Table S1. Source of samples used for analysis.

<table>
<thead>
<tr>
<th>Study</th>
<th>Reference</th>
<th>Population enrolled</th>
<th>HIV status at enrollment</th>
<th>Enrollment (years)</th>
<th>Follow-up interval</th>
<th>Length of follow-up</th>
<th>HIV test method</th>
</tr>
</thead>
</table>
| MACS      | Kaslow (22) | MSM                | Infected (42%)
Uninfected (58%) | 1984-1985;
1987-1990;
2001-2003 | 6 months          | Ongoing (up to 29 years) | EIA / WB<sup>a</sup> |
| ALIVE     | Vlahov (23) | PWID               | Uninfected               | 1988-1989;
1994-1995;
1998; 2000;
2005-2008 | 6 months          | Ongoing (up to 25 years) | EIA / WB          |
| JHHCC     | Moore (25) | Various            | Infected                 | 1989-present       | Various            | Ongoing (>24 years) | SOC             |
| HIVNET 001 | Celum (24) | Various            | Uninfected               | 1995-present       | 3 months           | Up to 3 years       | EIA / WB<sup>b</sup> |
| HPTN 061 | Koblin (28) | Black MSM          | Infected (25%)
Uninfected (75%) | 2009-2010 | 6 months | 12 months | Rapid test / WB<sup>b</sup> |
| HPTN 064 | Hodder (27) | Women             | Infected (1.5%)
Uninfected (98.5%) | 2009-2010 | 6 months | 6 or 12 months | Rapid test / WB<sup>b</sup> |

Abbreviations: MACS: Multicenter AIDS Cohort; ALIVE: AIDS Linked to the Intravenous Experience; JHHCC: Johns Hopkins Hospital Clinical Cohort; HIVNET: HIV Network for Prevention Trials; HPTN: HIV Prevention Trials Network; MSM: men who have sex with men; PWID: persons who inject drugs; SOC: standard of care; EIA: enzyme immunoassay; WB: Western blot.

<sup>a</sup> Some participants were enrolled in this study before HIV testing algorithms were available. For these participants, stored samples from their baseline visit were tested when the tests became available.

<sup>b</sup> Retrospective quality control testing was performed at a centralized reference laboratory. This analysis included testing for acute infection at the visit prior to seroconversion.