

HOSPITAL PHYSICIAN®

INFECTIOUS DISEASES BOARD REVIEW MANUAL

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The *Hospital Physician Infectious Diseases Board Review Manual* is a study guide for fellows and practicing physicians preparing for board examinations in infectious diseases. Each manual reviews a topic essential to current practice in the subspecialty of infectious diseases.

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Initiating Combination Antiretroviral Therapy in Treatment-Naive Patients with HIV

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Initiating Combination Antiretroviral Therapy in Treatment-Naive Patients with HIV

Jason J. Bofinger, MD, Robert Bettiker, MD, and Rafik Samuel, MD

INTRODUCTION

With the advent of combination antiretroviral therapy, the face of HIV infection was changed forever. What was once a uniformly fatal disease became, for many with access to appropriate care, a chronic illness not unlike diabetes or congestive heart failure. Since its introduction in 1996, the use of combination antiretroviral therapy has led to significant reductions in both mortality and progression to AIDS.¹

Since persons treated with combination antiretroviral therapy are living longer, a shift in emphasis from the complications of HIV infection itself to the consequences of long-term use of antiretroviral medications has occurred. It has therefore become important to consider carefully the appropriate timing of treatment initiation in order to maximize the benefits of therapy while attempting to minimize its potential long-term consequences. For each patient, the choice of regimen must be individualized by taking into account the possible long-term complications of treatment, side effects, and tolerability, all of which may have a major impact on both quality of life and adherence to a regimen.

In the following manual, we will review the initiation of combination antiretroviral therapy in the treatment-naive setting, including indications for starting treatment, what to start, the goals of therapy, and important factors regarding side effects and possible adverse consequences of antiretroviral medications.

CASE I

INITIAL PRESENTATION



The patient is a 35-year-old man presenting for initial evaluation of newly diagnosed HIV

infection. He believes that he acquired the infection through unprotected sexual intercourse with another man. He feels well, has no complaints, and takes no medicines. He does not smoke cigarettes, drinks alcohol occasionally, and has never used illicit drugs. He works 10 to 14 hours a day as a newspaper journalist. Physical examination is normal. Laboratory evaluation reveals a CD4 count of 490 cells/mm³ and a viral load of 90,000 copies/mL.

- **When should combination antiretroviral therapy be started in treatment-naive patients with established HIV infection?**

INITIATING COMBINATION THERAPY

Both the International AIDS Society–USA Panel (IAS-USA) and the U.S. Department of Health and Human Services (DHHS) have published guidelines that delineate the indications for starting combination antiretroviral therapy in treatment-naive individuals.^{2,3} For symptomatic persons with either past or present evidence of an AIDS-defining illness, combination antiretroviral therapy should be started regardless of the CD4 cell count. For those who are asymptomatic, the CD4 count is the most important prognostic indicator of disease-free survival.⁴ Data from randomized controlled trials such as the AIDS Clinical Trials Group (ACTG) 320 study⁵ and others⁶ provide strong evidence that treating individuals with CD4 counts less than 200 cells/mm³ results in significant lowering of the risk of developing AIDS-defining illnesses. In addition, recent data demonstrate that the degree of baseline immune suppression does not affect the response to treatment. In the ACTG 5095 study,⁷ even patients with a very low CD4 nadir had virologic and immunologic responses to treatment comparable with those with a higher CD4 nadir. For these reasons, the guidelines