



# NPLEX<sup>®</sup>

Naturopathic Physicians Licensing Examinations

## Part II - Clinical Science Examinations: Blueprint and Study Guide

[Revised April 2013]

Case #1

PATIENT: 46-year-old female; 5'6" (168 cm), 120 lbs (54.4 kg)

PRESENTATION: The patient presents with chest pain, dyspnea, and pain, tenderness, and a sensation of heat in her right calf. The calf pain began 6 days ago, after she ran a marathon. The dyspnea and chest pain began 1 hour ago.

MEDICAL HISTORY: She has a 6-year history of amenorrhea.

PSYCHOSOCIAL: She works for a bank. She was divorced 3 months ago and lives alone.

HEALTH HABITS: She is vegan. She usually runs 4 miles per day, 6 or 7 days per week; however, when she is training for a marathon, she runs 10 miles on some days.

SUPPLEMENTS: She takes a daily multiple vitamin/mineral complex, and a botanical formula containing *Eleutherococcus senticosus*.

MEDICATIONS: She has taken ethinyl-estradiol/mestranol daily for 6 years.

VITAL SIGNS: Her temperature is 99.1°F (37.3°C), BP is 128/78 mmHg, heart rate is 78 bpm, and respiratory rate is 14/min and regular.

PHYSICAL EXAMINATION: On auscultation, her lungs are clear.

PRELIMINARY LAB RESULTS: Lab testing was not performed at this appointment.

DIAGNOSTIC IMAGING: Diagnostic imaging was not performed at this appointment.

1. What is the most appropriate first step?
  - A. Order Doppler studies.
  - B. Order pulmonary function testing.
  - C. Treat her symptoms with appropriate botanicals and physical therapies.
  - D. Immediately send her to the emergency department at the nearest hospital.
2. Given her presentation, what would you expect to find on physical examination?
  - A. absence of a pleural rub
  - B. a positive Homan's sign
  - C. an elevated ankle blood pressure
  - D. a negative Trendelenburg test
3. Which botanical medicine would most likely relieve her condition?
  - A. *Crataegus oxycantha*
  - B. *Viburnum prunifolium*
  - C. *Gelsemium sempervirens*
  - D. None of the above; botanical medicine would only mask her symptoms and would not address the cause.
4. The most likely diagnosis is \_\_\_\_\_, but you must also consider \_\_\_\_\_.
  - A. pleurisy; deep vein thrombosis and intermittent claudication
  - B. intermittent claudication; pulmonary embolism and pleurisy
  - C. myocardial infarction; intermittent claudication and pleurisy
  - D. deep vein thrombosis; pulmonary embolism and myocardial infarction

5. If this is an adverse reaction, which of the following is the most likely causative agent?
- A. oral contraceptives
  - B. her botanical formula
  - C. a topical analgesic she used to relieve muscle aches after she ran the marathon
  - D. an H2 blocker she took because she thought her SOB was due to an allergic reaction
6. After her condition has stabilized, which nutrient would be most indicated for her?
- A. 5 mg of vitamin K, administered po
  - B. 300 mg of citrus bioflavonoids, administered po
  - C. 400 IU of topical vitamin E massaged into her calf
  - D. 100 mg vitamin B6 and 500 mg of magnesium, administered IV push
7. She is very loquacious and says the sensation of not being able to catch her breath is very pronounced. She feels better while sitting up and bending forward. She had to loosen all her clothes and is averse to having any clothing near her throat. Her leg is extremely painful and she is angry that her friend who accompanied her is talking to you instead of fanning her to help her breathe. Which homeopathic remedy best fits her picture?
- A. causticum
  - B. lachesis muta
  - C. lycopodium clavatum
  - D. antimonium tartaricum
8. Which one of the following lifestyle changes would best help prevent recurrence?
- A. engaging in deep breathing exercises
  - B. using a different form of birth control
  - C. adding animal protein back into her diet
  - D. engaging in a different form of exercise that is non-weight bearing
9. She hesitantly tells you that since her divorce she has begun smoking cigarettes. Which of the following is the most critical component to ensuring long-term success in a smoking cessation program?
- A. the patient's sense of self-efficacy
  - B. the patient's social support network
  - C. the patient's participation in a hypnosis program
  - D. physician monitoring and patient self-monitoring

Case # 2

PATIENT: 67-year-old male, 5'10" (178 cm), 154 lbs (70 kg)

PRESENTATION: The patient presents with severe abdominal pain. Onset was gradual over the past 3 days, but the pain has been especially intense for the past 36 hours. Over the past 4-6 days, his stools have been soft but formed, and are a medium brown color.

MEDICAL HISTORY: He has been relatively healthy most of his life, but for the past 2 years he has had to get up three or four times per night to urinate.

PSYCHOSOCIAL: He has recently retired from an accounting firm where he was employed for 45 years. He has been happily married to his wife for 41 years.

HEALTH HABITS: He eats pancakes or whole wheat toast for breakfast, sandwiches and cold cuts for lunch, and fish or chicken with potatoes or pasta for dinner. He has one cup of coffee at breakfast and one glass of red wine with dinner. He drinks little water so he can sleep at night without needing to get up to urinate. His only exercise is walking his poodle two times per day.

SUPPLEMENTS: Serenoa repens 640 mg qd

MEDICATIONS: none

ALLERGIES: none known

FAMILY HISTORY: His father died of a stroke at age 91, his mother died from breast cancer at age 82, and his younger sister has osteopenia.

VITAL SIGNS: His temperature is 99.3°F (37.4°C), BP is 120/78 mmHg, heart rate is 96 bpm, and respiratory rate is 18/min and regular.

PHYSICAL EXAMINATION: During his visit he is very tense, and you take additional time to reassure him before you proceed with the examination. His abdomen is tender to light and deep palpation in the LLQ, and you detect a mass or stool in his LLQ near the midline.

PRELIMINARY LAB RESULTS:

TEST	US VALUE	US RANGE	IU VALUE	IU RANGE
RBC	$4.6 \times 10^6/\mu\text{L}$	$4.6 - 6.2 \times 10^6/\mu\text{L}$	$4.6 \times 10^{12}/\text{L}$	$4.6 - 6.2 \times 10^{12}/\text{L}$
WBC	$15.2 \times 10^3/\text{mm}^3$	$4.5 - 11 \times 10^3/\text{mm}^3$	$15.2 \times 10^9/\text{L}$	$4.5 - 11 \times 10^9/\text{L}$
eosinophils	$1.0 \times 10^3/\text{mm}^3$	$0 - 0.5 \times 10^3/\text{mm}^3$	$1.0 \times 10^9/\text{L}$	$0 - 0.5 \times 10^9/\text{L}$

1. Which diagnostic imaging procedure is most indicated?

- A. abdominal ultrasonography
- B. CT scan of his abdomen
- C. MRI of his lower abdomen
- D. barium enema with radiograph

2. What is the most likely diagnosis?

- A. diverticulitis
- B. diverticulosis
- C. bowel obstruction
- D. gluten enteropathy

3. A clerk at a health food store has recommended that he take *Rhamnus purshiana* and *Podophyllum peltatum* (1:1) 20 gtt bid. What do you tell the patient regarding this formula?
- A. It could aggravate his abdominal pain.
  - B. It would be safe for him, but it would not address any of his symptoms.
  - C. It would alleviate his nocturia, but would not address his abdominal pain.
  - D. It would not be safe for him because these two botanical medicines should not be used together.
4. To treat his pain, you prescribe \_\_\_\_\_ in the form of \_\_\_\_\_.
- A. *Ulmus rubra* (fulva); lozenges pc
  - B. *Mentha piperita*; a cold infusion ac
  - C. *Ricinis communis*; a warm pack qd
  - D. *Rhamnus frangula*; a tincture 30 gtt tid
5. Which one of the following drugs is commonly prescribed to treat the condition he has?
- A. prednisone
  - B. cephalexin
  - C. loperamide
  - D. esomeprazole
6. His wife prepares most of his meals, and asks about what he should be eating. Which dietary recommendation would be most appropriate?
- A. a high protein diet for 2 weeks, followed by a moderate protein diet
  - B. a complex carbohydrate diet for 1 month, followed by a high fiber diet
  - C. a bland diet for 2 weeks, with a gradual re-introduction of seasoned foods
  - D. a soft, low fiber diet for 1 month, followed by a high fiber/low residue diet
7. After he has fully recovered from the acute stage of his condition, which of the following supplements would be most indicated?
- A. niacin and potassium
  - B. ascorbic acid and proline
  - C. pyridoxine and manganese
  - D. pantothenic acid and calcium
8. After his condition has stabilized, you would recommend that he \_\_\_\_\_, because research has shown that this lifestyle factor can reduce anxiety, cause the release of endogenous opioids, and enhance immune function.
- A. eat a raw foods diet
  - B. sleep 9-10 hours per night
  - C. begin an aerobic exercise regimen
  - D. begin systematic desensitization therapy

Case # 3

PATIENT: 55-year-old female, 5'4" (162.6 cm), 135 lbs (61.2 kg).

PRESENTATION: The patient presents with left shoulder pain. She describes a diffuse aching in her left shoulder during the day; at night, when she turns over onto her left shoulder, she is awakened by a sharp pain. Due to the restricted movement in her left arm, dressing and grooming have become increasingly difficult. She denies any specific trauma to her shoulder or any prior episodes of the pain. Onset of the diffuse aching was 2 months ago; the sharp pain during the night began 10 days ago.

MEDICAL HISTORY: She has a history of hypothyroidism, which was diagnosed 2 years ago.

PSYCHOSOCIAL: She is a self-employed author. She is not married and lives alone with her dog.

HEALTH HABITS: She loves breads and pasta, and her diet is high in carbohydrates. She spends 4 to 6 hours per day at her computer. She does not exercise except to take her dog for a walk, twice per day, for 15 minutes. She says she has been unable to hold the leash in her left hand for the past month.

SUPPLEMENTS: She takes an OTC multiple vitamin on most days.

MEDICATIONS: She takes one half grain (30mg) of USP thyroid daily and has been taking two 500 mg tablets of acetaminophen four times per day.

ALLERGIES: none known

VITAL SIGNS: Her temperature is 97.6°F (36.4°C), BP is 130/84 mmHg, heart rate is 76 bpm and regular with no murmur, and her respiratory rate is 18/min.

PHYSICAL EXAMINATION: She is right-handed. Physical examination reveals point tenderness over her bicipital groove, and she has moderately decreased ROM in all directions of her left shoulder girdle both in active and passive movements. Her cervical spine has a normal ROM and her deep tendon reflexes are equal and active bilaterally. Valsalva test is normal. Abdominal examination is unremarkable.

PRELIMINARY LAB RESULTS:

ESR is negative

DIAGNOSTIC IMAGING: Diagnostic imaging was not performed at this appointment.

1. The most likely diagnosis is \_\_\_\_\_, but you must also consider \_\_\_\_\_ in your differential.
  - A. adhesive capsulitis; shoulder dislocation and pancreatitis
  - B. adhesive capsulitis; thoracic outlet syndrome and cholecystitis
  - C. bicipital tendonitis; shoulder dislocation and thoracic outlet syndrome
  - D. bicipital tendonitis; adhesive capsulitis and partial thickness rotator cuff tear
2. Her point tenderness suggests that there may be inflammation or injury to the \_\_\_\_\_, and you confirm this by performing \_\_\_\_\_.
  - A. bicipital tendon; Neer's test
  - B. bicipital tendon; Speed's test
  - C. glenohumeral capsule; Neer's test
  - D. glenohumeral capsule; Speed's test

3. A diagnosis of \_\_\_\_\_ would be supported if her symptoms were aggravated by \_\_\_\_\_.
- A. bicipital tendonitis; abduction and external rotation
  - B. adhesive capsulitis; adduction and pronation of the arm
  - C. adhesive capsulitis; resisted flexion and supination of the arm
  - D. bicipital tendonitis; resisted flexion and supination of the arm
4. Before you perform thrust manipulation of the shoulder, you must make sure that she does not have \_\_\_\_\_.
- A. scoliosis
  - B. breast implants
  - C. Hashimoto's thyroiditis
  - D. an osteolytic bone lesion
5. Which of the following home exercise regimens to improve her range of motion would be most safe and effective?
- A. isometric shoulder exercises
  - B. over-the-head free-weight lifting
  - C. "wall climbing" shoulder exercises
  - D. None of the above; exercise is contraindicated for her condition.
6. Which diagnostic imaging study should be done?
- A. MRI
  - B. CT scan
  - C. ultrasonography
  - D. radiographic studies
7. Which botanical medicine would you consider, and why?
- A. *Avena sativa* for its potent analgesic effects
  - B. *Curcuma longa* for its anti-inflammatory effect
  - C. *Piscidia erythrina* for its high bioflavonoid content
  - D. *Harpagophytum procumbens* for its analgesic effect
8. Which supplements would most effectively address her presentation?
- A. glucosamine to act as placebo
  - B. selenium to regenerate connective tissue
  - C. bromelain to act as an anti-inflammatory
  - D. probiotics to enhance the proteoglycan chemotaxis

Case # 4

PATIENT: 8-year-old male

PRESENTATION: The anxious mother of the patient calls you at 11:30 p.m. because the child has developed a loud barking cough that has been preventing him from sleeping. She became frightened when she observed that he is struggling to breathe. You can hear the child's cough in the background. Onset of the cough was several hours ago, after he played outside in the cold wind; she had noticed that he had a runny nose the day before.

MEDICAL HISTORY: One month ago, at his well-child checkup, you examined the child and found him to be a healthy child with normal development.

ALLERGIES: none known

VITAL SIGNS: His temperature is 101.5°F (38.6°C), heart rate is 120 bpm, and respiratory rate is 60/min and gasping.

1. What is the first thing you should ask the mother?
  - A. "Has he been vomiting?"
  - B. "Does his neck seem rigid?"
  - C. "Is there a rash on his abdomen?"
  - D. "What is his breathing like between coughs?"
2. Which one of the following homeopathic preparations would best address his clinical presentation?
  - A. spongia tosta
  - B. aconitum napellus
  - C. cuprum metallicum
  - D. drosera rotundifolia
3. Which one of the following home treatments could the mother do to help the child most immediately?
  - A. steam inhalation
  - B. a nutritive enema
  - C. effleurage over the rib area
  - D. wrapping the child in hot blankets
4. The most likely diagnosis is \_\_\_\_\_, but you must also consider \_\_\_\_\_ in your differential.
  - A. croup; bronchitis and pneumonia
  - B. pertussis; bronchitis and epiglottitis
  - C. croup; pertussis and foreign object in the airway
  - D. pertussis; epiglottitis and foreign object in the airway.
5. You order a CBC. While preparing the blood sample, a phlebotomy tube filled with the child's blood falls onto your office floor and breaks. As part of the hazardous materials management plan in your office, which one of the following is the most important?
  - A. wiping the area of the spill with alcohol
  - B. having office staff tested for possible exposure to blood-borne pathogens
  - C. immediately removing the broken tubing and placing it in a sharps container
  - D. providing the staff who clean up the spill with personal protective equipment



Case # 5

PATIENT: 4-year-old female, 41" (104.1 cm), 38 lbs (17.2 kg)

PRESENTATION: The patient presents with two lesions on her arm. She says they itch a little bit but do not hurt. The mother says the lesions have been there for about 1 week.

MEDICAL HISTORY: The patient's annual well-child appointments to your office have been unremarkable and she is current on all her vaccinations.

PSYCHOSOCIAL: The child goes to daycare. She has a new kitten.

HEALTH HABITS: She is a picky eater and likes fruits but not vegetables.

SUPPLEMENTS: She takes a children's daily multiple vitamin.

MEDICATIONS: none

ALLERGIES: none known

VITAL SIGNS: Her temperature is 98.4°F (36.9°C), heart rate is 100 bpm and regular with no murmur, and her respiratory rate is 22/min.

PHYSICAL EXAMINATION: She has no lymphadenopathy and no systemic symptoms.

Physical examination reveals two 1 to 2 cm reddish, round, annular plaques. The advancing borders of the lesions are slightly raised and scaling, and there are a few pinpoint pustules around the edge. There are no other similar lesions. She has a few small excoriations around her wrist.

PRELIMINARY LAB RESULTS: Lab results are pending.

DIAGNOSTIC IMAGING: Diagnostic imaging was not performed at this appointment.

1. The most likely diagnosis is \_\_\_\_\_, but you must also consider \_\_\_\_\_ in your differential.
  - A. impetigo; pemphigus and scabies
  - B. impetigo; urticaria and varicella
  - C. tinea corporis; impetigo and Lyme disease
  - D. tinea corporis; pityriasis rosea and varicella
2. To focus your diagnosis, which lab test should be performed?
  - A. serum antibody testing to detect fungus
  - B. microscopic examination to detect hyphae
  - C. microscopic examination to detect tiny worms
  - D. culture on blood agar to detect hemolytic colonies
3. What needs to be done to prepare the sample for evaluation?
  - A. gram stain the collected cells
  - B. apply 10% KOH to the skin scraping
  - C. grow the collected cells on blood agar
  - D. illuminate the lesion with a Wood's Lamp
4. If the lesion tested positive for \_\_\_\_\_, a diagnosis of \_\_\_\_\_ would be confirmed.
  - A. *Borrelia burgdorferi*; scabies
  - B. Epidermophyton; tinea corporis
  - C. *Enterobius vermicularis*; impetigo
  - D. *Staphylococcus aureus*; Lyme disease

5. Which one of the following drugs would be most indicated for her condition?
- A. acyclovir
  - B. penicillin
  - C. tetracycline
  - D. terbinafine
6. Which one of the following botanical medicines would most effectively treat her condition?
- A. oral *Passiflora incarnata*
  - B. oral *Selenicereus grandiflora*
  - C. topical *Podophyllum peltatum*
  - D. topical *Melaleuca alternifolia*

**OR A DIFFERENT FORMAT FOR THIS TYPE OF QUESTION WOULD BE:**

7. You consider topical treatment with *Melaleuca alternifolia*, and decide that:
- A. it would be safe for her and is indicated for her condition.
  - B. it would be safe for her, but it is not indicated for her condition.
  - C. it would not be safe for her due to her age, although it is indicated for her condition.
  - D. it would be neither safe for her, nor is it indicated for a patient who has this condition.
8. You determine that the child is very aggravated by the itching. The lesions itch and burn intensely when she is in her bed at night and after she bathes in hot water. She prefers to be barefoot and sticks one foot out of the covers at night. Which one of the following homeopathic preparations best addresses her presentation?
- A. sulphur
  - B. chamomilla
  - C. calcarea carbonica
  - D. pulsatilla pratensis

Case #6

PATIENT: 54-year-old female, 5'4" (162.6 cm), 158 lbs (71.7 kg)

PRESENTATION: The patient presents with heartburn and chest pain. She describes a heavy and squeezing pain, and says it is better when she rests. She denies shortness of breath but says that sometimes when the pain is at its worst, she notices that she perspires slightly. She thinks she may have food poisoning because she ate in a restaurant 2 nights ago, and has not felt well since that time. The symptoms have been intermittent during the past 3 days.

MEDICAL HISTORY: Her last office appointment was 5 years ago to address menopausal symptoms. At that time, her BP was 142/92 mmHg. She chose to address her borderline hypertension with lifestyle modifications. She says that due to her busy schedule, she has not had time to follow-up with you.

PSYCHOSOCIAL: She is a landscape architect and says that for the past 5 days, she has been doing relatively strenuous work.

HEALTH HABITS: She eats an omnivorous diet, and emphasizes that the fresh food she buys is usually organically grown. Because her work is physically challenging, she does not follow a regular exercise regime. She does not drink alcoholic beverages or smoke.

SUPPLEMENTS: She takes a daily multi-vitamin and extra calcium.

MEDICATIONS: none

ALLERGIES: none known

FAMILY HISTORY: Her father died of a myocardial infarction at age 60 and her mother has hypertension.

VITAL SIGNS: Her BP is 162/90 mmHg, heart rate is 84 bpm, and respiratory rate is 16/min.

PHYSICAL EXAMINATION: Neurological examination is unremarkable. There is no evidence of peripheral edema. On auscultation, her lungs are clear, but you hear S1/S2 with occasional premature beats, and a soft S4 is heard over the apex.

PRELIMINARY LAB RESULTS:

TEST	US VALUE	US RANGE	IU VALUE	IU RANGE
total cholesterol	250 mg/dL	< 200 mg/dL	6 mmol/L	< 5.1 mmol/L
LDL	165 mg/dL	< 100 mg/dL	4.1 mmol/L	< 2.6 mmol/L
HDL	30 mg/dL	> 35 mg/dL	0.85 mmol/L	> 0.9 mmol/L

DIAGNOSTIC IMAGING: Diagnostic imaging was not performed at this appointment.

1. The most likely diagnosis is \_\_\_\_\_ but you must also consider \_\_\_\_\_ in your differential.
  - A. pleuritis; costochondritis and GERD
  - B. pleuritis; esophageal spasm and costochondritis
  - C. ischemic heart disease; GERD and costochondritis
  - D. ischemic heart disease; esophageal spasm and pleurisy

2. Your first step would be to order a(n) \_\_\_\_\_ to rule out \_\_\_\_\_.
- A. echocardiogram; pleurisy
  - B. ECG; ischemic heart disease
  - C. CPK with MB bands; pleurisy
  - D. chest radiograph; ischemic heart disease

**OR, A DIFFERENT FORMAT TO TEST THIS COMPETENCY WOULD BE:**

3. If an ECG showed \_\_\_\_\_, it would indicate \_\_\_\_\_.
- A. premature beats; myocardial ischemia
  - B. a wide QRS complex; a 2<sup>nd</sup> degree heart block
  - C. a prolonged PR interval; a 3<sup>rd</sup> degree heart block
  - D. elevated ST segments; myocardial ischemia
4. Which one of the following drugs is most indicated for her condition?
- A. aspirin
  - B. atropine
  - C. acetaminophen
  - D. hydrochlorothiazide
5. She says the symptoms generally occur after exertion, but sometimes she is awakened at 1:00 a.m. by the pain, which is relieved if she drinks a hot beverage. Which one of the following homeopathic preparations best addresses her presentation?
- A. phosphorus
  - B. arnica montana
  - C. arsenicum album
  - D. aconitum napellus

**Example Research Question**

You were taught in several courses that *Hydrangea arborescens* is effective in treating urolithiasis. Your experience in the clinic has borne this out. The latest issue of the *New Zealand Journal of Botanical Medicine* reports a randomized, controlled clinical trial on the effect of *H. arborescens* in the treatment of urolithiasis. Results are reported with a  $p=.06$ . What does this mean, and how should you use the information?

- A. *H. arborescens* will be effective in 94% of patients who have urolithiasis. Continue to use the botanical as before.
- B. The results are significant at the 0.05 level; the additional 0.01 can undoubtedly be accounted for by some methodological flaw in the study. Continue to use the botanical as before.
- C. The failure to reach the level of significance despite your experience with *H. arborescens* may indicate that the study failed to control for some important factor. Wait for more research results before you stop using the botanical for the treatment of urolithiasis.
- D. Because this study was reported in a prestigious journal, you can assume that *H. arborescens* is not effective in the treatment of urolithiasis. Discontinue its use for treatment of urolithiasis.

Case #1

A 25-year-old female complains of painful swelling in her left axilla that first began as a pimple 4 days ago. She has no prior history of these symptoms, and she has no known allergies to drugs or medications. She denies fever, chills, or excessive perspiration, and her vital signs are all within normal limits. Physical examination reveals a recently shaved axillary region that is swollen, red, and exquisitely painful.

1. Based on this presentation, you would diagnose \_\_\_\_\_ if physical examination revealed  
 A. ripe abscess; a soft fluctuant mass  
 B. ripe abscess; an indurated nodular mass  
 C. sebaceous cyst; a palpable fixed mass  
 D. sebaceous cyst; a discreet palpable nodule
2. Which procedure would you use to treat her, and what would be the best technique for administering anesthesia?  
 A. incision and drainage; field block  
 B. excision and removal; nerve block  
 C. incision and drainage; a topical anesthetic  
 D. excision and removal; direct injection into the lesion
3. Which surgical instruments would be most appropriate?  
 A. a #11 scalpel and forceps  
 B. a #11 scalpel and hemostat  
 C. a #15 scalpel and hemostat  
 D. a #15 scalpel and iris scissors
4. Post-surgically, the physician should:  
 A. close the wound with steri-strips.  
 B. pack the site with iodoform gauze.  
 C. close the wound with cutaneous removable sutures.  
 D. close the wound with subcutaneous absorbable sutures.
5. The patient returns 1 week post-op with a purulent drainage at the operative site. What is the most likely reason for this?  
 A. There was trauma to the wound site.  
 B. The drainage is part of the normal healing response.  
 C. The surgical wound became infected from an extraneous source.  
 D. The original lesion was multilocular and was not drained completely.

Case #2

A 37-year-old male complains of a bump behind his right ear. He says the bump has been present for at least 1 year, but has become larger in the past month. He is worried because his barber expressed concern about it. He denies local pain or discharge, but when he combs his hair, he is aware of the lesion. On physical examination, you palpate a 2 cm round mass.

1. You would diagnose \_\_\_\_\_ if the mass was \_\_\_\_\_.
  - A. sebaceous cyst; fluctuant
  - B. nevus; indurated and fixed
  - C. nevus; indurated and mobile
  - D. sebaceous cyst; soft and mobile
  
2. The correct management of this patient's condition would be \_\_\_\_\_.
  - A. excision and biopsy
  - B. referral to a surgeon
  - C. incision and removal
  - D. None of the above; surgery is contraindicated for this patient
  
3. To prevent recurrence of the lesion, the physician or surgeon should:
  - A. remove the entire capsule.
  - B. pack the cavity with iodoform gauze.
  - C. allow the wound to heal without suturing.
  - D. make an incision that is at least twice as long as the mass.
  
4. Which agent would most appropriately anesthetize the operative site?
  - A. 2% procaine
  - B. epinephrine/adrenalin
  - C. topical lidocaine cream
  - D. 1% lidocaine with epinephrine
  
5. If the patient has no post-operative complications, when should the sutures be removed?
  - A. in 3 to 4 days
  - B. in 4 to 7 days
  - C. in 7 to 10 days
  - D. in 12 to 14 days

### Case #3

At her monthly examination, a pregnant, 41-year-old female asks you to examine a brown pigmented lesion located at her bra line. She says she thought it was only a freckle, but over the past few months it has become larger, raised, and occasionally painful. As her breasts have become larger through the progression of her pregnancy, her bra has gotten tighter, irritating the lesion. She wants to have it removed. She is allergic to penicillin and sulfonamides. Physical examination reveals a 3 mm round lesion that is slightly raised and has a notable margin of erythema.

1. Which additional characteristic of the lesion would lead you to suspect that it is benign?
  - A. regular borders
  - B. irregular borders
  - C. mottled coloring
  - D. hairs located in the middle of the lesion
2. Which technique will most appropriately remove the lesion for biopsy?
  - A. cryosurgery
  - B. shave biopsy
  - C. punch biopsy
  - D. electrocautery
3. Is there anything in her clinical presentation that would affect your choice of anesthetic?
  - A. Yes, given her allergy to penicillin, lidocaine is contraindicated.
  - B. Yes, given her allergy to sulfonamides, lidocaine with epinephrine is contraindicated.
  - C. Yes, lidocaine is a category B drug during pregnancy, so treatment of this lesion should wait until post partum.
  - D. No, there are no contraindications to consider in your choice of anesthetic.

### Answers to Example Items

#### Minor Surgery:

Case #1: 1. A 2. A 3. B 4. B 5. D  
Case #2: 1. D 2. C 3. A 4. D 5. C  
Case #3: 1. A 2. B 3. C

Case #1

**PRESENTATION:** A 36-year-old female presents with dizziness, fatigue, palpitations, poor memory, and decreased appetite. She has been breastfeeding her third child for the past year. Her menstrual cycle resumed 6 months after the birth of this child. Her periods are regular, but the flow is now scanty. Her dizziness is worse when she is fatigued, especially after her menstrual periods. She sleeps well at night, and she denies having any joint pain. She says she is always thirsty. Onset was 2 months ago.

**MEDICAL HISTORY:** G3P3

**PSYCHOSOCIAL:** Homemaker

**PHYSICAL EXAMINATION:** Her skin is dry, and her face, lips, and fingernails appear pale.

**TONGUE:** Her tongue is pale.

**PULSE:** Her pulse is thin and weak.

1. Which one of the following syndromes is most likely?
  - A. Yin Deficiency
  - B. Phlegm Stagnation
  - C. Qi and Blood Deficiency
  - D. Kidney Essence Deficiency
2. What principles of treatment are most appropriate for her?
  - A. tonify Qi and Blood
  - B. tonify Kidney Yin and Blood
  - C. tonify Kidney Essence and Qi
  - D. dissolve the Phlegm, tonify Qi
3. Needling which acupuncture points will best address her presentation?
  - A. CV 4, CV 6, CV 12, BL 23, KI 3, GV 20
  - B. CV 4, CV 6, BL 23, BL 13, BL 15, BL 20, GV 20, KI 3
  - C. BL 13, BL 15, BL 20, ST 36, SP 6, CV 4, CV 12, GV 20
  - D. ST 40, ST 36, CV 6, CV 12, BL 12, BL 15, BL 20, GV 20
4. As you are removing the needles after treatment, one appears to be stuck. Which of the following will most likely cause the needle to be released?
  - A. application of a cold wet cloth to the needle site
  - B. gentle massage in the area that surrounds the point
  - C. insertion of another needle directly next to the stuck needle
  - D. None of the above; the needle must be removed surgically.



Case #2

PRESENTATION: A 14-year-old male presents with wheezing, a weak voice, short rapid breathing, a cough that produces a white watery sputum, and perspiration on exertion.

MEDICAL HISTORY: His mother tells you that he has always been frail. He frequently experiences URI symptoms.

PSYCHOSOCIAL: He is a student in secondary school.

SENSITIVITIES: He is sensitive to cold, damp weather.

PHYSICAL EXAMINATION: His complexion appears pale.

PULSE: His pulse is thin and weak.

1. On physical examination, how would you expect his tongue to appear?
  - A. red, with a midline fissure
  - B. pale, with a thin white coating
  - C. red, with a thick yellow coating
  - D. pale and swollen, with scalloping on the sides
2. According to eight principle theory, how would you assess this case?
  - A. Interior/Hot/Excess/Yang
  - B. Exterior/Heat/Excess/Yin
  - C. Interior/Cold/Deficient/Yang
  - D. Exterior/Cold/Deficient/Yin
3. Which organ is primarily responsible for protecting against invasion of exterior pathogenic factors?
  - A. Lung
  - B. Spleen
  - C. Kidney
  - D. Stomach
4. Which syndrome is he most likely exhibiting?
  - A. Lung Qi Deficiency
  - B. Spleen Qi Deficiency
  - C. Kidney Yin Deficiency
  - D. Phlegm-Heat Obstructing the Lung
5. What are the most appropriate treatment principles for this case?
  - A. tonify Lung Qi
  - B. tonify Spleen Qi
  - C. tonify Kidney Yin
  - D. dissolve the Phlegm, dispel the Heat
6. Which set of points would you needle?
  - A. BL 23, CV 4, KI 6, BL 13
  - B. LU 7, LU 9, CV 6, BL 13, ST 36
  - C. LU 5, LU 7, ST 40, LI 4, ST 8, GV 20
  - D. ST 36, SP 3, SP 6, BL 20, BL 21, CV 12