**Supplemental Digital Content**

**Table 1: Demographic characteristics of study participants**

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|  | Study participants |
| HIV statusMedian (IQR) | **HCs****(n=35)** | **LTNPs****(n=32)** | **Progressors (n=40)** | **ART Naive (n=18)** | **On ART** **(12 months) (n=18)** |
| Age (years) | 33(28-38) | 36(34-40) | 35(34-39) | 38(33-41) | 39(34-42) |
| Viral Load (log10) | ND | 3.4(2.0-4.2) | 4.5(3.0-6.2) | 4.8(4.3-5.2) | ≤ 1.60 |
| CD4T cell (cells/mm3) | 944(756-1092) | 684(546-865) | 319(180-381) | 192(129-293) | 372(286-417) |
| % CD4 T cells | 62(39-84) | 56(30-80) | 38(8-60) | 18(8-35) | 27(18-38) |
| % total NKT cells | 0.24(0.16-0.46) | 0.12(0.05-0.26) | 0.04(0.02-0.08) | 0.03(0.02-0.04) | 0.07(0.03-0.11) |
| % CD4+ NKT cells | 0.12(0.07-0.16) | 0.05(0.02-0.09) | 0.01(0.01-0.03) | 0.01(0.004-0.03) | 0.02(0.01-0.04) |
| % CD4- NKT cells | 0.09(0.06-0.24) | 0.08(0.03-0.15) | 0.01(0.01-0.02) | 0.02(0.01-0.03) | 0.04(0.02-0.09) |
| % CD38+NKT cells | 3.98(2.60-6.92) | 7.14(4.12-9.45) | 13.6(9.8-16.9) | 15.8(11.4-24.9) | 12.8(9.1-17.1) |
| % CD 69+ NKT cells  | 11.4(8.6-16.4) | 14.2(11.5-19.1) | 25.6(18.4-38.6) | 25.7(17.4-33.4) | 24(17.7-32.3) |
| %HLA-DR+NKT cells  | 7.3(4.8-10.4) | 10.7(6.8-17.3) | 18.6(15.6-24.1) | 25.4(18.2-21.3) | 15.8(11.4-22.7) |
| % CD 57+ NKT cells  | 6.4(4.2-6.4) | 8.4(6.1-12.1) | 12.8(9.6-18.9) | 11.8(10.9-21.4) | 11.5(7.4-14.2) |
| % PD1+ NKT cells | 4.5 (3.6-6.6) | 7.2 (5.3-10.8) | 14.9 (8.9-25.3) | 16.8 (8.1-27.4) | 13.3 (10.5-20.5) |

Abbreviation: HIV, Human immunodeficiency virus; NKT, natural killer T; ND, not done; IQR, Inter Quartiles rang; HCs healthy controls; LTNPs, Long Term non Progressors.

Supplemental Digital Content Fig. 1: **Assessment of markers of immune activation on CD4+ and CD4- NKT cells.** (a) The association between the frequencies of CD4+CD38+, CD4+CD69+ and CD4+HLA-DR+ NKT cells (Y axis) with corresponding CD4 T cell counts (X axis). (b) Correlation between percent of CD4-CD38+, CD4-CD69+ and CD4-HLA-DR+ NKT cells with corresponding CD4 T cell counts (X axis) and (c) Correlation between percent of CD4-CD38+, CD4-CD69+ and CD4-HLA-DR+ NKT cells with corresponding plasma viral loads (X axis).



Supplemental Digital Content Fig. 2:  **Expression of immune exhaustion and senescence markers on CD4+ and CD4- NKT cells. (a)** The association between the frequencies of CD4+CD57+ and CD4+PD1+ NKT cells (Y axis) with corresponding CD4 T cell counts (X axis). (b) Correlation between percent of CD4-CD57+ and CD4-PD1+ NKT cells with corresponding CD4 T cell counts (X axis) and (c) plasma viral loads (X axis).

