HIV and AIDS Academic Half Day
(adapted from UC)

Case #1
A 27 y/o previously healthy male presents with 2 days of mild fever, sore throat, generalized malaise. You note cervical and axillary lymphadenopathy, mild meningismus, and a diffuse maculopapular rash on his trunk and neck. On further history he notes an episode of unprotected intercourse roughly 2 weeks prior. He had otherwise not been sexually active for many months.

1) How does Acute HIV present and what else should be in your differential?

2) You suspect Acute HIV. What is the best test to order at this time and why?

3) You check the lab discussed above. What do you think this patient's CD4 count, RNA PCR, HIV Antibody testing to show?

4) You discuss the patient's HIV infection as well as Anti-Retroviral Therapy (ART). Who should be treated with ART? After initial diagnosis, what other baseline labs should he receive?

5) How are you going to monitor their HIV and potential complications?

6) What preventative care items need to be addressed in patients with HIV?

Case #1 Continued

Your patient moves to Florida and loses touch with the medical system. 12 years later he presents as a 39 year old male with a generalized tonic-clonic seizure. Prior to this, he had a 2-3 week history of fevers and headaches. His CD4 count is 14, His HIV RNA is >500,000. He is confused, and has a temperature of 101. He has no nuchal rigidity. On a cursory neurologic exam he has no focal abnormalities.

6) What study would you like? What is on your differential? What do you think is most likely?

CT Scan without Contrast

MRI with Gadolinium

Differential Diagnosis –

7) How would you further evaluate him? How would you proceed to treat and/or differentiate between etiologies of your differential?

8) How could this complication have been prevented in this patient? What are the indications for prophylaxis against Toxoplasmosis in patients with HIV?

Case #2

32 y/o M presents with 2 weeks of shortness of breath, dyspnea on exertion, and cough. He has a 25 lb weight loss over the past 2-3 months. He was diagnosed with HIV in 2006 and had a "pneumonia" five months ago. He takes only OTC medications. When he had "pneumonia", his CD4 was 135, HIV Quant 329,000 copies

Vital Signs: T 101F, HR 132, BP 80/40, RR 24, SaO2 80% on RA.

Physical Exam: He is thin, tacky mucous membranes, tachycardic, in moderate respiratory distress, has a mildly productive cough, no lymphadenopathy, and has some minor diffuse crackles in his lungs bilaterally.

1) What do you think is going on? How will you confirm your diagnosis?

2) You obtain the appropriate test and your suspicion was confirmed. How do you grade severity? How can you treat this infection?

3) He is now nearing discharge. What prophylactic medications should this patient be discharged home with? What pathogens will be covered?

TMP-SMX 1 DS tab daily OR
1 SS tab daily

Case #3

45 year old F with history of AIDS (recent PCP Pneumonia) who presents with headache and fever for 2 weeks. Her boyfriend brought her in because today she was confused, didn't know where she was, and wasn't answering questions appropriately. Her temperature is 101 and she has some neck rigidity and grimaces when trying to flex her neck.

1) What is on your differential diagnosis?

2) What test helps to make the diagnosis?

Case #3 (Continued)

A CT is obtained which shows mild atrophy, but no mass lesions. A lumbar puncture is performed and analysis of the CSF shows 7 wbc/mm^3, glucose of 41 mg/dL, and a negative gram stain. The opening pressure is 310 mmH20. CD4 count is 12. Toxoplasma shows IgG is positive, and IgM is negative.

3) How do you treat the infection?

4) Your patient is started on the above therapy and ARTs. At admission your patient initially improves, but then over the next 24-48 hours her mental status waxes and wanes. Her nurse calls you to the bedside to evaluate the patient – she is worried your patient may be seizing. What could be going on?

5) The patient improves with your treatment and is discharged on all of her medications with plans to complete therapy for her crypto meningitis. Several days later she returns with severe headache, nausea, vomiting, and malaise, and myalgia. She has had low grade fevers at home. She's been taking all of her medications, what could be going wrong?

Case #4

You are on Long Call one Wednesday night when one of your co-interns comes up to you and appears anxious. They tell you that they were performing an I&D on a patient with an arm abscess. When they were capping the needle after injecting lidocaine they accidentally poked their finger with the needle. They cleansed the area, but are now unsure what else to do and come to you for advice.

1) What is the risk of HIV transmission from an occupational needlestick exposure? What about other infectious bloodborne pathogens?

2) Who should your co-intern contact regarding this needlestick injury?

3) What labs should be done on the source patient? What about on your co-intern?

4) Should your co-intern be started on any medications at this time? What are the indications for post-exposure prophylaxis? How are the recommendations different between occupational and non-occupational exposures?

5) The source patient is an injection drug user, but luckily they are HIV negative. They ask you how they can reduce their risk of acquiring HIV in the future. What advice would you give them?