

QP3 Daily Question Preview-Day 3

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INFECTIOUS

DISEASE

BOARD REVIEW

DISEASE

BOARD REVIEW

AUGUST 16-20, 2025



Daily Question Preview: Day 3

Moderator: Paul Auwaerter, MD

7/18/2025

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PREVIEW QUESTION

3.1

A 35-year-old woman presents with a painless ulcer on her vulva and one on her soft palate following unprotected vaginal and receptive oral sex 3 weeks earlier. She has no other symptoms. Examination reveals the two ulcers with heaped-up borders and a clean base.

Which of the following diagnostic tests is inappropriate to obtain?

A. Serum RPR

B. Serum VDRL

C. Serum treponemal EIA

D. Darkfield microscopy on a specimen obtained from the oral ulcer

E. Darkfield microscopy on a specimen obtained from the vulvar ulcer

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**D. Darkfield microscopy on a specimen obtained from the oral ulcer \*\***

E. Darkfield microscopy on a specimen obtained from the vulvar ulcer

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PREVIEW QUESTION

3.2

28-year-old old male presents with temp 39°C, diffuse myalgia, headache, malaise. Returned 2 days ago from “Iron Man” race with running, biking, swimming in lake, climbing in Hawaii. Numerous mosquito bites. Exam: Conjunctival suffusion but no other localizing findings.

WBC 14,500 with 80%PMN, no eos or bands. Platelets 210k.

Bili 2.4, ALT 45, AST 52, Alk Phos 120, Cr 1.6. Hct 45%. BC neg. UA: normal

What is the most likely diagnosis?

A. Malaria

B. Dengue

C. Ehrlichiosis

D. Leptospirosis

E. Zika

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PREVIEW QUESTION

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D. **Leptospirosis \*\***

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PREVIEW QUESTION

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3.3 54-year-old man with 4 weeks of cough, low grade fevers, & left-sided chest pain. Received a liver transplant 11 months ago, complicated by rejection, requiring high dose steroids 4 months ago. He receives TMP/SMX three times a week. On exam, he is stable, chronically-ill appearing, febrile (101.1°F), has clear lungs and benign abdomen. Labs reveal a normal white blood cell count, slight anemia, & normal creatinine. Chest radiograph reveals hazy opacity in left lower lung zone. Chest CT reveals nodular air-space consolidation in the left lower lobe with central cavitation (image). Gram stain of bronchoalveolar lavage fluid reveals beaded gram-positive filamentous organisms (image).

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PREVIEW QUESTION


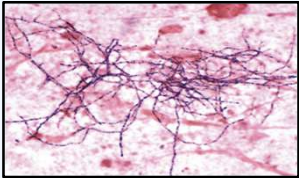
INFECTIONSDISEASE

BOARD REVIEW

3.3

Chest CT

BAL

CT Image from J. Bargher, et al. Clinical Radiology, 2013-05-01, Volume 68, Issue 5, Pages e266-e271.

Gram stain image from Murray, et al. Medical Microbiology, 7E, 2013 Saunders, Elsevier.

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PREVIEW QUESTION

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3.3 What is the most likely cause of this patient’s pneumonia?

A. *Cryptococcus neoformans*

B. *Histoplasma capsulatum*

C. *Actinomyces israelii*

D. *Nocardia farcinica*

E. *Aspergillus fumigatus*

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PREVIEW QUESTION



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- C. *Actinomyces israelii*
- D. *Nocardia farcinica* \*\*
- E. *Aspergillus fumigatus*

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PREVIEW QUESTION



3.4 A 32-year-old man presents complaining of a penile discharge. Gram's stain of the urethral discharge reveals intracellular Gram-negative diplococci. He reports an allergy to penicillins and cephalosporins.  
Which of the following regimens does the CDC recommend as the most appropriate therapy?

- A. Azithromycin
- B. Azithromycin plus ceftriaxone
- C. Azithromycin plus gentamicin
- D. Ciprofloxacin
- E. Spectinomycin

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PREVIEW QUESTION



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PREVIEW QUESTION



3.5 A man with persistent urethritis following doxycycline therapy is tested and found to be positive for *Mycoplasma genitalium*.  
Which of the following is the most appropriate therapy (assume today is his last day of doxycycline)?

- A. Azithromycin 1g orally
- B. Azithromycin 500mg orally X1 followed by 250 mg daily on the subsequent 3 days
- C. Doxycycline 100 mg orally twice daily for 14 days
- D. Moxifloxacin 400 mg orally daily for 7 days

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PREVIEW QUESTION



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PREVIEW QUESTION



- 3.6 62-year-old male living in an exurb of Phoenix, Arizona presents in early September with a three-day history of fever, myalgia, headache and rash.
- He works as an electrical lineman for a utility company. He lives with his family in an older adobe home with dogs. There is a faint maculopapular rash on extremities.
- Which of the following is the most likely diagnosis?
- A. Human Monocytic Ehrlichiosis (HME)
  - B. Human Granulocytic Anaplasmosis (HGA)
  - C. Babesiosis
  - D. Rocky Mountain Spotted Fever (RMSF)
  - E. Tularemia

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PREVIEW QUESTION



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PREVIEW QUESTION




- 3.7 35-year-old male 68 days post allogeneic bone marrow transplantation for myelodysplastic syndrome, receiving methylprednisolone 500 mg for Grade III GVHD of the gastrointestinal tract developed fever, several painful, red skin nodules and a blood culture growing a mold.



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PREVIEW QUESTION




3.7 Which of the following is the most likely fungus?

- A. *Scedosporium apiospermum* (*Pseudallescheria boydii*)
- B. *Lomentospora* (*Scedosporium*) *prolificans*
- C. *Apophysomyces elegans*
- D. *Fusarium multifforme*
- E. *Alternaria alternata*

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PREVIEW QUESTION




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- D. *Fusarium multifforme* \*\*
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PREVIEW QUESTION



3.8 53-year-old female recently arrived in US from Ukraine. Reports 3 months of cough. CXR with RUL cavity. Sputum Xpert result “MTB detected” and “Rifampin resistance detected.” Additional molecular testing shows mutation in *katG* associated with high-level INH resistance. No mutations in *gyrA* or *gyrB* (i.e., no molecular evidence of FQ resistance).


What is the best treatment approach?

- A. Start RIPE plus moxifloxacin, plus amikacin given daily
- B. Start RIPE plus moxifloxacin, plus amikacin given 3x/week
- C. Start moxifloxacin, amikacin, cycloserine, linezolid, ethionamide
- D. Start bedaquiline, pretomanid, linezolid, moxifloxacin

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- D. Start bedaquiline, pretomanid, linezolid, moxifloxacin \*\*

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PREVIEW QUESTION



3.9 49-year-old female complains of four years of fatigue, headache, poor sleep and joint aches since trip to London UK

PMH: TAH/BSO

Medications: hormone replacement

SH: Married, accountant. Lives in central Pennsylvania. Two dogs, often sleep in bed.

PE: normal



Labs: normal CBC, ESR, TSH

B. burgdorferi serology: EIA (not done), IgM WB 3/3 bands, IgG 1/10

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PREVIEW QUESTION



3.9 What is the best recommendation at this time?

A. Doxycycline 100 mg twice daily x 14 days

B. Doxycycline 100 mg twice daily x 28 days

C. Repeat Lyme serology (two tier: EIA w/ reflex WB)



D. Borrelia burgdorferi PCR (whole blood)

E. Neither additional Lyme disease testing nor treatment

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PREVIEW QUESTION



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PREVIEW QUESTION



3.10 A surgical colleague calls you because 2 of his patients developed *Candida albicans* surgical site infections following spine surgery. You review the hospital's microbiology records and confirm that this is very unusual.

What are potential sources for this cluster?

A. Scrub nurse wearing artificial nails

B. Disruption of laminar airflow in the operating room

C. Contamination of intravenous fluids used during surgery


D. Failure of peri-operative blood glucose control

E. Use of broad-spectrum antibiotics for peri-operative prophylaxis

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PREVIEW QUESTION



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PREVIEW QUESTION



3.11 A 43-year-old man is brought to the hospital after being found unconscious. Vomitus and feces were on the patient. His airway was suctioned; he was intubated for airway protection and then transferred to the ICU. An LP was performed. Gram stain showed gram negative diplococci.

Which healthcare workers should be offered post-exposure prophylaxis?

A. The scribe who documented the patient's emergency care

B. The respiratory therapist that suctioned the patient's vomitus

C. The medicine intern that did an admission physical in the ICU


D. The radiology technician that did a portable chest x-ray in the ED

E. The nurse that placed his IV in the ED (difficult stick, 3 attempts)

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PREVIEW QUESTION



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PREVIEW QUESTION



3.12

- 35 M 6d fever, malaise, severe headache, dry cough, myalgia
- PMH: HTN
- Meds: Lisinopril/HCT
- SH: Married, suburban Maryland,
  - Works in long-term care facility
  - Visited pet shop 10d earlier
    - Parakeets, cockatiels
  - Confided infidelity in last month

Exam: ill-toxic, 40°C P88  
BP100/70 RR18 O2 97% RA

Lungs: clear

Neck: supple

Cor: no murmurs

Skin: no rashes

LP: pending

Labs:

WBC 5200, 26% B


Sputum: 1+ PMNs, no organisms

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PREVIEW QUESTION




3.12 Which antibiotic will lead to the most rapid improvement?

A. Ceftriaxone

B. Gentamicin

C. Doxycycline


D. Trimethoprim/sulfamethoxazole



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PREVIEW QUESTION



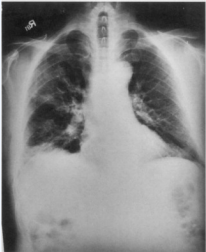
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**C. Doxycycline \*\***


D. Trimethoprim/sulfamethoxazole



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PREVIEW QUESTION



3.13 31-year-old male from Tidewater region of Virginia presents in June with three days of fever and rash.

Exam: unremarkable but T39.2°C, discrete black eschar on leg, scattered maculopapular rash elsewhere

Which of the following is the most likely etiologic agent?


A. Rickettsia rickettsii

B. Ehrlichia chaffeensis

C. Rickettsia parkeri

D. Anaplasma phagocytophilum


E. Rickettsia akari



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PREVIEW QUESTION



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PREVIEW QUESTION




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3.14 42-year-old male went camping with his son on Cape Cod, MA  
Didn't use DEET, no tick bites known  
About 4d after returning home, fever, chills, myalgia. Noted rash on thigh  
PMH: none  
PE: Appears ill, non-toxic, 104/60, P96 T101.7°F  
Exam only notable for 3 pink ovoid rashes over trunk, R thigh (largest ~7cm)  
Labs: WBC 2.2 Hg 9.6 plt 110K  
ALT 80 AST 58 Tot Bili 2.4

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PREVIEW QUESTION



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3.14 Doxycycline is prescribed.  
What should also be performed as part of the plan?

- A. PCR for *E. chaffeensis*
- B. Serology for spotted fever rickettsia (RMSF)
- C. Blood smear
- D. Serology for *B. burgdorferi*
- E. Nothing additional

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PREVIEW QUESTION



QUESTIONS  
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PREVIEW QUESTION



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3.15 A patient with end stage renal disease on dialysis through a tunneled hemodialysis catheter is admitted to the medical ICU with altered mental status, hypotension, and fever. On exam he has obvious purulence at the catheter site.  
For the patient's syndrome, which of the following is NOT an evidence-based intervention?

- A. Early and effective antibiotics
- B. Albumin as the preferred resuscitation fluid
- C. Measuring serum lactate
- D. Fluid resuscitation with 30 cc's/kg crystalloid

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### PREVIEW QUESTION



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