Supplementary Fig. 1. Absolute number of Treg cell subsets during HIV infection.
(a) Compared with healthy controls (n=92), HAART-naïve chronic-HIV-infected patients (n=57) but not acute-HIV-infected individuals (n=13) showed a significantly lower number of nTreg cells. (b) Compared with healthy controls, neither acute-HIV-infected nor HAART-naive chronic-HIV-infected patients showed different numbers of aTreg cells. P<0.05 indicates significant difference.

Supplementary Fig. 2. Distinct response of CD4⁺ T-cell function status and CD8⁺ T-cell activation level to antiviral therapy.
Increased frequency of CD4⁺CD28⁺ T cells (a) as well as decreased frequency of CD8⁺CD38⁺⁺ T cells (b) were observed after HAART in the longitudinal study (n=57), which were comparable with those of healthy controls. Compared with healthy controls, (c) the percentages of CD8⁺CD38⁺ T cells and (d) CD8⁺CD38⁺HLA-DR⁺ T cells in HAART-treated chronic-HIV-infected patients remained higher. Dashed lines indicate the value of healthy controls. An asterisk indicates significant difference between HIV-infected patients and healthy controls.
Supplementary Fig. 3. Distinct response of absolute Treg cell numbers to antiviral therapy.

(a) In the longitudinal study (n = 57), absolute number of nTreg cells in chronic-HIV-infected patients started to rise dramatically after 24 weeks of antiviral treatment and reached a plateau after 48 weeks. However, HAART-treated chronic-HIV-infected patients still showed a lower value than healthy controls. (b) Chronic-HIV-infected patients showed a higher absolute number of aTreg cells during HAART. Dashed lines indicate the value of healthy controls. An asterisk indicates significant difference between HIV-infected patients and healthy controls.

Supplementary Fig. 4. Distinct response of CD4+ T-cell subsets to antiviral therapy.

(a) Frequency of cytokine-secreting T cells (Fr III) remained at a higher level even after 96 weeks of antiviral treatment in the longitudinal study (n = 57). (b) Frequency of CD4+ naive T cells (Fr V) did not reach a level comparable with that of healthy controls and kept increasing even after 96 weeks of treatment. Dashed lines indicate the value of healthy controls. An asterisk indicates significant difference between HIV-infected patients and healthy controls.
Supplementary Fig. 5. Representative FACS profiles of the analysis of CD31 and Ki-67 expression on nTreg and aTreg cells in a patient with chronic HIV infection and a healthy control.

Supplementary Fig. 6. The response of plasma HIV-1 RNA and CD8⁺ T-cell activation level to antiviral therapy.
Differences in plasma HIV-1 RNA (a), the percentages of CD8⁻CD38⁺⁺ T cells (b), CD8⁻CD38⁺ T cells (c) and CD8⁻CD38⁺ HLA-DR⁺ T cells (d) after antiviral therapy among patients with naïve T-cell percentage ≤15% (green line, n=30) and >15% (red line, n=27) at baseline in the longitudinal study.