A) An antacid as needed
- B) An H₂-receptor antagonist as needed
- C) A proton pump inhibitor (PPI) as needed
- D) A PPI daily for 4–8 weeks
- E) Esophageal pH monitoring

165. Which one of the following is true regarding bariatric surgery?

- A) It has no effect on obesity-related mortality
- B) It results in weight loss equivalent to that seen with intensive multicomponent behavioral interventions
- C) It is effective for treating diabetes mellitus
- D) Laparoscopic sleeve banding leads to the greatest weight loss

166. Bruising in which one of the following locations would most likely suggest a diagnosis of child abuse?

- A) Forehead
- B) Neck
- C) Elbows
- D) Knees
- E) Shins

167. A 55-year-old male presents to your office with a 3-day history of pain, swelling, and tenderness in the right first metatarsophalangeal (MTP) joint. Four days ago he attended a celebration where he drank a large amount of beer and participated in a hot dog-eating contest.

On examination he is afebrile and visibly in pain from his right toe. The right first MTP joint is warm, tender, and swollen. There is no streaking of the skin and no obvious abscess.

Which one of the following laboratory tests would support the likely diagnosis?

- A) A C-reactive protein level
 - B) A CBC
 - C) A comprehensive metabolic panel
 - D) An erythrocyte sedimentation rate
 - E) A uric acid level
168. A 32-year-old female presents to your office because of a 2-month history of fatigue and myalgias. She reports a 5-lb weight loss and bilateral joint pain in her hands and knees. She has had intermittent fevers to 101 °F with no cough, dyspnea, or abnormal urinary symptoms. Examination findings are normal. An erythrocyte sedimentation rate is elevated at 35 mm/hr (N <20), and a CBC reveals leukocytosis and a hemoglobin level of 10.4 g/dL (N 12.0–15.0). An antinuclear antibody titer is positive at 1:80, and anti-double-stranded DNA and anti-Smith antibodies are elevated.

Which one of the following is the most likely diagnosis?

- A) Polymyalgia rheumatica
 - B) Psoriatic arthritis
 - C) Rheumatoid arthritis
 - D) Septic arthritis
 - E) Systemic lupus erythematosus
169. A 52-year-old female sees you for a health maintenance examination. Which one of the following findings on fundoscopic examination would be most concerning for glaucoma?
- A) Constricted retinal vessels
 - B) Dilated retinal vessels
 - C) A diminished cup to disc ratio
 - D) An elevated cup to disc ratio
 - E) Papilledema

170. A 33-year-old female sees you for follow-up of recently diagnosed diarrhea-predominant irritable bowel syndrome (IBS-D). She has had some improvement in the consistency of her stools and in the frequency and urgency of her bowel movements with the addition of a psyllium supplement, but she continues to have periodic significant cramping and bloating. She prefers over-the-counter products and supplements to prescription medication when possible.

Which one of the following over-the-counter products has the best evidence of benefit for improving global symptoms of IBS-D?

- A) Bismuth subsalicylate (Pepto-Bismol)
- B) Omega-3 fatty acids
- C) Peppermint oil
- D) *Hypericum perforatum* (St John's wort)
- E) Wheat bran

171. A generally healthy 13-month-old female is brought to the urgent care clinic by her parent because of concerns that she might have pneumonia. The parent says that the toddler has been coughing for the last week and has low energy and decreased appetite. She does not have a history of wheezing or breathing problems.

Which one of the following history or physical examination findings, if present, would be the most concerning for community-acquired pneumonia as a cause of this toddler's cough?

- A) A 3-day history of fevers up to 100.2 °F
- B) Cloudy nasal drainage
- C) Coughing that wakes the child
- D) Grunting and retractions
- E) Recent pneumococcal vaccination

172. An 89-year-old female with end-stage, widely metastatic lung cancer is receiving hospice care. Her symptoms, including pain, have been well controlled until recently. According to her caregiver, she is now experiencing excessive oropharyngeal secretions.

Which one of the following medications would most effectively control this patient's secretions?

- A) Chlorpheniramine/hydrocodone suspension
- B) Glycopyrrolate
- C) Haloperidol
- D) Hydroxyzine
- E) Morphine

173. Which one of the following is a best practice strategy for avoiding the use of stigmatizing or judgmental language in the medical record?

- A) Attributing responsibility to patients for their condition
- B) Documenting when a patient “refuses” a recommendation
- C) Including socioeconomic status in the “one-liner” about the patient
- D) Leading with ethnic identifiers
- E) Using person-first language

174. A 32-year-old female presents to your office because of a 2-month history of painful intercourse and vaginal dryness. She is 1 year post partum and started combined oral contraceptives 4 months ago. She is no longer breastfeeding and desires continued contraception. Her menstrual cycles have been regular, and she has not had any vaginal discharge. She reports intermittent dysuria and frequency, but no urinary incontinence. The pelvic examination is within normal limits and her symptoms are not reproduced on examination. A urine pregnancy test is negative, and a urinalysis is within normal limits.

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

- A) Switching to a levonorgestrel IUD (Mirena)
- B) Trigger point injections
- C) OnabotulinumtoxinA (Botox)
- D) Cognitive behavioral therapy
- E) Myofascial pelvic physical therapy

175. A 32-year-old male has presented to your office 4 times over the past several months because of periods of intractable nausea and vomiting lasting 1–2 days, with up to 14 episodes each day. He has also experienced moderate abdominal pain, flushing, sweating, and dry mouth during these episodes. On 2 occasions he has required brief admission to the hospital for fluid resuscitation. Promethazine, ondansetron, and metoclopramide (Reglan) have been ineffective in treating his symptoms, but hot showers provide him relief. His medical history is significant for allergic rhinitis and obesity. His social history includes episodes of binge drinking approximately twice monthly and daily marijuana use since age 21. He has no history of intravenous drug use or tobacco abuse.

Physical findings are significant for a weight loss of 4.5 kg (10 lb) over the past 3 months and moderate tenderness to epigastric palpation. During acute episodes, laboratory evaluations have revealed only mild elevations in BUN and creatinine levels and hematocrit. Abdominal ultrasonography and CT scans have been normal.

Which one of the following is the most likely diagnosis?

- A) Abdominal migraines
 - B) Cannabinoid hyperemesis syndrome
 - C) Carcinoid syndrome
 - D) Pancreatitis
 - E) Peptic ulcer disease
176. Which one of the following conditions is most associated with an increased risk for venous thromboembolism?
- A) Active cancer
 - B) COPD
 - C) Poorly controlled type 2 diabetes
 - D) Severe intermittent asthma
 - E) Stage 3 chronic kidney disease
177. A 59-year-old female asks when she should consider screening for osteoporosis. Her last menstrual period was at age 53.

According to the U.S. Preventive Services Task Force, which one of the following risk factors, if present, should lead to a calculation of osteoporosis risk with a screening tool and consideration of screening for osteoporosis now?

- A) Low caffeine consumption
- B) High alcohol consumption
- C) Body weight >100 kg (220 lb)
- D) A maternal aunt with a history of hip fracture
- E) Nonsmoking status

178. A 62-year-old female sees you for evaluation of pain and stiffness in her neck. For several years she has attributed these symptoms to the aging process, but she has recently developed a loss of dexterity in her hands that makes typing and knitting difficult. She does not have any loss of sensation or weakness in her extremities but has noticed some difficulties with balance in recent weeks. The pain does not radiate, and she does not have any history of recent trauma. She feels well otherwise and has not had any fevers, chills, bowel incontinence, or bladder incontinence.

On examination you note mild tenderness of the spinous processes and paraspinous muscles of the cervical spine without focal tenderness. Her range of motion at the neck is limited due to pain. There are brisk reflexes in the bilateral upper and lower extremities and a positive Hoffman sign bilaterally with 4 beats of clonus on the right and 5 on the left. Her strength and sensation to light touch are intact in the bilateral upper extremities.

Which one of the following cervical spine conditions is the most likely diagnosis?

- A) Facet joint arthropathy
- B) Myelopathy
- C) Radiculopathy
- D) Vertebral compression fracture
- E) Vertebral osteomyelitis

179. A 30-year-old female presents to your office to discuss fertility and her irregular menses. The patient and her husband have been trying to conceive for the past 3 years but have been unsuccessful due to her irregular menstrual periods. Physical examination findings are significant for hirsutism and acne with hyperpigmentation on the posterior aspect of the neck and in the axillae. Her BMI is 35 kg/m². Laboratory studies from 1 month ago show a hemoglobin A_{1c} of 5.0%.

Which one of the following medications would be the most appropriate treatment of this patient's infertility?

- A) A GLP-1 receptor agonist
- B) Letrozole (Femara)
- C) Metformin
- D) Spironolactone (Aldactone)

180. Which one of the following is present in polycythemia vera?

- A) An α -1 antitrypsin deficiency
- B) An elevated α -fetoprotein level
- C) An elevated erythropoietin level
- D) Antimitochondrial antibodies
- E) A Janus kinase 2 mutation

181. A 72-year-old male presents to your office 3 months after hospitalization for an ischemic stroke. He has a history of diabetes mellitus that is well controlled on basal insulin. He has impaired mobility and balance, as well as left upper and lower extremity spasticity. He has fallen twice in the last week. His blood pressure is well controlled and recent laboratory studies are notable for an LDL-cholesterol level of 64 mg/dL and a hemoglobin A_{1c} of 6.9%. There is no evidence of cognitive impairment. His Patient Health Questionnaire–9 (PHQ-9) score is 3.

Which one of the following would be the most appropriate next step in optimizing his post-stroke care?

- A) Repeating neuroimaging
 - B) Increasing the basal insulin dosage
 - C) Initiating lorazepam (Ativan), 1–2 mg at bedtime
 - D) Initiating sertraline (Zoloft), 50 mg daily
 - E) Referral to a physical therapist
182. You see a 50-year-old female for a health maintenance examination. She is the primary caregiver for her father who has dementia, and she has heard that Alzheimer disease is genetic and asks if there is anything she can do to reduce her risk. She is in perimenopause and experiences severe hot flashes. She recently started a kickboxing class and drinks 1–2 beers per week. On examination her vital signs include a blood pressure of 138/80 mm Hg, a pulse rate of 63 beats/min, and a BMI of 30 kg/m².

Which one of the following should you recommend to decrease this patient's risk for dementia?

- A) A memory training app on her smartphone
 - B) Abstaining from alcohol
 - C) Testing for biomarkers associated with Alzheimer disease
 - D) A target systolic blood pressure ≤ 130 mm Hg
 - E) Hormone therapy with estrogen and progesterone
183. Which one of the following attention-deficit/hyperactivity disorder (ADHD) medications is considered safest to take while breastfeeding?
- A) Amphetamine (Evekeo)
 - B) Atomoxetine (Strattera)
 - C) Clonidine
 - D) Guanfacine
 - E) Methylphenidate (Ritalin)

184. A 20-year-old female is brought to the emergency department after experiencing blunt abdominal trauma during a motor vehicle accident. A focused assessment with sonography for trauma (FAST) examination is performed at the bedside and there are no signs of internal bleeding.

Based on these results, which one of the following should be the next step in evaluation?

- A) No further imaging to evaluate for internal bleeding
- B) Additional imaging only if the patient develops signs of hemodynamic compromise
- C) Additional imaging to confirm the absence of bleeding
- D) Diagnostic peritoneal lavage

185. A 65-year-old male sees you for follow-up after he was hospitalized for pneumonia a few months ago. He has smoked 1 pack of cigarettes per day for 40 years. Pulmonary function testing today shows an FEV₁ of 60% of predicted and an FEV₁/FVC ratio of 0.65. Physical examination findings include a BMI of 24 kg/m² and scattered rhonchi in the chest.

Which one of the following inhalers is the recommended initial treatment to decrease this patient's number of exacerbations?

- A) Budesonide/formoterol (Symbicort)
- B) Fluticasone propionate
- C) Ipratropium bromide/albuterol (Combivent Respimat)
- D) Salmeterol (Serevent Diskus)
- E) Tiotropium (Spiriva)

186. You are the attending physician at a nursing home and the charge nurse notifies you that 3 symptomatic patients in 1 unit have tested positive for influenza A. The facility is implementing enhanced contact and droplet precautions.

To prevent additional cases, you should recommend chemoprophylaxis with oseltamivir (Tamiflu) for

- A) no residents or staff
- B) only residents of the affected unit who have not received influenza vaccine
- C) only residents of the affected unit
- D) only residents of the facility who have not received influenza vaccine
- E) all residents of the facility

187. A 65-year-old female with no chronic medical problems presents for an annual Medicare wellness visit. You initiate a discussion regarding cervical cancer screening.

According to current clinical guidelines, which one of the following would be an indication for additional cervical cancer screening in this patient?

- A) A family history of cervical cancer in a first-degree relative
- B) Loop excision of a high-grade precancerous lesion 15 years ago, with consecutive normal results since then
- C) Three consecutive normal cytology results within the past 10 years, most recently 3 years ago
- D) Two consecutive normal cytology results with negative high-risk HPV co-testing within the past 10 years, most recently 4 years ago
- E) Unprotected intercourse with a new sex partner

188. A 67-year-old male presents for an annual health maintenance visit. His medical conditions include hypertension, dyslipidemia, severe aortic stenosis, and osteoarthritis. He is under the care of a cardiologist and is scheduled for an annual echocardiogram next week. He reports that he generally feels well but “can’t keep up with the grandkids” anymore. He has not had any lightheadedness, chest pain, shortness of breath, or lower extremity edema.

Which one of the following findings would support surgical treatment for aortic stenosis at this time?

- A) An elevated 10-year atherosclerotic cardiovascular disease risk
- B) A left ventricular ejection fraction of 40%–45%
- C) A need for an elective total knee replacement
- D) A normal exercise stress test result

189. A 44-year-old male presents for evaluation of left shoulder pain and stiffness that has developed gradually over the past few months after a fall while skiing. He describes a dull, deep, poorly localized ache. On examination he has impaired active and passive range of motion in all planes. Radiography of the shoulder is unremarkable.

Which one of the following is most likely to lead to symptom resolution?

- A) Wearing a sling on the left arm for 4–6 weeks
- B) Extracorporeal shock wave therapy
- C) Biceps tendon sheath injection and physical therapy
- D) Glenohumeral corticosteroid injection and physical therapy
- E) Surgical repair

190. A 6-year-old male is brought to your office by his parents for follow-up after being seen in the emergency department (ED) for an unprovoked, nonfebrile seizure. He does not have any prior seizure history and his past medical history is unremarkable. An EEG in the ED was normal. The parents are concerned about his risk for recurrent seizure and ask about treatment with anti-epileptic drug (AED) therapy.

Which one of the following should you recommend?

- A) Starting AED monotherapy only if he has a second seizure
- B) Starting AED monotherapy now
- C) Starting combination AED therapy only if he has a second seizure
- D) Starting combination AED therapy now

191. A 48-year-old female presents to your office because of an erythematous rash on her left posterior calf and right posterior thigh (shown below). Five days ago she was stung by wasps in those locations. The stings were initially associated with intense pain and small areas of erythema that have since expanded to approximately 10-cm erythematous patches surrounding the original sting sites.

On examination there are erythematous patches on her left posterior calf and right posterior thigh with warmth, induration, and tenderness to palpation. She does not have any fevers or chills. The examination findings are otherwise within normal limits.

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

- A) Topical neomycin/polymyxin B/pramoxine (Neosporin)
- B) Oral cephalexin
- C) Oral diphenhydramine
- D) Oral prednisone
- E) Oral sulfamethoxazole/trimethoprim (Bactrim)

192. A 39-year-old female presents with a sudden onset of palpitations. Her vital signs include a blood pressure of 114/68 mm Hg and a pulse rate of 166 beats/min. She is cooperative and alert. An EKG shows regular narrow complex tachycardia with normal intervals. She has tried vagal maneuvers with no improvement.

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

- A) Adenosine
- B) Atropine
- C) Diltiazem (Cardizem)
- D) Metoprolol
- E) Synchronized cardioversion



Item #191



Item #191

193. A 29-year-old female presents with low back pain that began after giving birth 3 months ago. She reports pain on her right side when climbing and descending stairs and when lying on her right side. On examination she has mild lumbar paraspinal muscle tightness on the left and moderate tenderness inferomedial to the posterior superior iliac spine on the right. Muscle strength testing and lower extremity reflexes are normal.

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

- A) Lumbar strain
- B) Piriformis syndrome
- C) Pudendal nerve entrapment
- D) Sacroiliac joint dysfunction
- E) Spondyloarthropathy

194. Most elder abuse is perpetrated by

- A) family members
- B) friends
- C) nurses
- D) paid caregivers
- E) physicians

195. A 52-year-old male presents to the emergency department with a sudden onset of what he describes as the worst headache of his life. You are concerned about the possibility of an intracranial hemorrhage.

After performing an examination to rule out neurologic deficits, which one of the following would be the most appropriate next step in evaluation?

- A) CT of the head without contrast
- B) CT of the head with contrast
- C) MRI of the head with and without contrast
- D) A lumbar puncture

196. A 45-year-old male with a history of hypertension and poorly controlled anxiety and depression presents to your office to establish care. He requests refills of his current medications, which include the following:

Alprazolam (Xanax), 0.5 mg nightly Buspirone, 10 mg 3 times daily Gabapentin (Neurontin), 600 mg 3 times daily Lorazepam (Ativan), 1 mg twice daily Losartan (Cozaar), 50 mg daily Sertraline (Zoloft), 200 mg daily

You tell the patient that you will provide refills for buspirone, gabapentin, losartan, and sertraline without dosage adjustments; however, he will need to taper and ultimately discontinue the alprazolam and lorazepam. You both agree hospitalization is not necessary. After discussion, the patient agrees with your approach.

In addition to cognitive behavioral therapy, which one of the following strategies would be most appropriate for this patient?

- A) Discontinuing both benzodiazepines and initiating buprenorphine maintenance therapy
 - B) Discontinuing both benzodiazepines and initiating flumazenil maintenance therapy
 - C) Discontinuing lorazepam now and gradually decreasing alprazolam over 6 months
 - D) Tapering the alprazolam and lorazepam dosages simultaneously over 6 months
 - E) Switching both alprazolam and lorazepam to diazepam (Valium), and then decreasing the diazepam dosage over 6 months
197. A 15-year-old female is brought to your office in May with a 3-week history of nasal congestion, sneezing, and itchy eyes. She reports that these episodes occur every spring and last about 6 weeks. She has been taking oral cetirizine (Zyrtec) with no improvement. You initiate an intranasal corticosteroid.

The patient returns for follow-up 4 weeks later and says that she has seen some improvement but is dissatisfied with her progress. The patient and her parent ask about further steps in diagnosis.

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

- A) A CBC
- B) Skin allergen testing
- C) Serum allergy testing
- D) Chest radiography
- E) Sinus CT

198. Which one of the following conditions is most likely to impair swallowing of both solids and liquids?

- A) Achalasia
- B) Eosinophilic esophagitis
- C) Esophageal cancer
- D) Esophageal stricture
- E) Schatzki ring

199. A 55-year-old male with a medical history of GERD and osteoarthritis presents to the emergency department 2 hours after a sudden onset of intense epigastric pain. He takes naproxen almost daily for joint pain.

On examination the patient is noticeably pale. His vital signs include a blood pressure of 90/60 mm Hg and a pulse rate of 125 beats/min. He is exquisitely tender to palpation in his abdomen, particularly at the epigastrium. There is no fluid wave or hepatomegaly. You do not note any obvious stigmata of chronic liver disease.

Which one of the following tests should be performed to assist in the diagnosis?

- A) Aortic ultrasonography
- B) Abdominal radiography
- C) Abdominal and pelvic CT
- D) Abdominal paracentesis
- E) Exploratory laparotomy

200. A 55-year-old male presents for evaluation of recent-onset tinnitus that has adversely affected his sleep and concentration. A physical examination including otoscopy is unremarkable.

Which one of the following additional findings, if present, would be an indication for head imaging?

- A) Associated development of major depressive disorder
- B) Bilateral hearing loss on audiometry
- C) Lack of improvement with a trial of a tricyclic antidepressant
- D) A pulsatile quality of the tinnitus
- E) Symptom duration >6 months