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| **Author, Year** | **Study name** | **Type of study** | **Location/setting** | **Duration of  followup** | **Treatment groups** | **Population characteristics** | **Inclusion criteria** |
| Cohen et al, 2011109 | HIV Prevention Trials Network study 052 | RCT | Botswana, Kenya, Malawi, South Africa, Zimbabwe, India, Brazil, Thailand, and United States | Median, 42 months | Delayed treatment: initiation after 2 consecutive measures of CD4 count of ≤0.250 x 109 cells/mL or at onset of AIDS-related illness (n=877) Early treatment: immediate initiation of ART at CD4 count of 0.350 to 0.550 x 109 cells/mL (n=886) | n=1763 serodiscordant couples (HIV+ participants: n=886 early treatment, 877 delayed treatment) Mean age not reported; 61% of participants ages 26 to 40 years  Median CD4 count, 0.442 x 109 cells/L for early-therapy group, 0.428 x 109 cells/L  for delayed therapy group | Couples in which 1 partner is HIV-1 positive and other is negative; CD4 counts of 0.350 to 0.550 x 109 cells/L; in a stable relationship for at least 3 months; reported 3 or more instances of vaginal or anal intercourse; willing to disclose serostatus to partner |
| Severe et al, 2010130 | Study not named | Open-label RCT | Haiti; single specialty clinic (Haitian Group for the Study of Karposi's Sarcoma and Opportunistic Infections [GHESKIO]) | Mean, 21 months (range, 1–44 months) | Early treatment (CD4 count 0.201–0.350 x 109 cells/L) (n=408): lamivudine 150 mg + zidovudine 300 mg bid, efavirenz 600 mg qd Standard treatment (n=408): same intervention as early treatment group, started when CD4 count ≤0.200 x 109 cells/L | n=816 Mean age not reported, median age 40 years  58% female Median CD4 count, 0.281 x 109 cells/L | Age >18 years, HIV-infected, confirmed CD4 count >0.200 x 109 cells/L and <0.350 x 109 cells/L within 45 days before enrollment |
| SMART Study Group, 2008131  Other publication:  SMART Study Group, 2006138 | Strategies for Management of Antiretroviral Therapy Study Group (SMART Study) | RCT (subgroup analysis) | United States/Europe;  multicenter | Mean, 18 months (median, 15 months) | Intermittent ART-drug conservation group: CD4 count <0.250 x 109 cells/L or CD4 percentage <15% or symptomatic (n=131 ART naive)  Continuous ART-viral supression group: CD4 count >0.350 x 109 cells/L (n=118 ART naive) | n=477 (249 ART naive; 228 no ART)  Median age, 41 years  26% female  49% white, 36% black, 15% other  Median CD4 count, 0.447 x 109 cells/L (range, 0.385–0.536 x 109) | ART naive or no use of ART for a minimum of 6 months prior to study entry; at least 1 HIV RNA measure and level at least >10,000 copies/mL |

| **Author, Year** | **Exclusion criteria** | **Number screened/ eligible/enrolled/ withdrawals/% analyzed** | **Clinical outcomes** | **Adverse events** | **Funding source and role** | **Quality rating** |
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| Cohen et al, 2011109 | Previous ART (with the exception of short-term prevention of mother-to-child transmission) | 10,838 screened; 1763 couples enrolled | Mortality Delayed treatment, 13/877 (2%) vs. early treatment, 10/886 (1%); HR, 1.3 (95% CI, 0.57 to 3.0)  Clinical event (death, WHO Stage 4 event, severe bacterial infection, pulmonary infection) Delayed treatment, 65/877 (7%) vs. early treatment, 40/886 (5%); adjusted HR, 1.7 (95% CI, 1.1 to 2.5) Extrapulmonary tuberculosis Delayed treatment, 17/877 (2%) vs. early treatment, 3/886 (0.3%); RR, 5.6 (95% CI, 1.7 to 20)  Pulmonary tuberculosis Delayed treatment, 15/877 (2%) vs. early treatment, 13/886 (2%); RR, 1.2 (95% CI, 0.56 to 2.4) | Severe or life-threatening adverse events Early treatment, 127/886 (14%) vs. delayed treatment, 119/877 (14%) | National Institute of Allergy and Infectious Diseases | Good |
| Severe et al, 2010130 | History of AIDS-defining illness (WHO Stage 4) or previously used ART | 816/816; unclear | Mortality Standard treatment, 23/408 (6%) vs. early treatment, 6/408 (2%); unadjusted HR, 4 (95% CI, 1.6 to 9.8) Incident tuberculosis Standard treatment, 36/408 (9%) vs. early treatment, 18/408 (4%); unadjusted HR, 2 (95% CI, 1.2 to 3.6) | Any severe or life-threatening drug reaction Standard treatment, 18/160\* (11%) vs. early treatment, 32/408 (8%) Anemia Standard treatment, 13/160 (8%) vs. early treatment, 14/408 (3%) \*160/408 standard treatment patients received ART once CD4 counts reached ≤200 x 109 cells/L | National Institute of Allergy and Infectious Disease; Fogarty International Center; Global Fund to Fight AIDS, Tuberculosis and Malaria; GlaxoSmithKline; Abbot Laboratory; Fondation Merieux | Good |
| SMART Study Group, 2008131  Other publication:  SMART Study Group, 2006138 | No use of ART for <6 months before randomization | SMART subgroup analysis: 477 screened; 477 eligible; 477 enrolled | Opportunistic disease or death\*  DC, 4/131 (event rate, 2.7/100 person-years) vs. 1/118 (event rate, 0.5/100 person-years); HR, 5.3; p=0.13  Fatal or nonfatal opportunistic disease\*  DC, 3/131 (event rate, 2/100 person-years) vs. 1/118 (event rate, 0.5/100 person-years); HR, 4.1; p=0.22  Serious nonAIDS events, including death due to nonopportunistic disease\*  DC, 4/131 (event rate, 2.8/100 person-years) vs. VS, 1/118 (event rate, 0.5/100 person-years); HR, 5.1; p=0.15  Fatal or nonfatal opportunistic disease or serious nonAIDS event including death due to nonopportunistic disease\*  DC, 7/131 (event rate, 4.9/100 person-years) vs. VS, 2/118 (event rate, 1/100 person-years); HR, 4.6; p=0.06  \*ART naive only | Not reported | National Institute of Allergy and Infectious Diseases | Good |

ART = antiretroviral therapy; DC = drug conservative; HR = hazard rate; RCT = randomized, controlled trial; VS = viral suppression; WHO = World Health Organization.