Pre-work 8/22/2023:

1. A 52-year-old woman is evaluated for a 1-month history of fever, malaise, and weight loss. She has a history of cardiomyopathy, for which she received a heart transplant 5 years ago; 3 months ago, an episode of rejection occurred, and high-dose glucocorticoids were initiated. At the time of transplantation, studies were significant for donor seropositivity for Epstein-Barr virus and cytomegalovirus; the patient was negative for both. Medications are tacrolimus, mycophenolate mofetil, prednisone, and trimethoprim-sulfamethoxazole.

On physical examination, temperature is 37.7 °C (99.9 °F), and other vital signs are normal. Cervical lymphadenopathy is noted. The remainder of the examination is unremarkable.

CT scan of the chest shows an anterior mediastinal mass.

Top of Form

Which of the following infections is the most likely cause of the patient's findings?

1. Adenovirus
2. Epstein-Barr virus
3. *Escherichia coli*
4. *Pneumocystis jirovecii*

Bottom of Form

2. A 29-year-old man is evaluated for a 2-day history of diarrhea and crampy abdominal pain. Medical history is significant for non-Hodgkin lymphoma. Medications are rituximab, cyclophosphamide, doxorubicin hydrochloride, vincristine, and prednisone.

On physical examination, temperature is 38 °C (100.4 °F); other vital signs are normal. The abdomen is nondistended, bowel sounds are present, and mild tenderness to palpation is elicited.

A complete blood count and metabolic panel are normal. Rapid molecular gastrointestinal assay of the stool identifies *Campylobacter*.

Top of Form

Which of the following is the most appropriate empiric treatment for this patient?

1. Amoxicillin
2. Azithromycin
3. Fidaxomicin
4. Metronidazole
5. Vancomycin

Bottom of Form

3. A 29-year-old woman is evaluated for multiple episodes of diarrhea and emesis with significant abdominal pain and distension. She was hospitalized 3 days ago for *Escherichia coli–*associated pyelonephritis and treated with ceftriaxone. She takes no other medications.

On physical examination, the patient is confused. Temperature is 38.5 °C (101.3 °F), blood pressure is 90/60 mm Hg, pulse rate is 125/min, and respiration rate is 24/min. The abdomen is distended, with decreased bowel sounds and tenderness to palpation but no guarding. The remainder of the examination is noncontributory.

Laboratory studies show a leukocyte count of 30,000/µL (30 × 109/L), a serum creatinine level of 2 mg/dL (177 µmol/L), and plasma lactate  level of 4 mEq/L (4 mmol/L).

Stool testing for *Clostridioides difficile* is positive. Imaging of the colon reveals areas of the large bowel exceeding 6 cm in diameter, consistent with megacolon.

The patient is transferred to the ICU and surgical consultation is obtained.

Top of Form

Which of the following is the most appropriate initial treatment?

1. Fecal microbiota transplant
2. Intravenous vancomycin
3. Oral vancomycin
4. Oral metronidazole
5. Oral vancomycin plus intravenous metronidazole

Bottom of Form

4. List the sexually transmitted infections (STI) that persons at high risk for STI should be screened for.

5. Most persons who become infected with *Mycobacterium tuberculosis* remain asymptomatic and develop latent tuberculosis. List three risk factors for the development of active TB.

6. Know the preferred therapy for methicillin-sensitive staphylococcus aureus (MSSA) bacteremia and the options for therapy for methicillin-resistant staphylococcus aureus (MRSA) bacteremia.