Supplementary Online Content


eMethods. Recommendations Development Process

*eBox 1.* Volunteer IAS–USA Board of Directors, June 2014

*eBox 2.* IAS–USA Antiretroviral Therapy Recommendations Panel

*eBox 3.* Working Sections of the IAS–USA Antiretroviral Therapy Recommendations Panel

*eBox 4.* Example: Results of a PubMed Literature Search Update

*eTable 1.* Summary of Evidence Collection

*eTable 2.* Literature Search Terms Used

*eTable 3.* Information Requested from Antiretroviral Drug Manufacturers

*eTable 4.* Estimated Patent Expiration Dates for Branded Antiretroviral Drugs

*eTable 5.* Recommended Target Trough Levels of Antiretroviral Drugs Used in Therapeutic Drug Monitoring

This supplementary material has been provided by the authors to give readers additional information about their work.
eMethods. Recommendations Development Process

I. Brief Summary

The recommendations for antiretroviral therapy in adults with HIV-1 infection recommendations were developed by an international panel of experts in HIV research and patient care. The Panel was established initially in 1995 by the International Antiviral Society–USA (IAS–USA); members are selected by the IAS–USA Board of Directors and vetted by the organization for suitability for the panel. Panel members serve in a volunteer (uncompensated) capacity and do not participate in industry promotional activities such as speakers’ bureaus, lectures, or other marketing activities during their tenure on the panel. The current panel convened in person in October 2013 and March 2014, and regularly by conference call. The chair (Huldrych F. Günthard, MD) oversees the discussions of the process and evidence review and manuscript development, and guides the group to consensus. Section leaders (Judith A. Aberg, MD; Joseph J. Eron, MD; Jennifer F. Hoy, MBBS, FRACP; Amalio Telenti, MD, PhD) and teams were appointed to evaluate evidence and summarize panel discussions for each section. Prior to selection of the section teams and leaders, panel members declared their financial relationships with commercial concerns, discussed potential conflicts of interest (COIs), and recused themselves from serving as section leaders or team members as necessary.

Evidence considered for updating the recommendations was limited to data published in the scientific literature, presented at major peer-reviewed scientific conferences, or released as safety reports by regulatory agencies or data safety and monitoring boards, since the last update in 2012 through June 2014. Literature searches were conducted by reference librarians and were designed to capture publications relevant to ART in adult HIV-1 infection. The publication list was reviewed by a panel member (Paul A. Volberding, MD) for relevance. More than 400 references were identified. Relevant abstracts publically presented at recent scientific conferences were identified by panel members. Manufacturers of antiretroviral drugs were asked to submit lists of recent publications or abstracts meeting the established criteria. All reference lists, published papers, abstracts, and other relevant reports were organized and stored on a web-based, shared, electronic drive to which all panel members have ongoing access.

These recommendations focus on HIV-1–infected adults in international, developed-world settings where antiretroviral drugs are generally available (approved by regulatory bodies or in expanded access) or in late-stage development (new drug application filed). Recommendations were made by full-panel consensus and rated according to the strength of the recommendation and the quality of the supporting evidence (Table 1 in article). For areas in which recommendations have not changed substantially or no or few new data are available, the reader is referred to the previous report.

II. Detailed Summary

a. Background

The medical management of HIV changes rapidly, owing to the continued rapid advances in pathogenic and clinical knowledge leading to necessary changes in patient care, as well as ongoing availability of new drugs, formulations, and laboratory testing to optimally manage HIV infection. In 1995, on recognizing the rapidly changing knowledge base, the complexity of HIV management and expertise needed to provide quality care, and the lack of current plans to update any existing HIV guidelines, the need to disseminate reliable evidence-based guidance for clinicians involved in HIV management was clear. The IAS–USA Antiretroviral Recommendations Panel was established in 1995 by the IAS–USA to develop this needed guidance for physicians and other clinicians actively involved in HIV care.

b. The IAS–USA and Its Role in the Recommendations

The IAS–USA is a 501(c) (3) not-for-profit, mission-based, nonmembership, educational organization that was established in 1992. The mission of the IAS–USA is to improve the treatment, care,
and quality of life for people with HIV, hepatitis C virus (HCV), or other viral infections through high-quality, relevant, balanced, and needs-oriented education and information for practitioners who are actively involved in medical care. The IAS–USA delivers annual CME programs on HIV and HCV that include live courses; live intensive, interactive workshops; live webinars; online interactive activities in the series Cases on the Web (COW); and the peer-reviewed, indexed journal Topics in Antiviral Medicine. In addition, IAS–USA serves as the Conference Secretariat and CME sponsor for the annual Conference on Retroviruses and Opportunistic Infections (CROI). The IAS–USA is accredited with commendation by the Accreditation Council for Continuing Medical Education (ACCME) to provide CME for physicians.

IAS–USA has sponsored the development of evidence-based recommendations for viral load monitoring, antiretroviral therapy, HIV drug resistance testing, cytomegalovirus (CMV) infection, and the metabolic complications of antiretroviral therapy, all of which are published in the medical literature. In addition to the published recommendations, the IAS–USA serves as the collaborating partner for the American Association for the Study of Liver Diseases (AASLD)/Infection Diseases Society of America (IDSA)/IAS–USA HCV Guidance (www.HCVguidelines.org) and is responsible for providing expertise and administrative support to HCV Guidance Panel members and processes.

The volunteer members of the IAS–USA Board of Directors (eBox 1) oversee the development of the information and educational programs and are not compensated for their roles in oversight and governance of the organization.

IAS–USA funding comes from a variety of sources. As of 2014, the largest single source of revenue is conference and CME participant registration fees. Other funding sources include grants from the pharmaceutical/diagnostics (commercial) industries, grants and subcontracts from government agencies, private donations, and gifts-in-kind from local community businesses and individuals. The commercial support that IAS–USA accepts is only for selected activities. Two large national CME efforts (one on HIV and another on HCV) invite funding in the form of educational grants from industry. Per IAS–USA policy, any effort that uses commercial grants must receive grants from several companies with competing products. Funds are pooled and distributed to activities within the effort at the sole discretion of the IAS–USA. Funders have no input into any activity, including its content, development, or selection of topics or speaker(s). Funders are listed in each activity as applicable.

The development of the Antiretroviral Therapy Recommendations is supported and funded by the IAS–USA. The IAS–USA determined the need for updated recommendations; selected panel members based on expertise in research and care to represent developed-world settings affected by HIV disease; determined the most appropriate way in which to disseminate the information (eg, publication in a medical journal rather than publication in the IAS–USA journal, web publication, etc); and provided administrative oversight and financial support.

The Panel itself is responsible for the design and conduct of the work; collection, management, analysis, and interpretation of the data; and preparation, review, and approval of the manuscript. IAS–USA provided staff support for administrative management, oversight of literature searches and editorial and production assistance.

c. Identifying and Screening Panel Members

The panel was initially appointed in 1995, and members have rotated periodically since then. In evaluating potential participants for the Panel, the IAS–USA Board considered individuals who 1) are recognized as authorities in HIV treatment research and clinical care, 2) have appointments in major medical teaching or research institutions, 3) have a demonstrated ability to review and evaluate evidence in an effort to provide useful recommendations in the field, 4) meet the IAS–USA COI and financial relationship criteria for participation (see below and www.iasusa.org), and 5) have the ability to work in a collaborative consensus process. In addition, the Board emphasized the need for an international, developed world perspective.

Like the IAS–USA Board of Directors, participants in IAS–USA panels are volunteers and receive no financial compensation for their panel participation. In joining the Panel, members agree to commit substantial time to the effort necessary for evidence review and for participation in the consensus process.

d. COI Management
It is the policy of IAS–USA to ensure balance, independence, objectivity, and scientific rigor in all its activities. All parties with control over the content of IAS–USA activities are required to disclose to the organization and activity audience any financial interest or other relationship with the manufacturer(s) of any commercial product(s) or provider(s) of commercial services with interests discussed in the activity (eg, presentation, article, etc) within at least the past 12 months. Financial interests or other relationships can include receipt of grants or research support, status as employee or consultant, stock or options holder, paid lecturer, paid lecturer, writer, or author, or member of speakers bureau, of the party or of his or her spouse or partner. The ACCME defines a financial interest as an interest of any dollar amount. Part of the IAS–USA policies to ensure the integrity of its activities is the policy to separate commercial promotion from core IAS–USA educational and informational activities. Individuals who conduct marketing or promotional activities for commercial firms may not contribute to core IAS–USA programs. A marketing or promotional activity includes any activity in which the commercial entity controls key elements, such as speaker or topic selection, that could be used to serve the entity’s commercial interests (eg, speakers bureaus, advertorials, etc). Individuals may not participate in most IAS–USA programs for 12 months after functioning in a promotional or marketing effort for a commercial firm. A notable exception to the separation policy is the annual Conference on Retroviruses and Opportunistic Infections (CROI) which allows research and symposia presentation by individuals with some of such relationships (including employment) because of its large focus on the presentations on original research, if their research or work passes rigorous peer review. Panel members who meet general criteria and are appointed, agree not to participate in any promotional activity on behalf of a pharmaceutical or medical device company (eg, serve on a speaker bureau, as a paid lecturer, or a similar contribution) while a member of the panel. Any conforming financial relationships with commercial entities that still may represent a real or potential COIs, will be resolved so that they do not influence the content of the recommendations. Prior to selection of the section teams and leaders, panel members declared their financial relationships with commercial concerns, discussed potential COIs, and recused themselves from serving as section leaders or team members accordingly.

III. The IAS–USA Antiretroviral Recommendations Panel

The members of the IAS–USA Antiretroviral Recommendations Panel are listed in eBox 2. The Panel convened in person in October 2013 and March 2014, and regularly by conference call. The chair (Huldrych F. Günthard, MD) oversees the discussions of the process and evidence review and manuscript development, and guides the group to consensus. Section leaders (Judith A. Aberg, MD; Joseph J. Eron, MD; Jennifer F. Hoy, MBBS, FRACP; Amalio Telenti, MD, PhD) and teams were appointed to evaluate evidence and summarize panel discussions for each section.

IV. Rating the Recommendations

The Panel is divided by topic into working sections, each with a section leader. These sections are responsible for reviewing and screening evidence, developing preliminary recommendations, and presenting these to the full Panel for discussion, identification of further evidence, and consensus.

The selected rating system (Table 1 in article) combines 2 ratings for each recommendation. One rates the strength of the recommendation (strong, moderate, or limited support) and the other rates the quality of the evidence (ranging from Ia, based on evidence from 1 or more randomized controlled clinical trial[s] published in the peer-reviewed literature, to III, based on the Panel’s analysis of the accumulated available evidence).

V. Content of the Recommendations

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The Panel agreed on the purpose, audience, and scope of these recommendations and on 4 main content sections (and subsections).

Content Sections:

1. When to Start
   a. General
   b. Special Considerations—Acute HIV-1 Infection; Opportunistic Infections (OIs); Cost
2. What Treatment to Start
   a. General
   b. Special Considerations—Pregnancy; Comorbid Diseases; Cardiovascular, Renal, and Bone Diseases; OIs; Hepatitis B Infection; Malignancy and Immunosuppressive Treatment; Hepatitis C Infection
3. Monitoring
4. Treatment-Experienced Patients

Panel members were assigned to content sections based on their expertise and section leaders were appointed (eBox 3). Huldrych F. Günthard, MD, Panel Chair, participated in all sections and was asked to review the entire manuscript, and Paul A. Volberding, MD, reviewed literature search results and identified relevant publications, and also reviewed the entire manuscript.

From October 2013 to June 2014, sections met in person and by conference call and e-mail exchange. Initial discussions were used to develop detailed Section outlines, and assign participants to draft subsections. The full Panel reviewed sections and the final manuscript.

VI. Evidence Collection and Literature Searches

Panel members were selected based on their active work in the field of HIV research and care, and detailed knowledge of available evidence (published and presented at major scientific conferences).

Literature searches in PubMed and Embase were conducted and designed by research librarians, Evans Whitaker, MD, MLIS, and Gloria Y. Won, MLIS, from UCSF (eTables 1 and 2). The initial literature search provided data available since the 2012 publication of the recommendations thru April 2014; approximately 300 references were identified. Relevant abstracts publically presented at recent scientific conferences were identified by panel members. All manufacturers of FDA-approved antiretroviral drugs were asked to submit lists of publications or abstracts meeting the established criteria (eTable 3). Drug manufacturers were instructed to provide references and electronic copies of the published or presented papers or abstracts only and not to comment on the design, methods, results or implications of any of the work. All reference lists, published papers, abstracts, and other relevant reports were organized and stored on a web-based, shared, electronic drive to which all panel members have ongoing access.

During the revision phase of the manuscript (June 2014), literature searches in PubMed and Embase were updated to June 2014 using the same Medical Subject Headings (MeSH) terms used in the original searches, to identify any additional major, published, relevant studies; an additional 100 possibly relevant references were circulated to the section chairs (eBox 4).

References


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**eBox 1. Volunteer IAS–USA Board of Directors, June 2014**

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Professor of Medicine  
Co-Director, Center for AIDS Research  
Director, AIDS Research Institute  
Director of Research, Global Health Sciences  
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San Francisco, California

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Director, Antiviral Research Center  
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Associate Director, Clinical AIDS Research and Education (CARE) Center  
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University of California Los Angeles  
Los Angeles, California

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Rollins School of Public Health  
Professor of Medicine  
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University of California San Diego and  
Veterans Affairs San Diego Healthcare System  
San Diego, California

Michael S. Saag, MD  
Professor of Medicine  
Jim Straley Chair in AIDS Research  
Director, Center for AIDS Research  
University of Alabama at Birmingham  
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Professor and Vice Chair  
Department of Medicine  
Head, Division of Infectious Diseases  
University of California San Diego  
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**eBox 2. IAS–USA Antiretroviral Therapy Recommendations Panel**

Huldrych F. Günthard, MD (Panel Chair)  
Professor of Infectious Diseases  
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Principal Investigator, AIDS Clinical Research Group  
The University of North Carolina at Chapel Hill  
Chapel Hill, North Carolina

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Professor, Medical Virology  
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Director, Antiviral Research Center  
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Southwest CARE Center

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eBox 3. Working Sections of the 2014 IAS–USA Antiretroviral Therapy Recommendations Panel

When to Start
Section Leader: Judith A. Aberg, MD
Section Participants: Constance A. Benson, MD; Pedro Cahn, MD, PhD; Michael S. Saag, MD; Huldrych F. Günthard, MD

What Treatment to Start
Section Leader: Joseph J. Eron, MD
Section Participants: Constance A. Benson, MD; David M. Burger, PharmD, PhD; Pedro Cahn, MD; Joel E. Gallant, MD, MPH; Marshall J. Glesby, MD, PhD; Jennifer F. Hoy, MBBS, FRACP; Peter Reiss, MD, PhD; David L. Thomas, MD; Huldrych F. Günthard, MD

Monitoring
Section Leader: Amalio Telenti, MD, PhD
Section Participants: David M. Burger, PharmD, PhD; Joel E. Gallant, MD, MPH; Peter Reiss, MD, PhD; Huldrych F. Günthard, MD

Treatment-Experienced Patients
Section Leader: Jennifer F. Hoy, MBBS, FRACP
Section Participants: Constance A. Benson, MD; Joseph J. Eron, MD; Michael S. Saag, MD; Huldrych F. Günthard, MD
**eBox 4. Example: Results of a PubMed Literature Search Update**

Search: PubMed Database

Search dates: 04/01/2014 through 06/04/2014


Search results:

Items 1 - 172 of 172  (Display the 172 citations in PubMed)

   High-fat meals do not impair postprandial endothelial function in HIV-infected and uninfected men.
   Volpe GE1, Wanke C, Imai CM, Heffernan KS, Kuvin JT, Mangili A.
   PMID: 24892462 [PubMed - as supplied by publisher]
   Related citations

   Assessment of satisfaction with pharmaceutical services in patients receiving antiretroviral therapy in outpatient HIV treatment setting.
   Agu KA1, Oqua D, Agada P, Ohiaeri SI, Adesina A, Abdulkareem MH, King RC, Wutoh AK.
   PMID: 24736896 [PubMed - in process]
   Related citations

   PMID: 24828268 [PubMed - in process]
   Related citations

Raltegravir for the treatment of patients co-infected with HIV and tuberculosis (ANRS 12 180 Reflate TB): a multicentre, phase 2, non-comparative, open-label, randomised trial.
PMID: 24726095 [PubMed - in process]
Related citations

Outcome of artemether-lumefantrine treatment for uncomplicated malaria in HIV-infected adult patients on anti-retroviral therapy.
Maganda BA, Minzi OM, Kamuhabwa AA, Ngasala B, Sasi PG.
PMID: 24885714 [PubMed - as supplied by publisher]
Related citations

When can HIV clinical trials detect treatment effects on drug resistance?
Hill AM, Moecklinghoff C, DeMasi R.
PMID: 24874537 [PubMed - as supplied by publisher]
Related citations

Tenofovir Alafenamide vs. Tenofovir Disoproxil Fumarate in Single Tablet Regimens for Initial HIV-1 Therapy: A Randomized Phase 2 Study.
PMID: 24872136 [PubMed - as supplied by publisher]
Related citations

Modeling and Simulation Approach to Support Dosing and Study Design Requirements for Treating HIV-Related Neuropsychiatric Disease with the NK1-R Antagonist Aprepitant.
PMID: 24862330 [PubMed - as supplied by publisher]
Related citations

Safety and effectiveness of antiretroviral therapies for HIV-infected women and their infants and children: protocol for a systematic review and network meta-analysis.
PMID: 24887455 [PubMed - as supplied by publisher]
Related citations

Pharmacokinetics of Antiretrovirals in Genital Secretions and Anatomic Sites of HIV Transmission: Implications for HIV Prevention.
Trezza CR, Kashuba AD.
PMID: 24859035 [PubMed - as supplied by publisher]
Related citations

Optimisation of antiretroviral therapy in HIV-infected children under 3 years of age.
PMID: 24852077 [PubMed - in process]
Related citations

Impact of Isoniazid Preventive Therapy for HIV-Infected Adults in Rio de Janeiro, Brazil: An Epidemiological Model.
Dowdy DW, Golub JE, Saraceni V, Moulton LH, Cavalcante SC, Cohn S, Pacheco AG, Chaisson RE, Durovni B.
PMID: 24853308 [PubMed - as supplied by publisher]
Related citations

Antiretroviral Therapy and Efficacy after Virologic Failure on First-line Boosted Protease Inhibitor Regimens.
PMID: 24842909 [PubMed - as supplied by publisher]
Related citations

Adherence to antiretroviral therapy in adolescents living with HIV: systematic review and meta-analysis.
Kim SH, Gerver SM, Fidler S, Ward H.
PMID: 24845154 [PubMed - as supplied by publisher]
Related citations

PMID: 24829212 [PubMed - as supplied by publisher]
Related citations

Isoniazid plus antiretroviral therapy to prevent tuberculosis: a randomised double-blind, placebo-controlled trial.
PMID: 24835842 [PubMed - as supplied by publisher]
Related citations

Ginger for prevention of antiretroviral-induced nausea and vomiting: a randomized clinical trial.
Dabaghzadeh F, Khalili H, Dashti-Khavidaki S, Abbasian L, Moeinifard A.
PMID: 24820858 [PubMed - as supplied by publisher]
Related citations

Systems analysis and improvement to optimize pMTCT (SAIA): a cluster randomized trial.
PMID: 24885976 [PubMed - as supplied by publisher]
Related citations

A Randomized Controlled Trial of Palifermin (Recombinant Human Keratinocyte Growth Factor) for the Treatment of Inadequate CD4+ T-Lymphocyte Recovery in Patients with HIV-1 Infection on Antiretroviral Therapy.


PMID: 24815851 [PubMed - as supplied by publisher]
Related citations

Lower baseline CD4 count is associated with a greater propensity towards virological failure in a cohort of South African HIV patients.
PMID: 24803320 [PubMed - as supplied by publisher]
Related citations

Voucher Incentives Improve Linkage to and Retention in Care among HIV-infected Drugs Users in Chennai, India.
PMID: 24803381 [PubMed - as supplied by publisher]
Related citations

25-Hydroxyvitamin D Insufficiency and Deficiency is Associated with HIV Disease Progression and Virological Failure Post-Antiretroviral Therapy Initiation in Diverse Multinational Settings.
PMID: 24799602 [PubMed - as supplied by publisher]
Related citations

Effect of antiretroviral therapy including lopinavir/ritonavir or efavirenz on etonogestrel-releasing implant pharmacokinetics in HIV-positive women.
PMID: 24798768 [PubMed - as supplied by publisher]
Related citations

Immunologic effect of zinc supplementation in HIV infected children receiving highly active antiretroviral therapy: A randomized, double blind placebo controlled trial.
PMID: 24798767 [PubMed - as supplied by publisher]
Related citations

Early versus delayed initiation of highly active antiretroviral therapy for HIV-positive adults with newly diagnosed pulmonary tuberculosis (TB-HAART): a prospective, international, randomised, placebo-controlled trial.

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PMID: 24810491 [PubMed - as supplied by publisher]
Related citations

26. AIDS Behav. 2014 May 1. [Epub ahead of print]
Tailored Nutrition Education and Food Assistance Improve Adherence to HIV Antiretroviral Therapy: Evidence from Honduras.
PMID: 24788781 [PubMed - as supplied by publisher]
Related citations

Effects of combination antiretroviral therapies on the risk of myocardial infarction among HIV patients.
PMID: 24713880 [PubMed - in process]
Related citations

Hepatitis B and hepatitis C virus infections among antiretroviral-naive and -experienced HIV co-infected adults.
Manyazewal T, Sisay Z, Biadgilign S, Abegaz WE.
PMID: 24757219 [PubMed - in process]
Related citations

Appetite testing in HIV-infected African adults recovering from malnutrition and given antiretroviral therapy.
PMID: 24785906 [PubMed - as supplied by publisher]
Related citations

30. AIDS. 2014 Apr 30. [Epub ahead of print]
Epidermal nerve fiber density, oxidative stress, and mitochondrial haplogroups in HIV-infected Thais initiating therapy.
PMID: 24785954 [PubMed - as supplied by publisher]
Related citations

HIV Protective Efficacy and Correlates of Tenofovir Blood Concentrations in a Clinical Trial of PrEP for HIV Prevention.
PMID: 24784763 [PubMed - as supplied by publisher]
Related citations

Efficacy of 400 mg efavirenz versus standard 600 mg dose in HIV-infected, antiretroviral-naive adults (ENCORE1): a randomised, double-blind, placebo-controlled, non-inferiority trial.
PMID: 24522178 [PubMed - indexed for MEDLINE]
Related citations

Dual therapy with lopinavir and ritonavir plus lamivudine versus triple therapy with lopinavir and ritonavir plus two nucleoside reverse transcriptase inhibitors in antiretroviral-therapy-naive adults with HIV-1 infection: 48 week results of the randomised, open label, non-inferiority GARDEL trial.
PMID: 24783988 [PubMed - as supplied by publisher]
Related citations

Role of Multivitamins, Micronutrients and Probiotics Supplementation in Management of HIV Infected Children.
Gautam N, Dayal R, Agarwal D, Kumar R, Singh TP, Hussain T, Singh SP.
PMID: 24760382 [PubMed - as supplied by publisher]
Related citations

Causes and Determinants of Mortality in HIV-Infected Adults With Tuberculosis: An Analysis From the CAMELIA ANRS 1295-CIPRA KH001 Randomized Trial.
PMID: 24759827 [PubMed - as supplied by publisher]
Related citations

Artemisinin-Based Combination Therapies Are Efficacious and Safe for Treatment of Uncomplicated Malaria in HIV-Infected Ugandan Children.
PMID: 24759826 [PubMed - as supplied by publisher]
Related citations

A Qualitative Study Investigating the Use of a Mobile Phone Short Message Service Designed to Improve HIV Adherence and Retention in Care in Canada (WelTel BC1).
PMID: 24768442 [PubMed - as supplied by publisher]
Related citations

Relationship of vitamin D insufficiency to AIDS-associated Kaposi's sarcoma outcomes: retrospective analysis of a prospective clinical trial in Zimbabwe.
Erlandson KM, Gudza I, Fiorillo S, Ndema B, Schooley RT, Gwanzura L, Borok M, Campbell TB.
PMID: 24769175 [PubMed - as supplied by publisher]
Related citations

A phase 1/pharmacokinetic study of sunitinib in combination with highly active antiretroviral therapy in human immunodeficiency virus-positive patients with cancer: AIDS Malignancy Consortium trial AMC 061.
PMID: 24474568 [PubMed - indexed for MEDLINE]
Related citations

Combination antiretroviral treatment for women previously treated only in pregnancy: week 24 results of AIDS clinical trials group protocol a5227.
PMID: 24759064 [PubMed - in process]
Related citations

Effect of 24 weeks of statin therapy on systemic and vascular inflammation in HIV-infected subjects receiving antiretroviral therapy.
Eckard AR, Jiang Y, Debanne SM, Funderburg NT, McComsey GA.
PMID: 24415784 [PubMed - indexed for MEDLINE]
Related citations

Secondary metabolism pathway polymorphisms and plasma efavirenz concentrations in HIV-infected adults with CYP2B6 slow metabolizer genotypes.
Haas DW, Kwara A, Richardson DM, Baker P, Papageorgiou I, Acosta EP, Morse GD, Court MH.
PMID: 24729586 [PubMed - as supplied by publisher]
Related citations

HIV status, breastfeeding modality at 5 months and postpartum maternal weight changes over 24 months in rural South Africa.
Chetty T, Carter RJ, Bland RM, Newell ML.
PMID: 24720779 [PubMed - as supplied by publisher]
Related citations

The effect of weekly text-message communication on treatment completion among patients with latent tuberculosis infection: study protocol for a randomised controlled trial (WelTel LTBI).
PMCID: PMC3987735 Free PMC Article
PMID: 24719431 [PubMed]
Related citations

Biomarkers of inflammation, coagulation and microbial translocation in HIV/HCV co-infected patients in the SMART study.
PMID: 24793968 [PubMed - as supplied by publisher]

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Ability of preventive therapy to cure latent Mycobacterium tuberculosis infection in HIV-infected individuals in high-burden settings.
Houben RM, Sumner T, Grant AD, White RG.
PMCID: PMC3986199 Free PMC Article
PMID: 24706842 [PubMed - in process]
Related citations

47. AIDS Behav. 2014 Apr 3. [Epub ahead of print]
Individualised Motivational Counselling to Enhance Adherence to Antiretroviral Therapy is not Superior to Didactic Counselling in South African Patients: Findings of the CAPRISA 058 Randomised Controlled Trial.
PMID: 24696226 [PubMed - as supplied by publisher]
Related citations

Functional CYP2B6 variants and virologic response to an efavirenz-containing regimen in Port-au-Prince, Haiti.
Haas DW, Severe P, Jean Juste MA, Pape JW, Fitzgerald DW.
PMID: 24695352 [PubMed - as supplied by publisher]
Related citations

Association between knowledge of HIV-positive status or use of antiretroviral therapy and high-risk transmission behaviors: systematic review.
Zakher B, Blazina I, Chou R.
PMID: 24007512 [PubMed - indexed for MEDLINE]
Related citations

Rilpivirine versus efavirenz with emtricitabine/tenofovir disoproxil fumarate in treatment-naïve HIV-1-infected patients with HIV-1 RNA ≤100,000 copies/mL: week 96 pooled ECHO/THRIVE subanalysis.
PMCID: PMC3985528 [Available on 2015/4/1]
PMID: 24660840 [PubMed - indexed for MEDLINE]
Related citations

Plasma and breast-milk selenium in HIV-infected Malawian mothers are positively associated with infant selenium status but are not associated with maternal supplementation: results of the Breastfeeding, Antiretrovirals, and Nutrition study.
PMCID: PMC3953887 [Available on 2015/4/1]
PMID: 24500152 [PubMed - indexed for MEDLINE]
Related citations

Total hip replacement in HIV-positive patients.
Graham SM, Lubega N, Mkandawire N, Harrison WJ.
Tuberculosis immune reconstitution inflammatory syndrome in A5221 STRIDE: timing, severity, and implications for HIV-TB programs.
PMCID: PMC3943693 [Available on 2015/4/1]
PMID: 24226057 [PubMed - indexed for MEDLINE]
Related citations

Once-daily dolutegravir versus darunavir plus ritonavir in antiretroviral-naive adults with HIV-1 infection (FLAMINGO): 48 week results from the randomised open-label phase 3b study.
PMID: 24698485 [PubMed - as supplied by publisher]
Related citations

Hepatic decompensation in antiretroviral-treated patients co-infected with HIV and hepatitis C virus compared with hepatitis C virus-monoinfected patients: a cohort study.
PMID: 24723077 [PubMed - indexed for MEDLINE]
Related citations

Interventions to improve adherence to antiretroviral therapy: a rapid systematic review.
Chaiyachati KH, Ogbuoji O, Price M, Suthar AB, Negussie EK, Bärnighausen T.
PMID: 24849479 [PubMed - in process]
Related citations

Improving antiretroviral therapy scale-up and effectiveness through service integration and decentralization.
Suthar AB, Rutherford GW, Horvath T, Doherty MC, Negussie EK.
PMID: 24849478 [PubMed - in process]
Related citations

Optimal strategies for monitoring response to antiretroviral therapy in HIV-infected adults, adolescents, children and pregnant women: a systematic review.
Tucker JD, Bien CH, Easterbrook PJ, Doherty MC, Penazzato M, Vitoria M, Peeling RW.
PMID: 24849475 [PubMed - in process]
Related citations

Optimization of antiretroviral therapy in HIV-infected children under 3 years of age: a systematic review.
Penazzato M, Prendergast AJ, Muhe LM, Tindyebwa D, Abrams EJ.
PMID: 24849473 [PubMed - in process]
Related citations


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Characterization of HIV-1 drug resistance development through week 48 in antiretroviral naive subjects on rilpivirine/emtricitabine/tenofovir DF or efavirenz/emtricitabine/tenofovir DF in the STaR study (GS-US-264-0110).

Porter DP, Kulkarni R, Fralich T, Miller MD, White KL.

PMID: 24525469 [PubMed - indexed for MEDLINE]
Related citations

Efficacy and safety of an extended nevirapine regimen in infants of breastfeeding mothers with HIV-1 infection for prevention of HIV-1 transmission (HPTN 046): 18-month results of a randomized, double-blind, placebo-controlled trial.


PMCID: PMC3945386 [Available on 2015/3/1]
PMID: 24189151 [PubMed - indexed for MEDLINE]
Related citations

Antiviral activity, pharmacokinetics, and safety of the HIV-1 protease inhibitor TMC310911, coadministered with ritonavir, in treatment-naive HIV-1-infected patients.


PMID: 24121756 [PubMed - indexed for MEDLINE]
Related citations

Low-frequency nevirapine (NVP)-resistant HIV-1 variants are not associated with failure of antiretroviral therapy in women without prior exposure to single-dose NVP.

Boltz VF, Bao Y, Lockman S, Halvas EK, Kearney MF, Schooley RT, Hughes MD, Coffin JM, Mellors JW; OCTANE/A5208 Team.

PMCID: PMC3923545 [Available on 2015/3/1]
PMID: 24443547 [PubMed - indexed for MEDLINE]
Related citations

CD8+ T cells are activated in an antigen-independent manner in HIV-infected individuals.

Bastidas S, Graw F, Smith MZ, Kuster H, Günthard HF, Oxenius A.

PMID: 24446519 [PubMed - indexed for MEDLINE]
Related citations


PMCID: PMC3912327 [Available on 2015/2/10]
PMID: 24378417 [PubMed - indexed for MEDLINE]
Related citations

Is forced migration a barrier to treatment success? Similar HIV treatment outcomes among refugees and a surrounding host community in Kuala Lumpur, Malaysia.
PMID: 24715982 [PubMed]
Related citations

PMID: 24791204 [PubMed]
Related citations

PMID: 24713353 [PubMed - in process]
Related citations

PMID: 24876794 [PubMed]
Related citations

PMID: 24518212 [PubMed - indexed for MEDLINE]
Related citations

PMID: 24805184 [PubMed - in process]
Related citations

PMID: 24721464 [PubMed - in process]
Related citations

PMCID: PMC3976531 Free PMC Article
Virologic and immunologic effectiveness at 48 weeks of darunavir-ritonavir-based regimens in treatment-experienced persons living with HIV-1 infection in clinical practice: a multicenter Brazilian cohort.
PMID: 24134962 [PubMed - indexed for MEDLINE]
Related citations

CD4 and Viral Load Dynamics in Antiretroviral-Naïve HIV-Infected Adults from Soweto, South Africa: A Prospective Cohort.
PMCID: PMC4022663 Free PMC Article
PMID: 24831447 [PubMed - in process]
Related citations

Efficacy of Initial Antiretroviral Therapy for HIV-1 Infection in Adults: A Systematic Review and Meta-Analysis of 114 Studies with up to 144 Weeks' Follow-Up.
Lee FJ, Amin J, Carr A.
PMCID: PMC4022522 Free PMC Article
PMID: 24830290 [PubMed - in process]
Related citations

Simplification to Abacavir/Lamivudine + Atazanavir Maintains Viral Suppression and Improves Bone and Renal Biomarkers in ASSURE, a Randomized, Open Label, Non-Inferiority Trial.
PMCID: PMC4019479 Free PMC Article
PMID: 24825167 [PubMed - in process]
Related citations

The Association between HIV Infection, Antiretroviral Therapy and Cervical Squamous Intraepithelial Lesions in South Western Nigerian Women.
Ezechi OC, Pettersson KO, Okolo CA, Ujah IA, Ostergren PO.
PMCID: PMC4014606 Free PMC Article
PMID: 24809726 [PubMed - in process]
Related citations

Baseline Natural Killer and T Cell Populations Correlation with Virologic Outcome after Regimen Simplification to Atazanavir/Ritonavir Alone (ACTG 5201).
PMCID: PMC4011688 Free PMC Article
PMID: 24802242 [PubMed - in process]
Related citations

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PMCID: PMC3994063 Free PMC Article
PMID: 24752177 [PubMed - in process]
Related citations

Olsen CM, Knight LL, Green AC.
PMCID: PMC3989294 Free PMC Article
PMID: 24740329 [PubMed - in process]
Related citations

PMCID: PMC3986059 Free PMC Article
PMID: 24733021 [PubMed - in process]
Related citations

PMCID: PMC3974754 Free PMC Article
PMID: 24699474 [PubMed - in process]
Related citations

Parenteral Patent Drug S/GSK1265744 has the Potential to be an Effective Agent in Pre-Exposure Prophylaxis Against HIV Infection.
Taha H, Morgan J, Das A, Das S.
PMID: 24738551 [PubMed - in process]
Related citations

Ambulatory care for HIV-infected patients: differences in outcomes between hospital-based units and private practices: analysis of the RESINA cohort.
PMID: 24262206 [PubMed - indexed for MEDLINE]
Related citations

Outcomes of antiretroviral treatment programmes in rural Lesotho: health centres and hospitals compared.
Nonlinear multiple imputation for continuous covariate within semiparametric Cox model: application to HIV data in Senegal.
Mbougua JB, Laurent C, Ndoye I, Delaporte E, Gwet H, Molinari N.
PMID: 23712767 [PubMed - indexed for MEDLINE]
Related citations

Pharmacokinetics and pharmacodynamics in HIV prevention; current status and future directions: a summary of the DAIDS and BMGF sponsored think tank on pharmacokinetics (PK)/pharmacodynamics (PD) in HIV prevention.
PMCID: PMC3809377 Free PMC Article
PMID: 23614610 [PubMed - indexed for MEDLINE]
Related citations

Association of higher plasma vitamin D binding protein and lower free calcitriol levels with tenofovir disoproxil fumarate use and plasma and intracellular tenofovir pharmacokinetics: cause of a functional vitamin D deficiency?
PMCID: PMC3811269 Free PMC Article
PMID: 24002093 [PubMed - indexed for MEDLINE]
Related citations

Changes in clearance, volume and bioavailability of immunosuppressants when given with HAART in HIV-1 infected liver and kidney transplant recipients.
PMCID: PMC4018225 Free PMC Article
PMID: 24030928 [PubMed - indexed for MEDLINE]
Related citations

A randomized controlled pilot trial of valacyclovir for attenuating inflammation and immune activation in HIV/herpes simplex virus 2-coinfected adults on suppressive antiretroviral therapy.
PMID: 23946220 [PubMed - indexed for MEDLINE]
Related citations

Low baseline CD4+ count is associated with greater bone mineral density loss after antiretroviral therapy initiation.
    PMID: 23943825 [PubMed - indexed for MEDLINE]
    Related citations

Optimizing care for HIV-infected people who use drugs: evidence-based approaches to overcoming healthcare disparities.
Meyer JP, Althoff AL, Altice FL.
PMCID: PMC3792721 [Available on 2014/11/1]
    PMID: 23797288 [PubMed - indexed for MEDLINE]
    Related citations

Optimization and simplification of antiretroviral therapy for adults and children.
Ford N, Flexner C, Vella S, Ripin D, Vitoria M.
    PMID: 24100871 [PubMed - indexed for MEDLINE]
    Related citations

Impact of HIV on clinical presentation and outcomes of tuberculosis treatment at primary care level.
Henegar C, Behets F, Vanden Driessche K, Tabala M, Van Rie A.
    PMID: 24125443 [PubMed - indexed for MEDLINE]
    Related citations

Effect of 7 days of phenytoin on the pharmacokinetics of and the development of resistance to single-dose nevirapine for perinatal HIV prevention: a randomized pilot trial.
    PMID: 23864647 [PubMed - indexed for MEDLINE]
    Related citations

Anthropometric measurements and lipid profiles to detect early lipodystrophy in antiretroviral therapy experienced HIV-infected children in the CHAPAS-3 trial.
    PMID: 24717427 [PubMed - as supplied by publisher]
    Related citations

Paradoxical tuberculosis-associated immune reconstitution inflammatory syndrome after early initiation of antiretroviral therapy in a randomized clinical trial.
    PMID: 24096631 [PubMed - indexed for MEDLINE]
    Related citations

At the crossroads: HIV prevention and treatment for people who inject drugs in Ukraine.
Bojko MJ, Dvoriak S, Altice FL.
PMCID: PMC3775865 [Available on 2014/10/1]
PMID: 23745777 [PubMed - indexed for MEDLINE]
Related citations

Integration of family planning services into HIV care and treatment in Kenya: a cluster-randomized trial.
Grossman D, Onono M, Newmann SJ, Blat C, Bukusi EA, Shade SB, Steinfeld RL, Cohen CR.
PMID: 24088687 [PubMed - indexed for MEDLINE]
Related citations

Integration of family planning into HIV services: a synthesis of recent evidence.
Wilcher R, Hoke T, Adamchak SE, Cates W Jr.
PMID: 24088686 [PubMed - indexed for MEDLINE]
Related citations

Nevirapine-based antiretroviral therapy does not reduce oral contraceptive effectiveness.
PMID: 24088680 [PubMed - indexed for MEDLINE]
Related citations

Planning for success predicts virus suppressed: results of a non-controlled, observational study of factors associated with viral suppression among HIV-positive persons following jail release.
Spaulding AC, Messina LC, Kim BI, Chung KW, Lincoln T, Teixeira P, Avery AK, Cunningham M, Stein MS, Ahuja D, Flanigan TP.
PMID: 23076719 [PubMed - indexed for MEDLINE]
Related citations

Mitochondrial DNA variation and changes in adiponectin and endothelial function in HIV-infected adults after antiretroviral therapy initiation.
Hulgan T, Stein JH, Cotter BR, Murdock DG, Ritchie MD, Dube MP, Gerschenson M, Haas DW, Torriani FJ; Aids Clinical Trials Group A5152s And Dacs 252 Study Teams.
PMCID: PMC3785797 [Available on 2014/10/1]
PMID: 23944767 [PubMed - indexed for MEDLINE]
Related citations

Effects of raltegravir on 2-long terminal repeat circle junctions in HIV type 1 viremic and aviremic patients.
PMCID: PMC3785805 [Available on 2014/10/1]
PMID: 23802629 [PubMed - indexed for MEDLINE]
Related citations

Clinical and pharmacogenetic factors affecting neonatal bilirubinemia following atazanavir treatment of mothers during pregnancy.

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Eley T, Huang SP, Conradie F, Zorrilla CD, Josipovic D, Botes M, Osiyemi O, Hardy H, Bertz R, McGrath D.

PMCID: PMC3785800 Free PMC Article
PMID: 23782005 [PubMed - indexed for MEDLINE]
Related citations

Antiretroviral therapy-induced changes in plasma lipids and the risk of kidney dysfunction in HIV-infected men.
Abraham AG, Li X, Jacobson LP, Estrella MM, Evans RW, Witt MD, Phair J.
PMCID: PMC3785801 [Available on 2014/10/1]
PMID: 23758574 [PubMed - indexed for MEDLINE]
Related citations

Cost of HIV and determinants of health care costs in HIV-positive patients in Germany: results of the DAGNA K3A Study.
PMID: 22990377 [PubMed - indexed for MEDLINE]
Related citations

Regional cerebral blood flow and FDG uptake in asymptomatic HIV-1 men.
PMID: 22496057 [PubMed - indexed for MEDLINE]
Related citations

Neurocognitive impairment in HIV-1-infected adults in Sub-Saharan Africa: a systematic review and metanalysis.
PMID: 23953699 [PubMed - indexed for MEDLINE]
Related citations

Co-administration of a commonly used Zimbabwean herbal treatment (African potato) does not alter the pharmacokinetics of lopinavir/ritonavir.
Gwaza L, Aweeka F, Greenblatt R, Lizak P, Huang L, Guglielmo BJ.
PMCID: PMC3776002 [Available on 2014/10/1]
PMID: 23587599 [PubMed - indexed for MEDLINE]
Related citations

Community-based intervention to enhance provision of integrated TB-HIV and PMTCT services in South Africa.
Uwimana J, Zarowsky C, Hausler H, Swanevelder S, Tabana H, Jackson D.
PMID: 24020602 [PubMed - indexed for MEDLINE]
Related citations

Outcomes in HIV-infected adults with tuberculosis at clinics with and without co-located HIV clinics in Botswana.
Schwartz AB, Tamuhla N, Steenhoff AP, Nkakana K, Lethogile R, Chadborn TR, Kestler M, Zetola NM, Ravimohan S, Bisson GP.
PMID: 24025381 [PubMed - indexed for MEDLINE]
Related citations

Policies and practices in the delivery of HIV services in correctional agencies and facilities: results from a multisite survey.
PMCID: PMC3801270 Free PMC Article
PMID: 24078624 [PubMed - indexed for MEDLINE]
Related citations

Health status, sexual and drug risk, and psychosocial factors relevant to postrelease planning for HIV+ prisoners.
Feaster DJ, Reznick OG, Zack B, McCartney K, Gregorich SE, Brineks AM.
PMID: 24078623 [PubMed - indexed for MEDLINE]
Related citations

Polypharmacy and risk of antiretroviral drug interactions among the aging HIV-infected population.
PMCID: PMC3785656 [Available on 2014/10/1]
PMID: 23605401 [PubMed - indexed for MEDLINE]
Related citations

Caring for women living with HIV: gaps in the evidence.
PMCID: PMC3789211 Free PMC Article
PMID: 24088395 [PubMed - indexed for MEDLINE]
Related citations

Clinical pharmacology quality assurance program: models for longitudinal analysis of antiretroviral proficiency testing for international laboratories.
PMCID: PMC3781596 [Available on 2014/10/1]
PMID: 24052065 [PubMed - indexed for MEDLINE]
Related citations

Antibody persistence and immunologic memory after sequential pneumococcal conjugate and polysaccharide vaccination in HIV-infected children on highly active antiretroviral therapy.
PMCID: PMC3825555 [Available on 2014/10/1]
PMID: 23954381 [PubMed - indexed for MEDLINE]
Related citations

Association of self-reported race with AIDS death in continuous HAART users in a cohort of HIV-infected women in the United States.
Murphy K, Hoover DR, Shi Q, Cohen M, Gandhi M, Golub ET, Gustafson DR, Pearce CL, Young M, Anastos K.

PMCID: PMC3815041 Free PMC Article
PMID: 24037210 [PubMed - indexed for MEDLINE]
Related citations

Bone mineral density in HIV participants randomized to raltegravir and lopinavir/ritonavir compared with standard second line therapy.
PMCID: PMC3815006 Free PMC Article
PMID: 23921615 [PubMed - indexed for MEDLINE]
Related citations

Accelerated biological ageing in HIV-infected individuals in South Africa: a case-control study.
PMCID: PMC3805356 Free PMC Article
PMID: 23751258 [PubMed - indexed for MEDLINE]
Related citations

A study of financial incentives to reduce plasma HIV RNA among patients in care.
Farber S, Tate J, Frank C, Ardito D, Kozal M, Justice AC, Scott Braithwaite R.
PMCID: PMC3742414 Free PMC Article
PMID: 23404097 [PubMed - indexed for MEDLINE]
Related citations

Lopinavir/ritonavir monotherapy as a nucleoside analogue-sparing strategy to prevent HIV-1 mother-to-child transmission: the ANRS 135 PRIMEVA phase 2/3 randomized trial.
PMID: 23763338 [PubMed - indexed for MEDLINE]
Related citations

Comparison of risk factors and outcomes in HIV immune complex kidney disease and HIV-associated nephropathy.
PMCID: PMC3805081 [Available on 2014/9/6]
PMID: 23685946 [PubMed - indexed for MEDLINE]
Related citations

Optimizing PMTCT service delivery in rural North-Central Nigeria: protocol and design for a cluster randomized study.
Aliyu MH, Blevins M, Audet C, Shepherd BE, Hassan A, Onwujekwe O, Gebi UI, Kalish M, Lindegren ML, Vermund SH, Wester CW.
PMCID: PMC3786261 [Available on 2014/9/1]
PMID: 23816493 [PubMed - indexed for MEDLINE]
Related citations

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Therapy and prophylaxis of opportunistic infections in HIV-infected patients: a guideline by the German and Austrian AIDS societies (DAIG/ÖAG) (AWMF 055/066).
PMCID: PMC3776256 Free PMC Article
PMID: 24037688 [PubMed - indexed for MEDLINE]
Related citations

A comparison of the association between glomerular filtration and L-arginine status in HIV-infected and uninfected African men: the SAfRIC study.
Glyn MC, Van Rooyen JM, Schutte R, Huisman HW, Böger RH, Schwedhelm E, Lüneburg N, Mels CM, Schutte AE.
PMID: 23448845 [PubMed - indexed for MEDLINE]
Related citations

Factors associated with the immune response to hepatitis A vaccination in HIV-infected patients in the era of highly active antiretroviral therapy.
PMID: 23777950 [PubMed - indexed for MEDLINE]
Related citations

Characteristics of foreign-born HIV infected individuals and differences by region of origin and gender.
Carten ML, Castillo-Mancilla JR, Allshouse AA, Johnson SC.
PMID: 22562621 [PubMed - indexed for MEDLINE]
Related citations

Gut Lactobacillales are associated with higher CD4 and less microbial translocation during HIV infection.
Pérez-Santiago J, Gianella S, Massanella M, Spina CA, Karris MY, Var SR, Patel D, Jordan PS, Young JA, Little SJ, Richman DD, Smith DM.
PMCID: PMC3816380 [Available on 2014/7/31]
PMID: 24180001 [PubMed - indexed for MEDLINE]
Related citations

HIV transmission and 24-month survival in a randomized trial of HAART to prevent MTCT during pregnancy and breastfeeding in Botswana.
PMCID: PMC3987116 [Available on 2014/7/31]
PMID: 24180000 [PubMed - indexed for MEDLINE]
Related citations

Factors associated with remaining on initial randomized efavirenz-containing regimens.
Smurzynski M, Wu K, Schouten JT, Lok JJ, Bosch RJ, Taiwo B, Johnson VA, Collier AC.
PMID: 23925417 [PubMed - indexed for MEDLINE]
Related citations
HIV-infected adolescents in southern Africa can achieve good treatment outcomes: results from a retrospective cohort study.
PMCID: PMC3713766 Free PMC Article
PMID: 23525033 [PubMed - indexed for MEDLINE]
Related citations

Virologic and immunologic response to cART by HIV-1 subtype in the CASCADE collaboration.
PMCID: PMC3728088 Free PMC Article
PMID: 23936260 [PubMed - indexed for MEDLINE]
Related citations

A novel approach to accounting for loss to follow-up when estimating the relationship between CD4 Count at ART initiation and mortality.
Fox M, McCarthy O, Over M.
PMCID: PMC3728360 Free PMC Article
PMID: 23935977 [PubMed - indexed for MEDLINE]
Related citations

HIV replication alters the composition of extrinsic pathway coagulation factors and increases thrombin generation.
PMCID: PMC3828789 Free PMC Article
PMID: 23896681 [PubMed - indexed for MEDLINE]
Related citations

PMCID: PMC3708944 Free PMC Article
PMID: 23874597 [PubMed - indexed for MEDLINE]
Related citations

Suppression of HBV by tenofovir in HBV/HIV coinfected patients: a systematic review and meta-analysis.
PMCID: PMC3707972 Free PMC Article
PMID: 23874527 [PubMed - indexed for MEDLINE]
Related citations

Factors influencing bone mineral density in ARV-naive patients at Sanglah Hospital, Bali.
Masyeni S, Utama S, Somalia A, Widiana R, Merati TP.

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Long-term gender-based outcomes for atazanavir/ritonavir (ATV/r)- containing regimens in treatment-experienced patients with HIV.  
PMCID: PMC3871422 Free PMC Article  
PMID: 23590675 [PubMed - indexed for MEDLINE]  
Related citations

Polymorphisms in IL-1 gene cluster and its association with the risk of perinatal HIV transmission, in an Indian cohort.  
PMID: 23769826 [PubMed - indexed for MEDLINE]  
Related citations

Effect of Immune No. 2 on the immune reconstitution in patients with HIV/AIDS after highly active antiretroviral treatment: a randomized double blind placebo controlled clinical trial.  
PMID: 23494328 [PubMed - indexed for MEDLINE]  
Related citations

Evaluation of how integrated HIV and TB programs are implemented in South Africa and the implications for rural-urban equity.  
Scott VE, Sanders D.  
PMID: 23713881 [PubMed - indexed for MEDLINE]  
Related citations

Ocular complications and loss of vision due to herpes zoster ophthalmicus in patients with HIV infection and a comparison with HIV-negative patients.  
Nithyanandam S, Joseph M, Stephen J.  
PMID: 23512510 [PubMed - indexed for MEDLINE]  
Related citations

Residual plasma viraemia and infectious HIV-1 recovery from resting memory CD4 cells in patients on antiretroviral therapy: results from ACTG A5173.  
Gandhi RT, Bosch RJ, Aga E, Bedison MA, Bastow B, Schmitz JL, Siliciano JD, Siliciano RF, Eron JJ, Mellors JW; ACTG A5173 team.  
PMCID: PMC3887470 Free PMC Article  
PMID: 23411421 [PubMed - indexed for MEDLINE]  
Related citations

Therapeutic levels of lopinavir in late pregnancy and abacavir passage into breast milk in the Mma Bana Study, Botswana.  
PMID: 23183881 [PubMed - indexed for MEDLINE]  
Related citations
Badell ML, Kachikis A, Haddad LB, Nguyen ML, Lindsay M. 
PMCID: PMC3782836 Free PMC Article
PMID: 24106419 [PubMed - indexed for MEDLINE] Related citations

Fortuna S, Fabbiani M, Digiambenedetto S, Ragazzoni E, Lisi L, Cauda R, Navarra P. 
PMID: 23887354 [PubMed - indexed for MEDLINE] Related citations

PMCID: PMC3775760 Free PMC Article
PMID: 24069230 [PubMed - indexed for MEDLINE] Related citations

Nouhin J, Madec Y, Ngo-Giang-Huong N, Ferradini L, Nerrienet E. 
PMCID: PMC3756052 Free PMC Article
PMID: 24015311 [PubMed - indexed for MEDLINE] Related citations

Sempa JB, Kiragga AN, Castelnuovo B, Kamya MR, Manabe YC. 
PMCID: PMC3754935 Free PMC Article
PMID: 24013838 [PubMed - indexed for MEDLINE] Related citations

PMCID: PMC3747183 Free PMC Article
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**eTable 1. Summary of Evidence Collection**

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*Of note, individual panel members collected relevant evidence throughout the process and reviewed materials submitted by manufacturers (particularly for safety issues) and this process cannot be quantified.*
### eTable 2. Literature Search Terms Used

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### eTable 3. Information Requested From Antiretroviral Drug Manufacturers

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| AbbVie                                     | • Presented at national or international conferences or has been published in the peer-reviewed literature  
  • From prospective clinical trials (ie, properly randomized controlled trials), cohort studies, and ancillary trials (pharmacologic and drug interaction studies)  
  • About newly recognized toxicities and complications associated with product(s) | 01/28/2014     | 02/12/2014         |
| Boehringer Ingelheim Pharmaceuticals, Inc  | • Presented at national or international conferences or has been published in the peer-reviewed literature  
  • From prospective clinical trials (ie, properly randomized controlled trials), cohort studies, and ancillary trials (pharmacologic and drug interaction studies)  
  • About newly recognized toxicities and complications associated with product(s) | 01/28/2014     | None received      |
| Bristol-Myers Squibb                       | • Presented at national or international conferences or has been published in the peer-reviewed literature  
  • From prospective clinical trials (ie, properly randomized controlled trials), cohort studies, and ancillary trials (pharmacologic and drug interaction studies)  
  • About newly recognized toxicities and complications associated with product(s) | 01/28/2014     | 02/14/2014         |
| Gilead Sciences, Inc                       | • Presented at national or international conferences or has been published in the peer-reviewed literature  
  • From prospective clinical trials (ie, properly randomized controlled trials), cohort studies, and ancillary trials (pharmacologic and drug interaction studies)  
  • About newly recognized toxicities and complications associated with product(s) | 01/28/2014     | 02/14/2014 and 03/20/2014 |
| Janssen Therapeutics                       | • Presented at national or international conferences or has been published in the peer-reviewed literature  
  • From prospective clinical trials (ie, properly randomized controlled trials), cohort studies, and ancillary trials (pharmacologic and drug interaction studies)  
  • About newly recognized toxicities and complications associated with product(s) | 01/28/2014     | 02/17/2014         |
<p>| Merck &amp; Co, Inc                            | • Presented at national or international conferences or has been published in the peer-reviewed literature | 1/28/2014      | 2/13/2014 and       |</p>
<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Information Requested</th>
<th>Date Requested</th>
<th>Date Received</th>
</tr>
</thead>
</table>
|                 | peer-reviewed literature  
• From prospective clinical trials (ie, properly randomized controlled trials), cohort studies, and ancillary trials (pharmacologic and drug interaction studies)  
• About newly recognized toxicities and complications associated with product(s)                                                                                       |                | 03/10/2014    |
| Genentech        | • Presented at national or international conferences or has been published in the peer-reviewed literature  
• From prospective clinical trials (ie, properly randomized controlled trials), cohort studies, and ancillary trials (pharmacologic and drug interaction studies)  
• About newly recognized toxicities and complications associated with product(s)                                                                                       | 01/28/2014     | 02/05/2014    |
| ViiV Healthcare  | • Presented at national or international conferences or has been published in the peer-reviewed literature  
• From prospective clinical trials (ie, properly randomized controlled trials), cohort studies, and ancillary trials (pharmacologic and drug interaction studies)  
• About newly recognized toxicities and complications associated with product(s)                                                                                       | 01/28/2014     | 02/11/2014    |
eTable 4. Estimated Patent Expiration Dates for Branded Antiretroviral Drugs

<table>
<thead>
<tr>
<th>Year</th>
<th>Drugs/Combinations</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>zidovudine, lamivudine, stavudine, didanosine, saquinavir, nevirapine</td>
</tr>
<tr>
<td>2013</td>
<td>ritonavir, efavirenz, zidovudine/ lamivudine (FDC)</td>
</tr>
<tr>
<td>2016</td>
<td>abacavir, lopinavir/r (softgel)</td>
</tr>
<tr>
<td>2017</td>
<td>atazanavir, tenofovir, darunavir</td>
</tr>
<tr>
<td>2019</td>
<td>etravirine, abacavir/lamivudine (FDC)</td>
</tr>
<tr>
<td>2024</td>
<td>tenofovir/emtricitabine (FDC)</td>
</tr>
<tr>
<td>2025</td>
<td>raltegravir</td>
</tr>
<tr>
<td>2026</td>
<td>tenofovir/emtricitabine/efavirenz (FDC), tenofovir/emtricitabine/rilpivirine (FDC), dolutegravir</td>
</tr>
</tbody>
</table>

Abbreviations: FDC, fixed-dose combination; /r, ritonavir boosted.
**eTable 5.** Recommended Target Trough Levels of Antiretroviral Drugs Used in Therapeutic Drug Monitoring

<table>
<thead>
<tr>
<th>Drug</th>
<th>Target Trough Level (mg/L)(^{b,c})</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lopinavir</td>
<td>1.00</td>
</tr>
<tr>
<td>Atazanavir</td>
<td>0.15</td>
</tr>
<tr>
<td>Darunavir</td>
<td>0.55</td>
</tr>
<tr>
<td>Nevirapine</td>
<td>3.00</td>
</tr>
<tr>
<td>Efavirenzd</td>
<td>1.00</td>
</tr>
<tr>
<td>Etravirine</td>
<td>0.10</td>
</tr>
<tr>
<td>Rilpivirine</td>
<td>0.04</td>
</tr>
<tr>
<td>Raltegravir</td>
<td>0.02</td>
</tr>
<tr>
<td>Elvitegravir</td>
<td>ND</td>
</tr>
<tr>
<td>Dolutegravir</td>
<td>ND</td>
</tr>
<tr>
<td>Maraviroc</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Abbreviations: ND, not done.

\(^{a}\)Therapeutic drug monitoring is not recommended in routine care; however, selected patients might benefit from this intervention.

\(^{b}\)Target concentrations have been determined in concentration-effect analysis or are defined by in vitro analysis based on protein-adjusted 90% effective concentration (EC\(_{90}\)).

\(^{c}\)Trough levels are associated with virologic response; patients should have a trough level *above* this target.

\(^{d}\)Target peak level: 4.0 mg/L. Peak levels are associated with toxicity; patients should have a peak level *below* this target.