TABLE 101-5 RECOMMENDATIONS FOR PRIMARY AND SECONDARY PROPHYLAXIS FOR PERSONS WITH HIV INFECTION

PATHOGEN	CD4 THRESHOLD (CELLS/MM^3)	ADDITIONAL INDICATION	PREFERRED	ALTERNATE
PRIMARY PROPHYLAXIS				
Pneumocystis jirovecii	<200		TMP-SMX SS or DS tablet daily	Dapsone, atovaquone
Toxoplasmosis	<100	Anti-*Toxoplasma* IgG detectable	TMP-SMX SS or DS tablet daily	Pyrimethamine-dapsone and pyrimethamine-sulfadoxine
Mycobacterium avium-intercellulare	<50		Azithromycin 1200 mg weekly	Clarithryomicin 500 mg bid
SECONDARY PROPHYLAXIS				
Mycobacterium tuberculosis	Any	History of exposure to TB confirmed by PPD test or IGRA	Isoniazid depending on sensitivities	Rifampin, isoniazid+rifapentene
Cryptococcosis	<200	History of cryptococcal meningitis or cryptococcal antigen positive	Fluconazole	NA
Coccidomycosis	<150	Antihistoplasma IgG detectable or history of coccidiomycosis	Fluconazole or itraconazole	NA
Histoplasmosis	<150	Anticoccidomyces IgG detectable	Itraconazole	NA
Cytomegalovirus (CMV)	<50	Ocular or extraocular findings consistent with CMV infection	Ganciclovir 3 g/day	NA

DS, Double-strength; IgG, immunoglobulin G; IGRA, interferon-γ release assay; NA, not applicable; PPD, purified protein derivative; SS, single-strength; TB, tuberculosis; TMP-SMX, trimethoprim-sulfamethoxazole.

is moderately effective in patients with CD4 counts lower than 50 cells/mm^3, but prompt initiation of effective ART with early treatment of active disease is the currently preferred strategy. Prophylaxis is very effective against recurrent HSV type 2 infection (with acyclovir, famciclovir, or valacyclovir) and against recurrent *Candida* esophagitis (with fluconazole) but should generally be reserved for those patients with recurrent symptomatic disease. Persons from areas where histoplasmosis or coccidiomycosis is endemic should be considered for primary prophylaxis (with fluconazole) if they have detectable antibodies and their CD4 count is lower than 150 cells/mm^3. No guidelines exist for cryptococcal antigen screening.

After the CD4 count rises on ART, withdrawal of prophylaxis against specific OIs is reasonable. After initiation of effective ART and two consecutive CD4 counts at least 3 months apart that exceed 100 cells/mm^3, prophylaxis against CMV and MAI may be withdrawn safely; likewise, if the two consecutive counts exceed 200 cells/mm^3, prophylaxis against PCP and *T. gondii* may be withdrawn.

For a deeper discussion of these topics, please see Chapter 389, "Prophylaxis and Management of Complications of HIV/AIDS: Infectious, Neoplastic, and Metabolic," in Goldman-Cecil Medicine, *25th Edition.*

MANAGEMENT OF SPECIFIC CLINICAL MANIFESTATIONS OF HIV INFECTION

Clinical manifestations of HIV include not only OIs associated with immunodeficiency but also HIV-associated malignancies and other noninfectious complications of HIV. The manifestations of HIV vary significantly in time of onset (see Table 101-2). Before the onset of infectious complications, some HIV-associated cancers such as non-Hodgkin's lymphoma and HPV-associated carcinomas can develop. Infectious complications such tuberculosis can manifest at any CD4 count and occur with increased frequency in association with HIV. Infectious complications that occur with higher CD4 counts respond to routine therapy for the specific infection (e.g., appropriate β-lactam antibiotic for pneumococcal pneumonia, standard multidrug therapy for pulmonary tuberculosis), whereas OIs occurring with CD4 counts lower than 200 cells/mm^3 require chronic suppressive therapy after treatment of the acute infection (e.g., PCP pneumonia, CMV retinitis, *Cryptococcus neoformans* meningitis).

For a deeper discussion of these topics, please see Chapter 389, "Prophylaxis and Management of Complications of HIV/AIDS: Infectious, Neoplastic, and Metabolic," in Goldman-Cecil Medicine, *25th Edition.*

Initial Assessment of HIV-Associated Illnesses

Assessment of a patient's immunologic status is key in the evaluation of persons with HIV when there is a new presenting illness or complaint. If the patient is on ART and has had a recent CD4 assessment, that count is the best indicator of their status. Persons without recent CD4 testing should be presumed to be immunocompromised unless there is clear information to suggest the contrary. If there has been a treatment interruption, the CD4 count should return to its prior nadir after about 12 months of interruption. During an acute illness, the absolute CD4 count may decline; therefore, a measured CD4 count during an acute illness can underestimate an individual's true immune function.

Constitutional Symptoms

Nonspecific symptoms may be the initial clinical manifestations of severe immunodeficiency. Patients may develop unexplained fever, night sweats, anorexia, weight loss, or diarrhea. These symptoms may last for weeks or months before the development of identifiable OIs in patients who do not receive effective ART. Most persistent fevers occurring late in the course of HIV infection reflect a definable OI. The most common cause of unexplained fever and anemia in patients with CD4 counts lower than 50 cells/mm^3 is disseminated MAI infection. This may be diagnosed by bone marrow biopsy, but blood cultures in