| **Author, Year** | **Setting/ Data source** | **Cohorts** | **Duration of followup** | **Inclusion criteria** | **Number analyzed** | **Comparison groups** | **Population characteristics** | **Quality rating** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Edwards,  201588 | U.S., Centers for AIDS Research Network of Integrated Clinical Systems | Centers for AIDS Research Network of Integrated Clinical Systems enrollees from 1 of 8 sites | 10 years | ART naïve, age ≥19 years enrolled in Centers for AIDS Research Network of Integrated Clinical Systems sites from January 1 1998 to December 31 2013 | 3,532 | A. Initiation of ART at <500 cells/mm3  B. Initiation of ART at <350 cells/mm3  C. Initiation of ART at <200 cells/mm3 | *Data not stratified according to intervention group*  Mean age NR:  49% 18 to 34 years  32% 35 to 44 years  19% 45 to 65 years  18% female  9% Hispanic; other race/ethnicity NR  MSM: 67%; PWID: 17%  CD4 count: 37% 500 to 600 cells/mm3; 34% 601 to 750 cells/mm3; 23% 751 to 1,000 cells/mm3; 7% >1,000 cells/mm3 | Fair |
| Lima,  201596 | British Columbia (Canada) Centre for Excellence in HIV/AIDS Drug Treatment Programme | DTP enrollees between January 1 2000 and December 31 2012 | Median 5 years | ART naïve, age ≥19 years enrolled in DTP during specified time frame | 4,120 | A. Initiation of ART at ≥500 cells/ mm3  B. Intiation of ART at <500 cells/mm3  C. Initiation of ART at ≥350 cells/mm3  D. Initiation of ART at <350 cells/mm3 | *Data not stratified according to intervention group*  Mean age 42 years (IQR, 35 to 49)  20% female  Race/ethnicity NR  36% history of PWID  CD4 count: 44% <200 cells/mm3; 32% 200 to 349 cells/mm3; 14% 350 to 499 cells/mm3; 10% ≥500 cells/mm3 | Fair |
| Lodi, 201587 | Pooled national health care data from 12 European cohorts | HIV-CAUSAL collaboration of cohorts in Europe and the U.S. | 7 years | Age ≥18 years; HIV diagnosis on or after Jan 1, 2000; AIDS-free; ART naïve; CD4 cell count and HIV-RNA measurements within 3 months of each other and within 6 months of the date of HIV diagnosis.  Excluded: Individuals with no CD4 or HIV RNA measures after baseline | 55,826 | A. Initiation of ART at ≥500 cells/mm3  B. Intiation of ART at <500 cells/mm3  C. Initiation of ART at <350 cells/mm3 | A vs. B  Mean age 35 (IQR, 28 to 44) vs. 38 (IQR, 31 to 46)  22% vs. 24% female  Transmission group: 30% vs. 40% heterosexual; 56% vs. 44% homosexual or bisexual; 2 vs. 3% PWID; 11% vs. 14% other/unknown  Geographic origin: 78% vs. 67% Western country; 11% vs. 20% sub-Saharan Africa; 8% vs. 9% rest of the world; 4% vs. 5% unknown | Fair |
| Lodi, 201795 | Cohorts from Europe, Brazil, Canada and the U.S. | HIV CAUSAL Collaboration cohorts (general HIV population) and Veterans Aging Cohort Study (VA population) | 5 years | Ages 50 to 70 years, who had at least 1 CD4 cell count and 1 HIV-RNA measurement within 3 months of each other, whereas ART-naive and AIDS-free after December 31, 2004 | 9,599 | A. Initiation of ART at ≥500 cells/mm3  B. Initiation of ART at <500 cells/mm3  C. Initiation of ART at <350 cells/mm3 | *Data not stratified according to intervention group*  General HIV population  Age 55 years (IQR, 52 to 59)  21% female  Transmission group: 45% heterosexual; 43% homosexual; 2% PWID; 9% unknown  Geographic origin: 63% Western country; 6% sub-Saharan Africa; 9% rest of world; 22% unknown  CD4 count: 12% <100 cells/mm3; 13% 100 to 200 cells/mm3; 25% 200 to 349 cells/mm3; 22% 350 to 499 cells/mm3; 29% ≥500 cells/mm3  HIV RNA: 23% <10,000 copies/mL; 41% 10,000 to 100,000 copies/mL; 36% >100,000 copies/mL  VA population  Age 56 years (IQR, 53 to 60)  2% female  CD4 count: 20% <100 cells/mm3; 16% 100 to 200 cells/mm3; 23% 200 to 349 cells/mm3; 19% 350 to 499 cells/mm3; 22% ≥500 cells/mm3  HIV RNA: 26% <10,000 copies/mL; 47% 10,000 to 100,000 copies/mL; 27% >100,000 copies/mL | Fair |

**Abbreviations:** ART=antiretroviral therapy; CD4=cluster of differentiation 4; DTP=drug treatment program; IQR=interquartile range; MSM=men who have sex with men; NR=not reported; PWID=persons who inject drugs; RNA=ribonucleic acid; U.S.=United States; VA=U.S. Department of Veterans Affairs.