Pharmacotherapy Update
Treatment Guidelines for Adult HIV Infection

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In August of this year, the Journal of the American Medical Association (JAMA) published the 2008 recommendations of the International AIDS Society–USA Panel for Antiretroviral Treatment of Adult HIV Infection and updated estimates of HIV incidence in the United States. [1,2] The new evidence-based recommendations updated those from August 2006 and were constructed taking into consideration advances and developments that included new antiretroviral agents recently introduced: new data about initial drug therapy for HIV; and new insights in HIV-related diseases. Estimation of HIV incidence was determined by combining diagnostic surveillance data with testing for recent infection and then corroborating this with back calculation estimates of HIV and AIDS.

A major change in the new IAS-USA guidelines increases the CD4 cell count threshold for when to initiate antiretroviral therapy from less than 200/µL to less than 350/µL. The authors note that the risk-to-benefit ratio is shifting toward earlier treatment. Newer regimens are less toxic, have improved pharmacokinetics and treatment response, improved adherence, and a lower potential for resistance. Antiretroviral therapy is recommended for all patients with symptomatic established HIV disease after appropriate counseling. For asymptomatic individuals, therapy should be initiated before CD4 cell count decreases to less than 350/µL. Guidance is also provided for patients with CD4 counts above 350/µL based on comorbidities, risk of disease, patient willingness, and estimated ability to adhere to long-term treatment.

Guidelines for initial regimens in treatment-naïve patients have been refined as well. Recommended regimens include two nucleoside reverse transcriptase inhibitors plus either efavirenz or a protease inhibitor boosted with ritonavir. Treatment should be individualized with the best choice among these agents depending on comorbidities, other conditions such as desire for pregnancy, patient tolerance, drug interactions, and primary drug resistance.

Revised guidelines are provided for patient monitoring. The initial workup of newly diagnosed HIV-infected treatment-naive persons regardless of estimated

duration of infection should include baseline genotypic testing for resistance. The guidelines state that plasma HIV-1 RNA levels should be monitored frequently when treatment is initiated or changed for virologic failure (eg, at 2, 4, 8, and every 4 weeks thereafter) until levels drop below the assay detection limits, and regularly thereafter. Twice-yearly CD4 cell counts are reasonable once the viral load is suppressed for an extended period and CD4 cell counts are stable at 350/µL or more. They note that therapeutic drug monitoring remains controversial. Resistance testing should also be considered after a new regimen is introduced if the trajectory of HIV-1 RNA reduction is not optimal. Complete IAS-USA panel recommendations for antiretroviral resistance testing can be found in the July 15, 2008 issue of Clinical Infectious Diseases.[3]

Treatment guidelines have also been refined in special populations. Treatment for HIV infection should be considered at any CD4 count for patients with Hepatitis B coinfection. Antiretroviral treatment may be considered at any CD4 cell count for persons coinfected with HCV genotypes 1a, 1b, or 4. The guidelines state that therapy should also be considered for those with HCV genotypes 2 or 3 who do not clear virus with therapy or who cannot tolerate HCV treatment. The principles for modifying a regimen successful in suppressing HIV in treatment-experienced patients have not changed. Additional recommendations are provided for multidrug resistance.

As a result of utilizing the BED HIV-1 capture enzyme immunoassay, which differentiates recent from long-standing infections, combined with routine HIV surveillance data, approximately 56,300 new infections were estimated in the United States in 2006.[2] This is much higher than a previous estimate from the Centers for Disease Control and Prevention of approximately 40,000 new infections annually. The authors suggest that these higher estimates could be due to selection bias in the population of this estimate, improved statistical methodology, or a direct increase in HIV incidence. New HIV infections remain disproportionately high in the African-American population and in men who have sex with men.

1. Hammer SM, Eron JJ, Reiss P, et al. Antiretroviral Treatment of Adult HIV Infection: 2008 Recommendations of the International AIDS Society–USA Panel. JAMA.300:555-570, 2008. [PMID: 18677028]

2. Hall HI, Song R, Rhodes P, et al. Estimation of HIV Incidence in the United States. JAMA.300:520-529, 2008. [PMID: 18677024]

3. Hirsch MS, Gunthard HF, Schapiro JM, et al. Antiretroviral Drug Resistance Testing in Adult HIV-1 Infection: 2008 Recommendation of an International Aids Society-USA Panel. Clin Infect Dis.47:266-285, 2008. [PMID: 18549313]