HIV Medicine Core Curriculum
Learning Objectives

Overview of HIV Infection
Approach to the Patient with HIV
Clinical Manifestations of HIV Infection
Principles of Antiretroviral Therapy
Research Issues

2004
The AAHIVM Core Curriculum

The American Academy of HIV Medicine is pleased to present the 2004 HIV Medicine Core Curriculum. This document lists the more than 200 Learning Objectives that together define the critical knowledge an HIV health care provider should possess to be considered an up-to-date HIV Specialist.

Each year since 2000, the Academy has assembled an expert panel of more than 50 of the nation’s leading frontline clinicians, academicians, and other authorities in the field of HIV medicine to generate and update the Core Curriculum. The original Core Curriculum, completed in 2001, was first revised in late 2002. The Core Curriculum faculty convened again in late 2003 for this, the second annual revision. New this year, the Core Curriculum includes an appendix with additional Learning Objectives addressing international issues in HIV medicine.

The 2004 Core Curriculum consists of 210 Learning Objectives spanning five general topics and 50 subtopics. Among these Learning Objectives, 41 Recent Learning Objectives are highlighted with arrows. These Recent Learning Objectives address very recent information, especially that acquired in the past 18 months, that a health care provider needs to know to be up-to-date in HIV medicine.

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# Table of Contents

About the American Academy of HIV Medicine ........................................... 4

## PART I: OVERVIEW OF HIV

Chapter 1: Epidemiology ............................................................ 5
Chapter 2: Pathogenesis and Classification ...................................... 5
Chapter 3: Transmission ................................................................ 5
Chapter 4: Detection and Diagnosis ................................................. 5

## PART II: APPROACH TO THE PATIENT WITH HIV

Chapter 5: History ...................................................................... 6
Chapter 6: Physical Examination ................................................... 6
Chapter 7: Laboratory Evaluation .................................................. 6
Chapter 8: Symptoms/System Evaluation ....................................... 6
Chapter 9: HIV Testing and Counseling ........................................ 6
Chapter 10: Health Maintenance .................................................... 6
Chapter 11: HIV Transmission Prevention Education ...................... 7
Chapter 12: Care Settings/Modalities ............................................ 7
Chapter 13: Pain Management ...................................................... 8
Chapter 14: Special Populations .................................................... 8
Chapter 15: Psychosocial and Economic Issues ............................... 9
Chapter 16: Complementary and Alternative Medical Approaches ....... 10
Chapter 17: Systems-Based Practice ............................................ 10
Chapter 18: Palliative Care and End-of-Life Support ....................... 10
Chapter 19: Legal Issues ............................................................ 10

## PART III: CLINICAL MANIFESTATIONS OF HIV INFECTION

Chapter 20: Acute HIV Infection .................................................. 11
Chapter 21: Chronic HIV Infection ................................................. 11
Chapter 22: Opportunistic Infections ............................................. 11
Chapter 23: Malignancies and Neoplasms ...................................... 11
Chapter 24: Dermatologic Complications ...................................... 12
Chapter 25: Dental/Oral and ENT Complications ......................... 12
Chapter 26: Endocrine Disorders ................................................... 12
Chapter 27: Gynecologic Complications ....................................... 12
Chapter 28: Respiratory Complications ......................................... 12
Chapter 29: Psychiatric and Neurologic Complications ................. 13
Chapter 30: Gastrointestinal and Hepatobiliary Complications .. 13
Chapter 31: Ocular Complications ............................................... 13
Chapter 32: Hematologic Complications ..................................... 14
Chapter 33: Cardiac Complications .............................................. 14
Chapter 34: Renal Complications .................................................. 14
Chapter 35: Musculoskeletal Complications .................................... 14
Chapter 36: Sexually Transmitted Diseases ................................... 14

## PART IV: PRINCIPLES OF ANTIRETROVIRAL THERAPY

Chapter 37: Initiation .................................................................. 15
Chapter 38: Specific Agents ....................................................... 15
Chapter 39: Combination Therapy ............................................. 15
Chapter 40: Monitoring ............................................................... 16
Chapter 41: Modifying Therapy ................................................... 16
Chapter 42: Investigational Antiretroviral Medications .................. 17
Chapter 43: Pregnancy .............................................................. 17
Chapter 44: Adherence Issues ..................................................... 17
Chapter 45: Complications of Treatment ..................................... 18
Chapter 46: Post- and Preexposure Prophylaxis ......................... 18
Chapter 47: Immune-Based Therapies ......................................... 18

## PART V: RESEARCH ISSUES

Chapter 48: Research Design and Analysis .................................. 19
Chapter 49: Drug Development and Expanded Access .................. 19
Chapter 50: Ethical Issues in Performing HIV Research ............... 19

## APPENDIX: INTERNATIONAL ISSUES ............. 20

## INDEX OF RECENT LEARNING OBJECTIVES (RLOs) ......................... 21
About the AAHIVM
The American Academy of HIV Medicine is an independent organization of HIV Specialists and others dedicated to promoting excellence in HIV/AIDS care. Through advocacy and education, the Academy is committed to supporting health care providers in HIV medicine and to ensuring better care for those living with AIDS and HIV disease.

To promote best practices in the field of HIV medicine, the Academy offers a number of resources to its members, their patients, community organizations, and government and policy makers. These programs, services, and activities, many of which are listed below, have helped establish the Academy as an authority in HIV health care education and public policy as well as recognition of HIV Specialists.

The AAHIVM Self-Directed HIV Medicine Education Program
The Academy established the Self-Directed HIV Medicine Education Program as a part of its commitment to frontline HIV health care providers. This program, which includes the Core Curriculum, the HIV Medicine Self-Directed Study Guide, and a regional educational workshop series, establishes a standard in health care education and training that can improve the quality of life for HIV/AIDS patients, improve outcomes, and contribute to a more coordinated approach to HIV care. Private practices, medical groups, specialty organizations, and other institutions can use these tools to help their members keep up with recent changes in HIV knowledge:

- **The AAHIVM Core Curriculum**
  The Core Curriculum is a complete listing of Learning Objectives that together define the knowledge that an HIV health care provider should possess to be considered an up-to-date HIV Specialist. The Core Curriculum is revised and updated on an annual basis and forms the outline for the HIV Medicine Self-Directed Study Guide.

- **The AAHIVM HIV Medicine Self-Directed Study Guide**
  The HIV Medicine Self-Directed Study Guide is an educational tool created to provide the latest, most comprehensive information available concerning HIV/AIDS-related health care. It is a compilation of the background and key data for each of the Learning Objectives in the Academy’s Core Curriculum. Like the Core Curriculum, the Study Guide is updated on an annual basis.

- **Recent Learning Objectives Review: A One-Day Workshop Series**
  In 2004, the Academy will expand its educational leadership with a new workshop series based on the Core Curriculum Recent Learning Objectives. Each workshop in this series will present the 2004 Recent Learning Objectives in a concise one-day format offering continuing education credit. These objectives address the most important new clinical HIV information presented and published in the past 18 months. The Academy will hold this workshop in several cities across the country throughout 2004.

Public Policy
As a voice at national and state levels, the Academy advocates for the best interests of HIV patients and frontline HIV medical care providers. As part of its commitment to excellence in HIV/AIDS care, the Academy interacts with government agencies, AIDS service organizations, and others in efforts to help shape legislation. Through public policy initiatives, the Academy is working to serve patient needs in an era of increased complacency around HIV issues and to bring together historical and present-day perspectives of thousands of HIV primary care providers to advocate for policies that represent their unique point of view.

Credentialing
To recognize HIV medical providers who maintain up-to-date knowledge, the Academy created a national credentialing process to identify AAHIVM HIV Specialists™. The Academy started its credentialing process in December of 2001 using the Academy’s definition of an HIV Specialist. Since then, more than 1,700 providers have obtained the AAHIVM HIV Specialist™ designation, establishing the Academy’s credentialing program as a proven and credible process.

The Academy’s credentialing process is independent of membership and is provided as a free service to both members and non-members alike. Credentialing requirements must be met every two years to ensure that applicants maintain up-to-date knowledge in HIV medicine. To ensure that the credentialing process is accurate and supportable, approximately 10 percent of the applications are randomly selected for audit by the Academy.

Contact Us
For more information about AAHIVM, please visit our Website at www.aahivm.org or call us toll-free at 866-241-9601.
PART I: OVERVIEW OF HIV

Chapter 1: Epidemiology

I.1 U.S. EPIDEMIOLOGY
Describe current demographic trends in HIV disease in the United States, especially regarding gender, sexuality, race/ethnicity, age, injection drug use, socioeconomic status, and transmission of resistant virus.

I.2 GLOBAL VIROLOGY
Discuss the global prevalence and geographic distribution of HIV-1 and HIV-2 infection, including HIV-1 clades/subclades, and recognize impact that geographic site of HIV acquisition has on HIV type, and implications for therapy.

Chapter 2: Pathogenesis and Classification

I.3 PREDICTIVE FACTORS
Demonstrate knowledge of the factors predictive of HIV disease progression, including host factors, that can result in differences in progression, and how to communicate this concept to patients.

I.4 VIRAL REPLICATION
Discuss the HIV life cycle in the human body and the CD4+ cell, monitoring of CD4 count and HIV viral load, and HIV replication kinetics, for patient and community education settings.

I.5 AIDS DEFINITION
Describe the CDC definition of AIDS.

Chapter 3: Transmission

I.6 MODES
Explain the modes of sexual and nonsexual transmission of HIV and their relative risks in a manner appropriate for educating patients and the community about HIV risk and prevention.

I.7 UNSUBSTANTIATED MODES
Describe the evidence against unsubstantiated HIV transmission modes (e.g., mosquito-borne transmission).

I.8 SUPERINFECTION
Discuss the evidence for superinfection/reinfection of an HIV+ patient by another strain of HIV, and its implications for patient education/management.

Chapter 4: Detection and Diagnosis

I.9 FALSE-POSITIVE TEST RESULTS
Discuss the problem of false-positive results when testing populations of high versus low HIV prevalence.

I.10 TEST SENSITIVITIES AND SPECIFICITIES
Discuss the sensitivity and specificity of enzyme immunoassay (EIA) and Western blot HIV antibody tests.

I.11 TESTING METHODS
Describe the benefits, limitations, appropriate use, interpretation, and confirmation of available HIV testing methods.

I.12 TEST SENSITIVITY TO HIV VARIANTS
Explain how different antibody tests and viral load tests vary in their sensitivities to detect HIV-1, HIV-2, and the HIV-1 subclades.

I.13 DIAGNOSIS OF PRIMARY INFECTION
Describe the approach to the diagnosis of the acute retroviral syndrome (primary HIV infection), including use of HIV viral load.
PART II: APPROACH TO THE PATIENT WITH HIV

Chapter 5: History

II.1 TAKING PATIENT HISTORIES
Describe proper history taking in an HIV+ patient, including an appropriate systems review for both an initial visit and a routine follow-up visit.

II.2 TAKING SENSITIVE HISTORIES
Describe a nonjudgmental approach to obtaining a sexual history, history of abuse or neglect, and a history of recreational drug use/drug addiction.

Chapter 6: Physical Examination

II.3 KEY COMPONENTS
Describe key components of the physical examination and evaluation of the HIV+ patient.

Chapter 7: Laboratory Evaluation

II.4 BASELINE EVALUATIONS
Identify important baseline laboratory evaluations for the new patient with HIV infection.

II.5 PROPHYLAXIS INDICATIONS
Discuss laboratory indications for specific prophylaxes.

Chapter 8: Symptoms/System Evaluation

II.6 RESPIRATORY SYMPTOMS
Discuss the differential diagnosis of the following respiratory symptoms in HIV+ patients: (a) shortness of breath; (b) chest pain; (c) cough.

II.7 GASTROINTESTINAL SYMPTOMS
Discuss the differential diagnosis of the following gastrointestinal symptoms in HIV+ patients: (a) diarrhea; (b) odynophagia/dysphagia; (c) abdominal pain.

II.8 NEUROLOGIC SYMPTOMS
Discuss the differential diagnosis according to disease stage of the following neurologic symptoms in HIV+ patients: (a) headache; (b) seizure; (c) painful feet; (d) paraplegia; (e) hemiparesis; (f) altered mental status.

II.9 VISUAL SYMPTOMS
Discuss the differential diagnosis of abnormal visual symptoms in HIV+ patients.

II.10 FATIGUE
Discuss the differential diagnosis of fatigue in HIV+ patients.

II.11 WASTING
Discuss the differential diagnosis of wasting in HIV+ patients.

II.12 FEVER
Discuss the differential diagnosis of fever in HIV+ patients.

II.13 LARGE JOINT PAIN
Discuss the evaluation of hip and other large joint pain in HIV+ patients.

Chapter 9: HIV Testing and Counseling

II.14 CONFIDENTIAL AND ANONYMOUS TESTING
Discuss confidential and anonymous HIV testing, pre- and posttest counseling, consent for HIV testing, implications and follow-up of rapid test results, and prenatal/neonatal HIV antibody testing.

II.15 PATIENT EDUCATION ESSENTIALS
Outline the basic information needed, and appropriate sequencing of education, for a newly diagnosed HIV+ patient, including but not limited to antiretroviral therapy, adherence, and treatment complications.

Chapter 10: Health Maintenance

II.16 CONTRAINDICATED COMMON VACCINES
Identify any commonly used vaccines that are contraindicated in HIV+ patients, including smallpox vaccine.
II.17 RECOMMENDED VACCINES
Discuss the use of pneumococcal vaccine, hepatitis A and B vaccines, and influenza vaccines in HIV+ patients, and their efficacy according to disease stage.

II.18 PAP SMEARS
Discuss the recommended frequency and specimen collection technique, and cite indications for specialist referral for colposcopy or high-resolution anoscopy, biopsy, for the following:
(a) genital tract Pap smears in HIV+ women;
(b) anal Pap smears in HIV+ men and women.

II.19 REPRODUCTIVE HEALTH
Discuss reproductive health considerations in serodiscordant and seropositive couples, including:
(a) preconception counseling, e.g., techniques to facilitate conception and reduce HIV transmission risk;
(b) the prevalence and management of infertility.

II.20 TUBERCULIN SKIN TESTING (PPD)
Describe the indications for, interpretation, and limitations of PPD testing in HIV+ versus HIV- individuals, including the role of anergy testing.

II.21 ROUTINE DENTAL FOLLOW-UP
Discuss role and impact of routine dental care for HIV+ patients.

II.22 NUTRITIONAL SUPPLEMENTS
Identify two indications for nutritional supplements in HIV+ patients.

II.23 DIETITIAN REFERRAL
Identify at least three conditions warranting referral to a registered dietitian, and essential information to be included in the treating physician's written referral.

II.24 SMOKING CESSATION
Describe the special risks posed by smoking for HIV+ patients as compared with smokers without HIV.

Chapter 11: HIV Transmission Prevention Education

II.25 HIV TRANSMISSION ASSESSMENT AND RISK REDUCTION COUNSELING
Describe appropriate HIV and STD risk assessment and risk reduction counseling for patients, in accordance with current CDC guidelines.

II.26 PARTNER NOTIFICATION
Facilitate notification and counseling of sex and needle sharing partners of HIV-infected persons, in accordance with current CDC guidelines.

II.27 HYGIENE AND INFECTION CONTROL COUNSELING
Propose counseling strategies for HIV+ patients and their household contacts to enhance hygiene and infection control in the home.

II.28 VERTICAL TRANSMISSION
Discuss issues relating to vertical transmission prevention in HIV+ women.

II.29 INJECTION DRUG USE
Recommend two approaches for decreasing the likelihood of HIV transmission when injection drugs are used.

II.30 BREAST-FEEDING
Discuss issues surrounding breast-feeding by HIV+ women in developed world setting.

II.31 PREVENTIVE HIV VACCINE RESEARCH
Discuss current research on the development of vaccines to prevent HIV infection.

Chapter 12: Care Settings/Modalities

II.32 UNIVERSAL PRECAUTIONS
Discuss the scientific rationale behind universal precautions.

II.33 PREVENTING HIV AND HEPATITIS
Describe the use of universal precautions in health care settings to prevent HIV and hepatitis B/C transmission.
| II.34 PHLEBOTOMY AND INFECTION CONTROL | Describe two components of proper infection control procedures for phlebotomy. |
| II.35 HIV+ HEALTH CARE WORKERS | Determine appropriate infection control measures for an HIV+ health care worker. |
| II.36 PULMONARY TUBERCULOSIS AND INFECTION CONTROL | Describe proper infection control procedures for an patient with proven or suspected pulmonary tuberculosis. |
| II.37 OCCUPATIONAL EXPOSURE MANAGEMENT | Identify at least three critical elements in the management of occupational needle-stick exposures. |
| II.38 ANTIRETROVIRALS DURING HOSPITALIZATION | Discuss considerations for use of antiretroviral therapy in hospitalized patients. |
| II.39 PERIOPERATIVE CARE | Describe important considerations in the perioperative care of an HIV+ patient. |
| II.40 AIDS-RELATED DEMENTIA AND IN-HOME CARE | Identify at least three key elements of a discussion with the family of a person with AIDS-related dementia regarding in-home care. |
| II.41 TRANSPLANTATION | Describe indications and outcomes for organ transplantation in HIV+ patients. |

**Chapter 13: Pain Management**

| II.42 ANALGESIC PYRAMID | Describe the pyramid of pain management from weakest to strongest analgesic. |
| II.43 PRINCIPLES OF PAIN MANAGEMENT | Discuss the principles of pain management and the use of NSAIDs, opiates, anticonvulsants, and antidepressants. |
| II.44 OPIOID AGENTS | Describe the characteristics of different opioid agents, including efficacy and side effects. |
| II.45 PAIN MANAGEMENT AND DRUG USE | Describe the special considerations involved in pain management for HIV+ patients with current or past substance use. |

**Chapter 14: Special Populations**

| II.46 DIVERSITY SENSITIVITY | Recognize the impact and importance of culture, ethnicity, immigration status, sexual orientation, gender, drug use/injection drug use, disability, and age on the care of HIV patients. |
| II.47 ISSUES OF PROVIDER DISTRUST | Describe causes and implications of provider distrust among HIV+ patients, including but not limited to discussion of the Tuskegee syphilis experiment, and conspiracy theories regarding HIV therapy and the origin of HIV. |
| II.48 APPROACH TO “HIV DENIALIST” VIEWS | Summarize the views of “HIV denialists” and the approach to patients who raise questions about these views. |
| II.49 CARING FOR HIV+ WOMEN | Discuss the following specific issues in the management of HIV+ women:  
(a) differentiation in the natural history of HIV disease in women compared with that in men;  
(b) differences in viral load and implications for initiation of antiretroviral therapy;  
(c) important considerations in the use of hormonal contraceptives;  
(d) gender-specific presentation of medication side effects (e.g., lipodystrophy). |
II.50 CARING FOR HIV+ CHILDREN
Identify similarities and differences in the diagnosis, laboratory markers, spectrum of disease manifestations, antiretroviral treatment, and opportunistic infection prophylaxis in HIV+ prepubertal children compared with HIV+ adults.

II.51 CARING FOR HIV+ ADOLESCENTS
Describe the potential impact of physiologic and cognitive development in an HIV+ adolescent on treatment adherence and secondary prevention.

II.52 CARING FOR OLDER HIV+ PATIENTS
Describe how the diagnosis and management of HIV+ in patients who are 50 years or older differs from younger adult patients.

II.53 CARING FOR TRANSGENDER HIV+ PATIENTS
Describe the management of transgender HIV+ patients, including routine health maintenance and use of hormone therapy.

II.54 DRUG USE TERMS
Define commonly used terminology with substance use.

II.55 HOMELESS POPULATIONS
Describe special considerations affecting medical management of homeless individuals.

II.56 INCARCERATED POPULATIONS
Recognize important medical and social problems that can occur when HIV+ people are incarcerated.

II.57 RURAL POPULATIONS
Describe obstacles to optimal HIV care for rural patients.

II.58 MIGRATING POPULATIONS
Discuss limitations in HIV care and special needs among migrant populations or patients with undocumented citizenship.

II.59 DRUG USE IN HIV+ PATIENTS
Discuss the importance of identifying and treating drug use and dependence in HIV+ patients, and the impact on HIV transmission, antiretroviral adherence, and overall medical care outcomes.

Chapter 15: Psychosocial and Economic Issues

II.60 MANAGING DIFFICULT PATIENTS
Describe the professional approach to HIV+ patients with personality and other behavioral disorders.

II.61 INTERVAL CARE
Describe the appropriate responsibilities for the HIV clinician regarding interval care (i.e., access during weekends and after hours) for HIV+ patients.

II.62 ETHICAL ISSUES
Discuss the following issues in HIV and ethics: (a) confidentiality and right to privacy; (b) duty to report communicable diseases; (c) death with dignity; (d) patient-provider relationship boundaries.

II.63 DISCLOSURE
Discuss the potential risks, benefits, and ethical dimensions of disclosing HIV diagnosis to family, friends, sexual partners, and employers.

II.64 PUBLIC HEALTH INTERVENTIONS
Describe major features of CDC guidelines for implementing HIV prevention, including increased screening and testing for HIV.

II.65 TUBERCULOSIS PREVENTION EDUCATION
List at least three elements of patient education in an HIV practice for tuberculosis prevention.

II.66 COMMUNITY REENTRY
Describe how to manage problems that occur surrounding community reentry of an HIV+ patient from inpatient and correctional settings.

II.67 MENTAL HEALTH REFERRAL
Describe HIV-related conditions associated with significant cognitive, emotional, or behavioral disorders for which referral to a mental health professional is appropriate.

II.68 DOMESTIC VIOLENCE
Discuss the association of HIV and domestic violence and describe appropriate interventions.
Chapter 16: Complementary and Alternative Medical Approaches

II.69 HERBAL REMEDIES
Discuss known interactions between herbal remedies and antiretroviral agents, and describe appropriate advice to HIV+ patients who intend to self-medicate with herbal remedies or vitamin supplements, with or without antiretroviral therapy.

II.70 PSYCHOLOGIC/PSYCHOPSYCHOMMUNOLOGIC BENEFITS
List possible psychologic/psychoimmunologic benefits that patients may derive from complementary and alternative therapy interventions.

Chapter 17: Systems-Based Practice

II.71 COORDINATION WITH HEALTH CARE MANAGERS AND INTERDISCIPLINARY TEAMS
Describe when and how to coordinate care effectively with health care managers and interdisciplinary teams.

II.72 HIV CARE IN DIFFERENT REIMBURSEMENT SETTINGS
Review the various methods for reimbursement of HIV-related health care services in the United States.

II.73 ACCESSING FINANCIAL ASSISTANCE PROGRAMS
Define and describe how to access the following: (a) the federal Ryan White CARE Act and its ADAP program; (b) compassionate access/medication assistance program supported by pharmaceutical companies.

II.74 CPT CODES AND REIMBURSEMENT
Recognize the importance of ascribing appropriate CPT codes to an HIV-related diagnosis.

II.75 COSTS OF CARE
Describe recent trends in the inpatient and outpatient costs of HIV care in the United States.

Chapter 18: Palliative Care and End-of-Life Support

II.76 CARING FOR THE TERMINALLY ILL PATIENT
Discuss the physician's responsibilities in caring for the terminally ill person with HIV.

II.77 HOSPICE CARE
Identify the role of hospice care and discuss (a) at least two HIV-related conditions for which hospice care is a frequent alternative; (b) at least two advantages to the patient, family, and loved ones of hospice care for a terminally ill person with HIV disease.

II.78 PALLIATIVE CARE
Discuss palliative care for common symptoms in end-stage HIV+ patients, including but not limited to fatigue, sleep disturbance, pruritus, dyspnea, hiccups, and dry mouth.

Chapter 19: Legal Issues

II.79 DISEASE REPORTING SYSTEM
Discuss the system of disease reporting in the United States and identify reportable conditions relevant to HIV care.

II.80 PARTNER NOTIFICATION
Describe the rationale for partner notification practices in HIV disease.

II.81 ISSUES IN NONDISCLOSURE
Discuss the physician's ethical and legal responsibilities with HIV+ patients who do not disclose their HIV status to sexual and needle-sharing partners.

II.82 TREATING MINORS
Describe legal issues related to treatment of minors with HIV infection.

II.83 CONFIDENTIALITY
Discuss legal issues related to confidentiality and HIV, including health information protected under HIPAA's Privacy Rule and HIPAA's impact upon communicating a patient’s personal health information.

II.84 ADVANCE PLANNING
Discuss the use of advance directives, durable power of attorney, and health proxy for HIV+ patients.
# PART III: CLINICAL MANIFESTATIONS OF HIV INFECTION

## Chapter 20: Acute HIV Infection

### III.1 SYMPTOMS AND SIGNS
Describe at least six symptoms and signs of the clinical presentation of acute HIV infection.

## Chapter 21: Chronic HIV Infection

### III.2 SYMPTOMS AND SIGNS
Identify at least six constitutional symptoms and clinical signs of chronic HIV infection.

### III.3 WASTING
Describe the presentation and management of wasting due to HIV disease, and define the HIV wasting syndrome.

## Chapter 22: Opportunistic Infections

### III.4 PRESENTATION
Describe the various clinical presentations and relative frequencies of common opportunistic infections: (a) bacterial infections; (b) fungal infections; (c) mycobacterial infections; (d) protozoan/parasitic infections; (e) viral infections.

### III.5 DIAGNOSTIC LAB PROCEDURES
Identify the appropriate procedures and laboratory investigations required to make a diagnosis for each of the opportunistic infections reflected in Objective III.4.

### III.6 PREFERRED AND ALTERNATIVE TREATMENTS
Cite the preferred and at least one alternative treatment regimen for each of the opportunistic infections reflected in Objective III.4.

### III.7 DRUG TOXICITY MANAGEMENT
Describe common toxicities and their management for each of the medications used to treat opportunistic infections.

### III.8 PROPHYLAXIS
List the recommended prophylactic regimens for PCP, MAC, fungal infections, toxoplasmosis, and herpesvirus infections (including CMV), citing the guidelines for:
- (a) initiation of prophylaxis;
- (b) discontinuation of prophylaxis.

### III.9 ENVIRONMENTAL PROTECTION STRATEGIES
Describe environmental protection strategies that minimize the risk of acquiring specific opportunistic infections.

## Chapter 23: Malignancies and Neoplasms

### III.10 KAPOSI'S SARCOMA
Describe the screening, presentation, diagnosis, treatment, prognostic indicators, and appropriate specialist referral for Kaposi's sarcoma (KS).

### III.11 LYMPHOMA
Describe the screening, presentation, diagnosis, treatment, prognostic indicators, and appropriate specialist referral for lymphoma.

### III.12 CASTLEMAN'S DISEASE
Describe Castleman's disease, including clinical manifestations, histopathology, chemotherapy, prognosis, and the role of the oncologist.

### III.13 HHV-8
Discuss the etiologic role of HHV-8 in Castleman's disease and in body-cavity (effusion) lymphoma.

### III.14 HUMAN PAPILLOMAVIRUS
Discuss the prevalence and role of human papillomavirus in the lower genital tract, and anal dysplasia and carcinoma.

### III.15 CERVICAL DYSPLASIA
Describe guidelines for screening of genital tract dysplasia in HIV+ women, and indications for specialist referral of HIV+ women with cervical intraepithelial neoplasia.
Discuss screening, diagnosis, and management of common endocrine manifestations of HIV disease, including but not limited to gonadal and adrenal dysfunction.

III.21 SCREENING, DIAGNOSIS, AND MANAGEMENT
Discuss screening, diagnosis, and management of common endocrine manifestations of HIV disease, including but not limited to gonadal and adrenal dysfunction.

Chapter 24: Dermatologic Complications

III.17 PRESENTATION AND TREATMENT
Describe the presentation and therapy for common dermatoses seen in HIV+ patients:
(a) noninfectious;
(b) fungal;
(c) viral;
(d) bacterial: including methicillin-resistant Staphylococcus aureus (MRSA);
(e) parasitic.

III.18 REFERRAL
Discuss the need for referral to a dermatologist and the role of early skin biopsy in an afebrile patient and an acutely ill febrile patient with a skin eruption.

Chapter 25: Dental/Oral and ENT Complications

III.19 DENTAL/ORAL COMPLICATIONS
Describe the clinical presentation, diagnosis, and therapy for common dental and oral manifestations of HIV infection.

III.20 ENT COMPLICATIONS
Describe the diagnosis and management of common ENT problems and their complications seen in HIV+ patients.

Chapter 26: Endocrine Disorders

III.21 SCREENING, DIAGNOSIS, AND MANAGEMENT
Discuss screening, diagnosis, and management of common endocrine manifestations of HIV disease, including but not limited to gonadal and adrenal dysfunction.

Chapter 27: Gynecologic Complications

III.22 COMMON GYNECOLOGIC INFECTIONS
Discuss the prevalence, diagnosis, and management of the following common gynecologic infections in HIV+ women: (a) vaginal candidiasis; (b) bacterial vaginosis; (c) trichomoniasis; (d) pelvic inflammatory disease (PID).

III.23 MENSTRUAL DISORDERS
Discuss the prevalence of amenorrhea and other menstrual disorders in HIV+ women.

Chapter 28: Respiratory Complications

III.24 COMMUNITY-ACQUIRED PNEUMONIA
Discuss the impact of HIV seropositivity on risk for community-acquired pneumonia.

III.25 PNEUMONIA DIAGNOSIS AND MANAGEMENT
Formulate the differential diagnosis and discuss the management of cavitary and noncavitary pneumonia in HIV+ patients.

III.26 TUBERCULOSIS
Describe appropriate diagnosis, management, and drug therapy for latent, active pulmonary, and extrapulmonary TB according to the most recent CDC/ATS guidelines.

III.27 LYMPHOCYTIC INTERSTITIAL PNEUMONITIS
Discuss lymphocytic interstitial pneumonitis in HIV+ patients.

III.28 PULMONARY HYPERTENSION
Describe the occurrence, clinical presentation, and management of primary pulmonary hypertension in HIV+ patients.
Chapter 29: Psychiatric and Neurologic Complications

III.29 PSYCHIATRIC DISORDERS
Identify the most common psychiatric disorders in HIV+ patients and their basic management (e.g., adjustment disorders, depression, bipolar disorder, personality disorders, and substance use).

III.30 NEUROCOGNITIVE DISORDERS
Discuss the clinical presentation, differential diagnosis, and management of neurocognitive disorder in an HIV+ patient.

III.31 MYELOPATHY
Discuss the clinical presentation, differential diagnosis, and management of myelopathy in an HIV+ patient.

III.32 INTRACRANIAL MASS LESIONS
Discuss the clinical presentation, differential diagnosis, and treatment of an intracranial mass lesion in an HIV+ patient.

III.33 MENINGITIS
Discuss the clinical presentation, differential diagnosis, and treatment of meningitis in an HIV+ patient.

III.34 DISTAL SYMMETRICAL POLYNEUROPATHY
Discuss the clinical presentation, differential diagnosis, and management of distal symmetrical polyneuropathy in an HIV+ patient.

III.35 AIDP/CIDP
Discuss the clinical presentation, differential diagnosis, and management of acute and chronic inflammatory demyelinating polyneuropathy (AIDP/CIDP) in HIV+ patients.

III.36 CMV POLYRADICULOPATHY
Discuss the clinical presentation, differential diagnosis, and management of cytomegalovirus polyradiculopathy in HIV+ patients.

III.37 MONONEURITIS
Discuss the clinical presentation, differential diagnosis, and management of mononeuritis multiplex in HIV+ patients.

Chapter 30: Gastrointestinal and Hepatobiliary Complications

III.38 DIARRHEA
Describe the diagnosis and treatment of diarrhea in HIV+ patients.

III.39 ESOPHAGEAL DISORDERS
Discuss the differential diagnosis and treatment of dysphagia, odynophagia, and esophagitis in HIV+ patients.

III.40 HEPATITIS
Discuss the following aspects of hepatitis in HIV+ patients:
(a) clinical presentation, diagnosis, treatment, and treatment complications of hepatitis B;
(b) clinical presentation, diagnosis, treatment, and treatment complications of hepatitis C;
(c) other viral causes of hepatitis;
(d) drug-induced hepatitis.

III.41 PANCREATITIS
Discuss the differential diagnosis and evaluation of an elevated serum amylase in HIV+ patients, and causes and management of pancreatitis.

III.42 CHOLECYSTITIS AND CHOLANGIOPATHY
Describe the clinical presentation and management of cholelithiasis, cholecystitis, acaulcus cholecystitis, and cholangiopathy in HIV infection.

Chapter 31: Ocular Complications

III.43 CYTOMEGALOVIRUS
Describe appropriate screening, diagnosis, management, and referral for HIV+ patients with cytomegalovirus retinitis.
III.44 HIV RETINOPATHY
Distinguish between HIV retinopathy and CMV retinitis.

III.45 OTHER
OPHTHALMOLOGIC
INFECTIONS
Discuss the ocular manifestations of varicella zoster virus, and retinal infection with *T. gondii, P. jiroveci (carinii)*, syphilis, and candida.

Chapter 32: Hematologic Complications

III.46 CYTOPENIAS
Describe the etiology, evaluation and management of anemia, neutropenia, and thrombocytopenia in HIV infection, including the use of agents such as erythropoietin and filgrastim.

III.47 PARVOVIRUS B19
Describe the manifestations, evaluation, and treatment of parvovirus B19 infection in HIV+ patients.

III.48 COAGULATION
DISORDERS
Discuss deep venous thrombosis and the various coagulation disorder etiologies in HIV infection.

III.49 OTHER HEMATOLOGIC
COMPLICATIONS
Discuss the differential diagnosis and management of hemolytic anemia with and without thrombocytopenia in HIV infection.

Chapter 33: Cardiac Complications

III.50 CARDIOMYOPATHY
Review the prevalence, prognosis, and management of cardiomyopathy in HIV infection.

III.51 PERICARDITIS
Formulate the differential diagnosis of pericardial disease in an AIDS patient.

Chapter 34: Renal Complications

III.52 NEPHROPATHY
Discuss risk factors, presentation, diagnosis, and management of nephropathy in HIV+ patients.

Chapter 35: Musculoskeletal Complications

III.53 SKELETAL AND
RHEUMATOLOGIC
DISORDERS
Discuss the diagnosis and management of significant skeletal and rheumatologic complications of HIV disease.

III.54 PYOMYOSITIS
Discuss pyomyositis and its therapy in HIV+ patients.

III.55 MYOPATHY
Discuss myopathy in HIV+ patients.

Chapter 36: Sexually Transmitted Diseases

III.56 SYPHILIS
Discuss current epidemiology, screening, clinical manifestations, indications for cerebrospinal fluid analysis, treatment, and follow-up for syphilis in HIV infection.

III.57 OTHER STDs
Discuss the diagnosis and management of STDs in the context of HIV disease.
# PART IV: PRINCIPLES OF ANTIRETROVIRAL THERAPY

## Chapter 37: Initiation

<table>
<thead>
<tr>
<th>IV.1</th>
<th>TREATMENT OF ACUTE HIV</th>
<th>Debate the advantages and disadvantages of very early treatment of acute HIV infection.</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV.2</td>
<td>INDICATIONS FOR INITIATING THERAPY</td>
<td>Summarize the latest guidelines on HIV therapy by the U.S. Public Health Service and the International AIDS Society-USA Panel on initiating HIV therapy.</td>
</tr>
<tr>
<td>IV.3</td>
<td>TREATMENT GOALS</td>
<td>Discuss rationale for and goals of antiretroviral therapy at the different stages of treatment experience.</td>
</tr>
<tr>
<td>IV.4</td>
<td>DELAYING INITIATION</td>
<td>Appraise the advantages and disadvantages of delaying initiation of therapy in a patient with chronic HIV infection.</td>
</tr>
</tbody>
</table>

## Chapter 38: Specific Agents

<table>
<thead>
<tr>
<th>IV.5</th>
<th>MECHANISMS OF ANTIRETROVIRALS</th>
<th>Describe the mechanism and site of action for each of the different classes of antiretroviral agents: NRTIs/NtRTIs, NNRTIs, protease inhibitors, and entry inhibitors.</th>
</tr>
</thead>
</table>
| IV.6 | ANTIRETROVIRAL DOSING | Describe the usual dosing, dose modifications for weight or impaired renal or liver clearance, and contraindications for currently FDA-approved antiretroviral therapies:  
(a) established FDA-approved therapies;  
(b) recently FDA-approved therapies. |
| IV.7 | ADJUNCTIVE ANTIRETROVIRALS | Discuss the arguments for and against the use of adjunctive antiretroviral treatments, e.g., hydroxyurea (Hydrea, Droxia) combined with didanosine (ddI); mycophenylate combined with abacavir. |
| IV.8 | COMMON ANTIRETROVIRAL TOXICITIES | Describe the important toxicities and their management for all current FDA-approved antiretroviral therapies. |
| IV.9 | ANTIRETROVIRAL INTERACTIONS WITH NONANTIRETROVIRAL DRUGS | Recognize the important drug-drug interactions that may be seen with current FDA-approved antiretroviral therapies and other medications. |
| IV.10 | RESISTANCE MUTATIONS | Identify the most important mutations and patterns of mutations associated with resistance to each of the currently FDA-approved antiretrovirals, and describe the concept of high and low genetic barriers to resistance. |
| IV.11 | ONCE-DAILY REGIMENS | Discuss the advantages and disadvantages of once-daily regimens, and identify the currently FDA-approved antiretroviral agents and combinations that can be used for once-daily therapy. |

## Chapter 39: Combination Therapy

<table>
<thead>
<tr>
<th>IV.12</th>
<th>REGIMEN SELECTION</th>
<th>Discuss the principles of how to combine antiretroviral medications, including reference to the U.S. Public Health Service and the International AIDS Society-USA guidelines for therapy, noting changes from previous guideline versions.</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV.13</td>
<td>COFORMULATIONS</td>
<td>Name and describe all antiretroviral coformulated tablets and capsules available.</td>
</tr>
<tr>
<td>IV.14</td>
<td>ANTIRETROVIRAL INTERACTIONS</td>
<td>Describe the known interactions that occur between antiretroviral medications, and describe the antiretroviral recommended dose adjustment.</td>
</tr>
</tbody>
</table>
IV.15 PRINCIPALS OF PHARMACODYNAMICS AND PHARMACOKINETIC ENHANCEMENT
Describe the terms Cmin, Cmax, IC50, area under the curve (AUC), and inhibitory quotient (IQ) and the principle of pharmacokinetic enhancement of protease inhibitor drug levels by inhibition of the CYP 3A4 and P-glycoprotein enzyme system using ritonavir or other agents.

IV.16 BOOSTED PROTEASE INHIBITORS
Discuss the advantages and specific dosage recommendations when combining ritonavir with other protease inhibitors.

IV.17 NOT-RECOMMENDED ANTIRETROVIRAL COMBINATIONS
Discuss which antiretroviral combinations should be coadministered with caution, and why.

### Chapter 40: Monitoring

**IV.18 GUIDELINES ON LABORATORY MONITORING**
Describe the U.S. Public Health Service and the International AIDS Society-USA guidelines on laboratory monitoring of HIV infection, including the use and interpretation of specific laboratory tests, and the frequency with which they should be performed to track progression or regression of disease.

**IV.19 RESISTANCE TESTING**
Discuss the following aspects of genotypic, phenotypic, and virtual phenotypic resistance tests:
(a) evaluation of currently available resistance assays, including proper use, strengths, and limitations, as well as interpretation and management of discordant phenotype and genotype resistance testing;
(b) the role of resistance testing in selecting a drug regimen for a treatment-naïve patient;
(c) the role of resistance testing in selecting a drug regimen for a patient whose regimen is failing (in contrast to empiric selection of antiretroviral therapy based on the patient's prior treatment history).

**IV.20 THERAPEUTIC DRUG MONITORING**
Discuss the advantages and disadvantages of therapeutic drug monitoring.

### Chapter 41: Modifying Therapy

**IV.21 PRECAUTIONS**
Discuss the precautions and contraindications for modifying antiretroviral therapy due to allergy, toxicity, and drug intolerance.

**IV.22 REGIMEN FAILURE**
Define failure of an antiretroviral regimen, discuss possible etiologies, and discuss the significance of viral load “blips.”

**IV.23 INTENSIFICATION**
Describe the rationale for and approaches to intensification of a failing antiretroviral regimen.

**IV.24 ANTIRETROVIRAL CROSS-RESISTANCE**
Discuss antiretroviral cross-resistance resulting from prior therapy, including approach to agent selection based on resistance testing and prior treatment history.

**IV.25 PATIENT FACTORS IN REGIMEN SELECTION**
Discuss the selection of an antiretroviral therapy regimen, considering pill burden, dosing frequency, side effects, patient's lifestyle, and preferences.

**IV.26 MULTIDRUG RESCUE THERAPY**
Summarize the research on use of multidrug rescue therapy in patients who have failed multiple drug regimens.

**IV.27 VIRAL FITNESS AND REPLICATIVE CAPACITY**
Discuss the distinction between viral fitness and replicative capacity and possible implications of reduced fitness on treatment strategies.

**IV.28 TREATMENT INTERRUPTIONS**
Discuss various approaches to, the rationale for, and the risks and benefits of treatment interruption: (a) in HIV+ patients who are on successful antiretroviral therapy; (b) in HIV+ patients for whom antiretroviral therapy is failing.
### Chapter 42: Investigational Antiretroviral Medications

<table>
<thead>
<tr>
<th>IV.29 Expanded/Early Access</th>
<th>Identify all investigational antiretroviral agents and the means by which to access currently available agents in expanded/early access, including their class, resistance profile, and toxicities.</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV.30 Advanced Phase Trials</td>
<td>Identify important investigational antiretrovirals currently in advanced phase clinical trials.</td>
</tr>
</tbody>
</table>

### Chapter 43: Pregnancy

<table>
<thead>
<tr>
<th>IV.31 Antiretroviral Treatment</th>
<th>Discuss CDC guidelines for antiretroviral treatment during pregnancy.</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV.32 Antiretroviral Agents Contraindicated in Pregnancy</td>
<td>Identify the antiretroviral agents that are contraindicated in reproductive-age women not actively avoiding pregnancy.</td>
</tr>
<tr>
<td>IV.33 Antiretroviral Treatment During Labor</td>
<td>Outline the antiretroviral treatment for an HIV+ pregnant woman presenting in labor with no prior treatment.</td>
</tr>
<tr>
<td>IV.34 Cesarean Section</td>
<td>Discuss the advantages, disadvantages, and indications for cesarean section in decreasing mother-to-child transmission of HIV.</td>
</tr>
</tbody>
</table>

### Chapter 44: Adherence Issues

<table>
<thead>
<tr>
<th>IV.35 Principles</th>
<th>Identify the degree of adherence necessary for successful antiretroviral therapy and discuss how various levels of adherence affect the probability of developing antiretroviral resistance.</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV.36 Initiation Strategies</td>
<td>Describe knowledge and skills needed, and strategies used, to assess treatment readiness and enhance patient adherence when starting antiretroviral therapy.</td>
</tr>
<tr>
<td>IV.37 Measurement</td>
<td>Describe challenges in measuring patient adherence and the potential use of questionnaires, pill counts, pharmacy medication fill data, and electronic MEMS cap monitoring to measure adherence.</td>
</tr>
<tr>
<td>IV.38 Psychiatric Issues</td>
<td>Identify the role of treating substance use, depression, and other psychiatric disorders in order to achieve adherence to antiretroviral therapy.</td>
</tr>
<tr>
<td>IV.39 Multidisciplinary Counseling</td>
<td>Discuss the role and impact of multidisciplinary adherence counseling, including but not limited to nurses, peers, counselors, and physicians – on adherence success.</td>
</tr>
<tr>
<td>IV.40 Reminder Devices</td>
<td>Identify various reminder devices that can assist with patient adherence.</td>
</tr>
<tr>
<td>IV.41 Additional Support</td>
<td>Describe the roles of community-based organizations, therapists, support groups, and other alternatives in assisting with and enhancing patient adherence.</td>
</tr>
<tr>
<td>IV.42 Directly Observed Therapy</td>
<td>Summarize the findings of studies of directly observed antiretroviral therapy.</td>
</tr>
</tbody>
</table>
### Chapter 45: Complications of Treatment

**IV.43 MORPHOLOGIC CHANGES**

Describe morphologic changes (lipoatrophy, and/or abnormal fat deposition) commonly observed in patients taking antiretroviral therapy, and their association with antiretroviral agents.

**IV.44 METABOLIC COMPLICATIONS**

Discuss the occurrence and management of metabolic complications of therapy, including but not limited to hyperlipidemia, insulin resistance and diabetes mellitus; and mitochondrial toxicities, including lactic acidosis.

**IV.45 CARDIOVASCULAR DISEASE**

Discuss the risk of cardiovascular disease associated with HIV and its treatment, and compare this with risk due to smoking, hypertension, diabetes, family history, and other cardiac risk factors.

**IV.46 IMMUNE RECONSTITUTION DISEASE**

Discuss the manifestations and clinical management of immune reconstitution disease secondary to opportunistic infections, including but not limited to MAC, TB, CMV, HBV, HCV, PML, HSV, and VZV as a result of combination antiretroviral therapy.

### Chapter 46: Post- and Preexposure Prophylaxis

**IV.47 POSTEXPOSURE MANAGEMENT**

Discuss considerations regarding immediate antiretroviral prophylaxis for occupational exposure to HIV (needle stick or other).

**IV.48 NONOCCUPATIONAL EXPOSURE**

Discuss the use of pre- and postexposure prophylaxis for nonoccupational settings, including sexual exposure or rape.

### Chapter 47: Immune-Based Therapies

**IV.49 INTERLEUKIN-2**

Discuss the advantages and disadvantages of interleukin-2 as treatment in HIV disease.

**IV.50 ALPHA INTERFERON**

Describe the advantages and disadvantages of alpha interferon as a treatment in HIV disease.

**IV.51 THERAPEUTIC HIV VACCINES**

Describe the potential therapeutic use of HIV vaccines in HIV+ patients.
### PART V: RESEARCH ISSUES

#### Chapter 48: Research Design and Analysis

<table>
<thead>
<tr>
<th>V.1 RESEARCH PLANNING</th>
<th>Discuss the importance of specifying end points and analytic plans and of performing power calculations before carrying out research.</th>
</tr>
</thead>
<tbody>
<tr>
<td>V.2 EVALUATING TREATMENT ANALYSES</td>
<td>Differentiate between an on-treatment analysis and an intent-to-treat analysis.</td>
</tr>
<tr>
<td>V.3 DRAWING CAUSE-AND-EFFECT CONCLUSIONS</td>
<td>Discuss the difficulties in drawing cause-and-effect conclusions about associated factors identified in a research study.</td>
</tr>
</tbody>
</table>

#### Chapter 49: Drug Development and Expanded Access

| V.4 ACCESS TO CLINICAL TRIALS | Describe the difference between phase I, II, III, and IV research clinical trials and how to enroll as an investigator in an expanded/early access program. |

#### Chapter 50: Ethical Issues in Performing HIV Research

| V.5 IRBS, INFORMED CONSENT, AND OTHER ETHICAL ISSUES | Describe the essentials of institutional review board processes and approval procedures, informed consent, and other ethical issues related to research in HIV medicine. |
APPENDIX: INTERNATIONAL ISSUES (Not required for care in U.S.)

The AAHIVM Core Curriculum focuses on what an HIV specialist needs to know to practice up to date, state of the art, HIV medical care. To do this it is not essential to have extensive knowledge of or interest in the international HIV/AIDS epidemic and care delivery internationally. However, many HIV specialists in the U.S. are increasingly interested in learning about how antiretroviral therapy can be delivered to the millions that need it internationally.

With this in mind, we include this international section as an appendix to the AAHIVM Core Curriculum. It is an appendix only; the focus of this section will not be used to create questions for the credentialing examination, but is included as these issues are of such major importance internationally and of considerable interest to many of our members.

PART I: OVERVIEW OF HIV

GLOBAL EPIDEMIOLOGY
Discuss the geographic prevalence and implications of various HIV clades.

AIDS DEFINITION
Describe the WHO definition of AIDS.

TRANSMISSION
Identify factors shown to facilitate and retard HIV transmission in resource-limited settings.

PART II: APPROACH TO THE PATIENT WITH HIV

INTERNATIONAL: BASELINE EVALUATIONS
Identify important baseline laboratory evaluations for a new patient with HIV infection in a resource-limited setting.

INTERNATIONAL: BREAST-FEEDING
Discuss issues surrounding breast-feeding by HIV+ women in resource-limited settings.

TESTING AND PREVENTION
Discuss cultural, political, and economic challenges in HIV prevention and testing in resource-limited settings.

PART III: CLINICAL MANIFESTATIONS

SYNDROMIC MANAGEMENT
Discuss syndromic management of opportunistic diseases in resource-limited settings.

INTERNATIONAL: OI PREVALENCE
Identify global geographic differences in the prevalence of opportunistic infections associated with HIV.

INTERNATIONAL: OI PROPHYLAXIS
Propose a strategy of monitoring clinical and laboratory thresholds in a resource-limited setting to guide deciding when to initiate prophylaxis for opportunistic infections.

INTERNATIONAL: OI PROPHYLAXIS
Propose a therapeutic regimen for OI prophylaxis in a resource-limited setting.

PART IV: PRINCIPLES OF ANTIRETROVIRAL THERAPY

INTERNATIONAL: ANTIRETROVIRAL INITIATION
Describe factors affecting the provision of antiretroviral therapy in resource-limited settings.

INTERNATIONAL: ANTIRETROVIRAL SEQUENCING
Propose a strategy of sequential antiretroviral regimens based on known probable resistance development, for application in settings without access to resistance testing.

INTERNATIONAL: MONITORING
Describe a strategy of laboratory and clinical evaluation for monitoring HIV+ patients on and off of HIV therapy in a resource-limited setting.
## Index of Recent Learning Objectives (RLOs)

<table>
<thead>
<tr>
<th>RLO#</th>
<th>Objective</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PART I: OVERVIEW OF HIV INFECTION</strong></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>RLO-1</td>
<td>I.1 U.S. Epidemiology</td>
<td>5</td>
</tr>
<tr>
<td>RLO-2</td>
<td>I.2 Global Virology</td>
<td>5</td>
</tr>
<tr>
<td>RLO-3</td>
<td>I.8 Superinfection</td>
<td>5</td>
</tr>
<tr>
<td>RLO-4</td>
<td>I.11 Testing Methods</td>
<td>5</td>
</tr>
<tr>
<td>RLO-5</td>
<td>I.12 Test Sensitivity to HIV Variants</td>
<td>5</td>
</tr>
<tr>
<td><strong>PART II: APPROACH TO THE PATIENT WITH HIV</strong></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>RLO-6</td>
<td>II.13 Large Joint Pain</td>
<td>6</td>
</tr>
<tr>
<td>RLO-7</td>
<td>II.18 (b) Pap Smears: (b) Anal.</td>
<td>7</td>
</tr>
<tr>
<td>RLO-8</td>
<td>II.25 HIV Transmission Risk Assessment and Risk Reduction Counseling</td>
<td>7</td>
</tr>
<tr>
<td>RLO-9</td>
<td>II.31 Preventive HIV Vaccine Research</td>
<td>7</td>
</tr>
<tr>
<td>RLO-10</td>
<td>II.83 Confidentiality</td>
<td>10</td>
</tr>
<tr>
<td><strong>PART III: CLINICAL MANIFESTATIONS OF HIV INFECTION</strong></td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>RLO-11</td>
<td>III.8(b) [Opportunistic Infection] Prophylaxis: (b) Discontinuation</td>
<td>11</td>
</tr>
<tr>
<td>RLO-12</td>
<td>III.17(d) [Dermatologic] Presentation and Treatment: (d) Bacterial (MRSA)</td>
<td>12</td>
</tr>
<tr>
<td>RLO-13</td>
<td>III.40(a,b) Hepatitis: (a) Hepatitis B, (b) Hepatitis C</td>
<td>13</td>
</tr>
<tr>
<td>RLO-14</td>
<td>III.56 Syphilis</td>
<td>14</td>
</tr>
<tr>
<td><strong>PART IV: PRINCIPLES OF ANTIRETROVIRAL THERAPY</strong></td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>RLO-15</td>
<td>IV.1 Treatment of Acute HIV</td>
<td>15</td>
</tr>
<tr>
<td>RLO-16</td>
<td>IV.2 Indications for Initiating Therapy</td>
<td>15</td>
</tr>
<tr>
<td>RLO-17</td>
<td>IV.4 Delaying Initiation</td>
<td>15</td>
</tr>
<tr>
<td>RLO-18</td>
<td>IV.6(b) Antiretroviral Dosing: (b) Recently FDA-Approved Agents</td>
<td>15</td>
</tr>
<tr>
<td>RLO-19</td>
<td>IV.8 Common Antiretroviral Toxicities</td>
<td>15</td>
</tr>
<tr>
<td>RLO-20</td>
<td>IV.9 Antiretroviral Interactions with Non-Antiretroviral Drugs</td>
<td>15</td>
</tr>
<tr>
<td>RLO-21</td>
<td>IV.10 Resistance Mutations</td>
<td>15</td>
</tr>
<tr>
<td>RLO-22</td>
<td>IV.11 Once Daily Regimens</td>
<td>15</td>
</tr>
<tr>
<td>RLO-23</td>
<td>IV.12 Regimen Selection</td>
<td>15</td>
</tr>
<tr>
<td>RLO-24</td>
<td>IV.13 Antiretroviral Interactions</td>
<td>15</td>
</tr>
<tr>
<td>RLO-25</td>
<td>IV.14 Boosted Protease Inhibitors</td>
<td>16</td>
</tr>
<tr>
<td>RLO-26</td>
<td>IV.15 Not-recommended Antiretroviral Combinations</td>
<td>16</td>
</tr>
<tr>
<td>RLO-27</td>
<td>IV.16 Resistance Testing</td>
<td>16</td>
</tr>
<tr>
<td>RLO-28</td>
<td>IV.22 Regimen Failure</td>
<td>16</td>
</tr>
<tr>
<td>RLO-29</td>
<td>IV.24 Antiretroviral Cross-Resistance</td>
<td>16</td>
</tr>
<tr>
<td>RLO-30</td>
<td>IV.27 Viral Fitness and Replicative Capacity</td>
<td>16</td>
</tr>
<tr>
<td>RLO-31</td>
<td>IV.28 Treatment Interruptions</td>
<td>17</td>
</tr>
<tr>
<td>RLO-32</td>
<td>IV.29 Expanded/Early Access</td>
<td>17</td>
</tr>
<tr>
<td>RLO-33</td>
<td>IV.30 Advanced Phase Trials</td>
<td>17</td>
</tr>
<tr>
<td>RLO-34</td>
<td>IV.32 Antiretroviral Agents Contraindicated in Pregnancy</td>
<td>17</td>
</tr>
<tr>
<td>RLO-35</td>
<td>IV.35</td>
<td>[Adherence] Principles</td>
</tr>
<tr>
<td>--------</td>
<td>--------</td>
<td>-------------------------------------------------------------</td>
</tr>
<tr>
<td>RLO-36</td>
<td>IV.43</td>
<td>Morphologic Changes</td>
</tr>
<tr>
<td>RLO-37</td>
<td>IV.44</td>
<td>Metabolic Complications</td>
</tr>
<tr>
<td>RLO-38</td>
<td>IV.45</td>
<td>Cardiovascular Disease</td>
</tr>
<tr>
<td>RLO-39</td>
<td>IV.46</td>
<td>Immune Reconstitution Disease</td>
</tr>
<tr>
<td>RLO-40</td>
<td>IV.47</td>
<td>Post-Exposure Management</td>
</tr>
<tr>
<td>RLO-41</td>
<td>IV.48</td>
<td>Non-Occupational Exposure</td>
</tr>
</tbody>
</table>
Coming Soon!
The 2004 update to the Academy’s HIV Medicine Self-Directed Study Guide will be available in the spring of 2004. This update will cover the Recent Learning Objectives of the Academy’s 2004 Core Curriculum. And it will include opportunities for low-cost CME/CEUs.

American Academy of HIV Medicine

For more information or to order the HIV Medicine Self-Directed Study Guide: 2004 Update, visit www.aahivm.org or call the Academy toll-free at 866-241-9601.
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