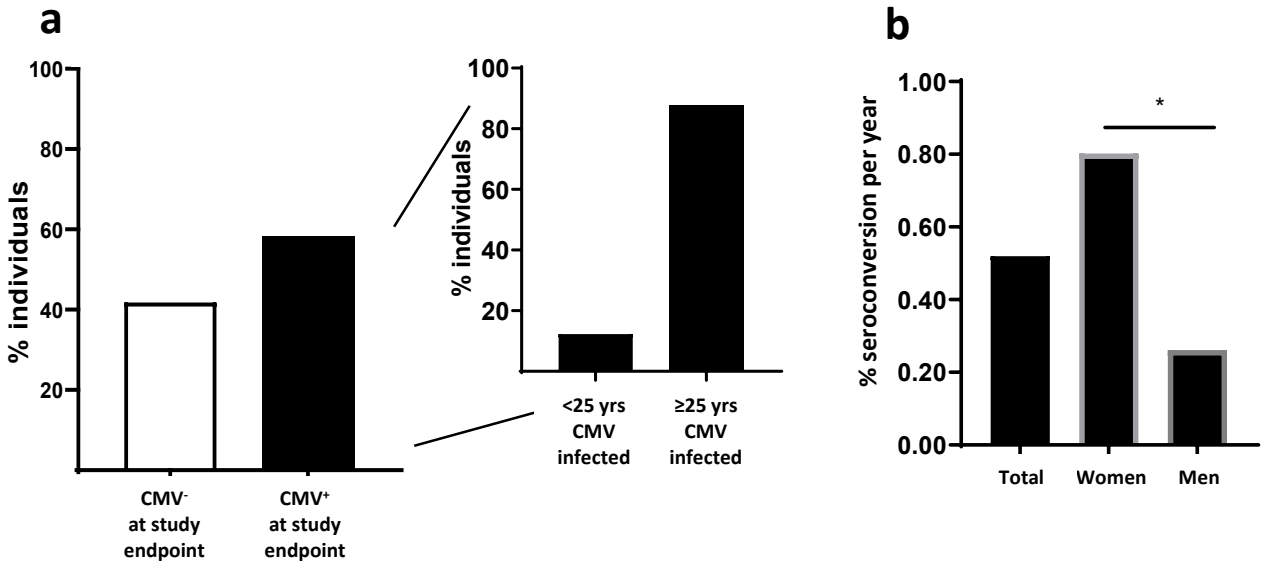
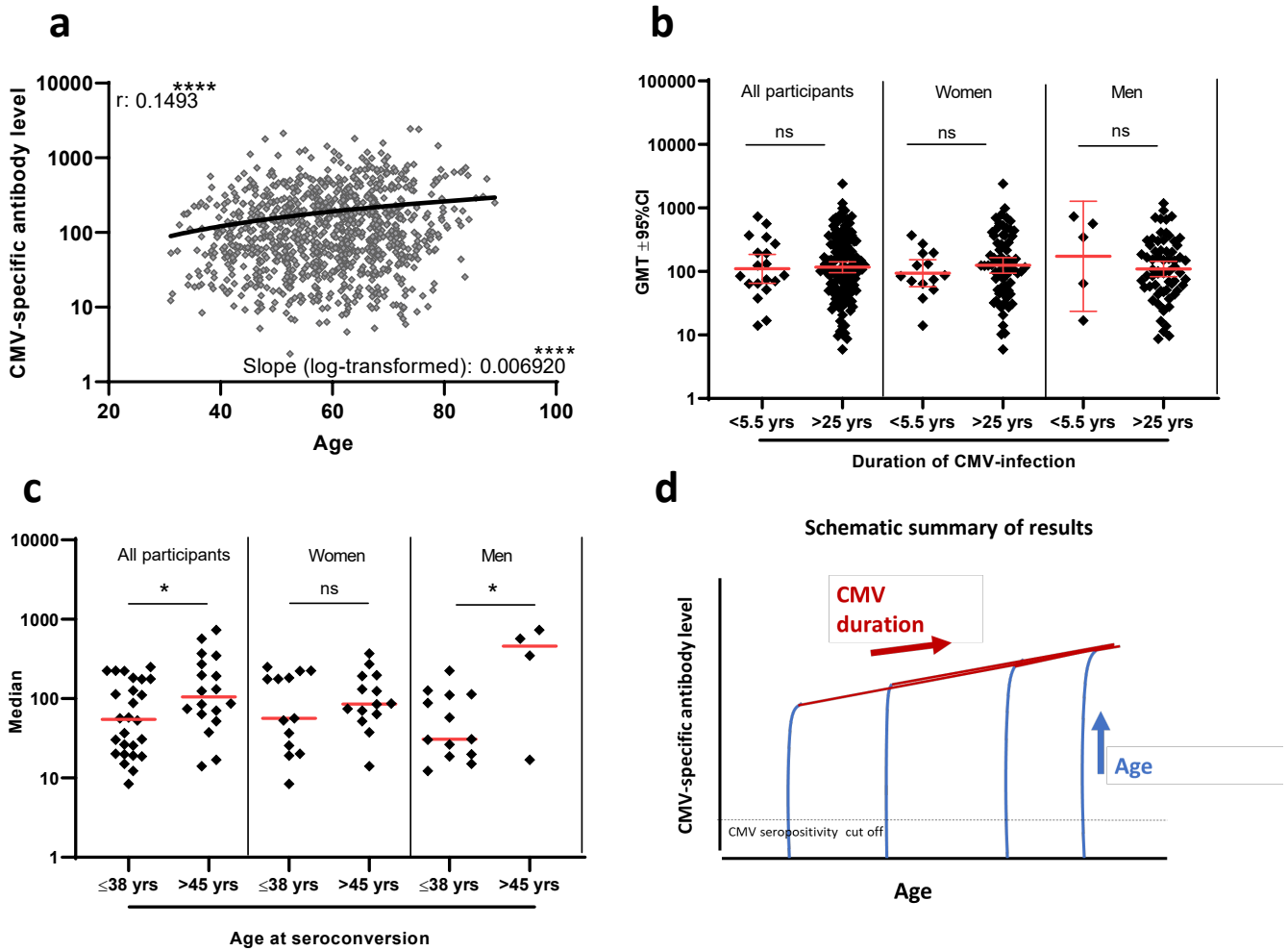


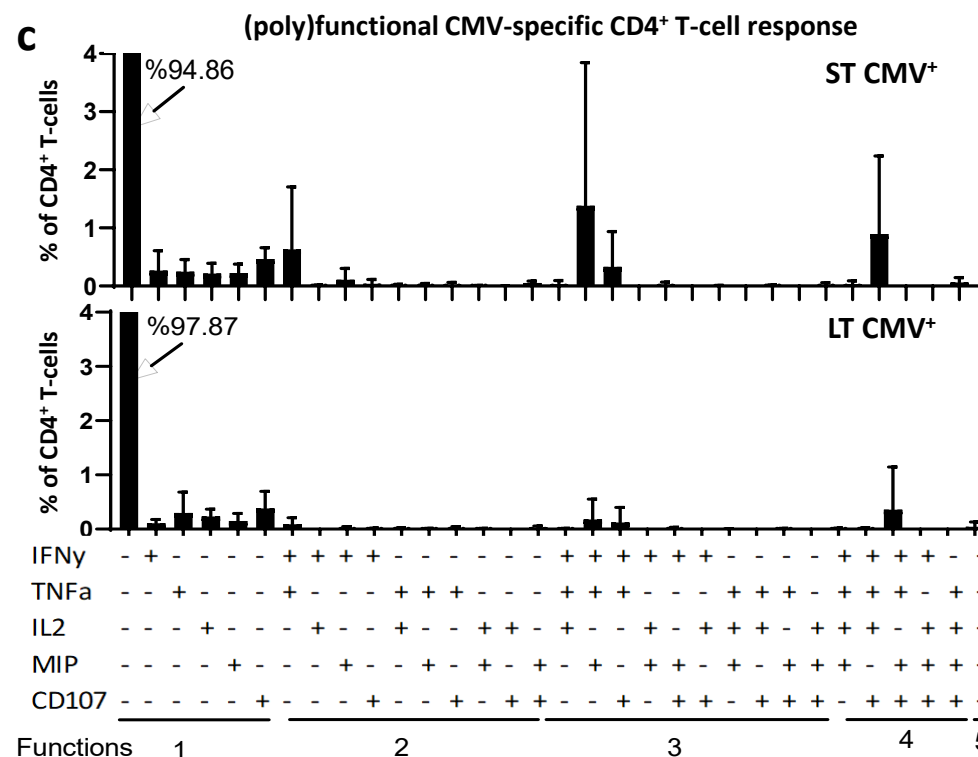
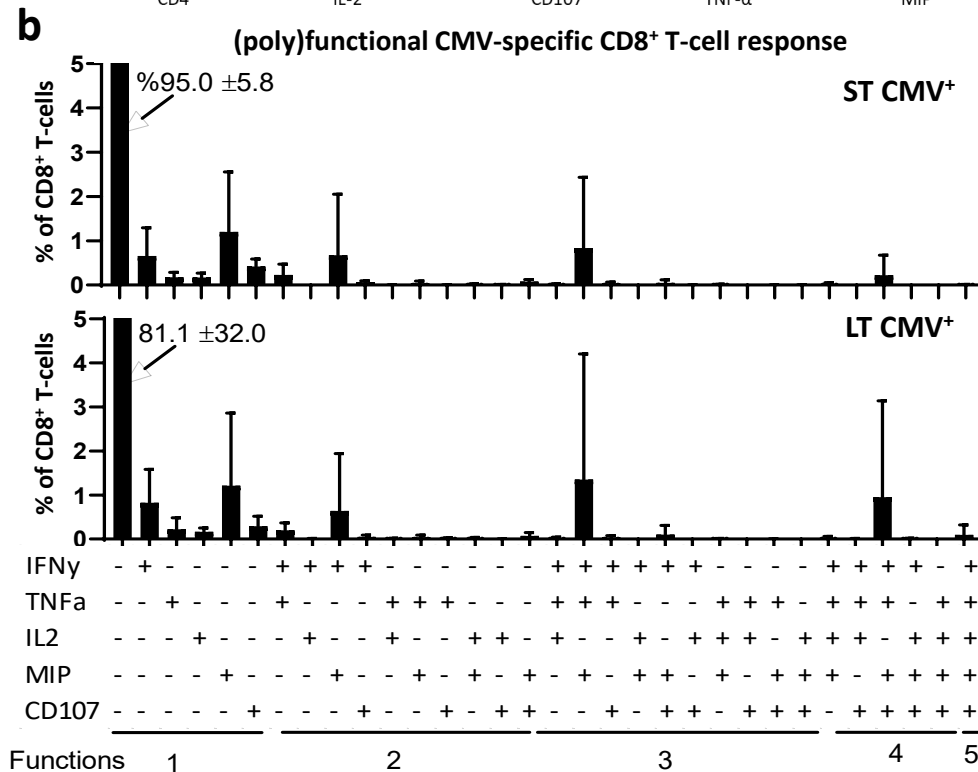
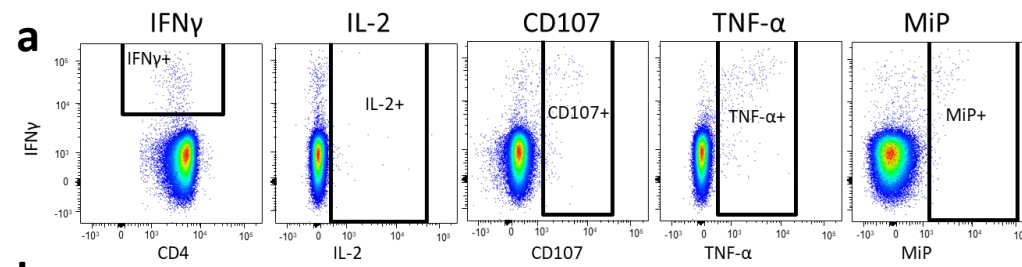
**Supplementary figure 1. Flow chart of selection of study subjects.**



**Supplementary figure 2. CMV serostatus at study endpoint and seroconversion rate in the past 27 years. (a)** Left panel: CMV serostatus at end point of all individuals. Right panel: duration of CMV infection in CMV<sup>+</sup> individuals. **(b)** Seroconversion rate for total individuals and separated for women and men. Statistics was performed by  $\chi^2$  test. Star indicates a *P*-value < 0.05.

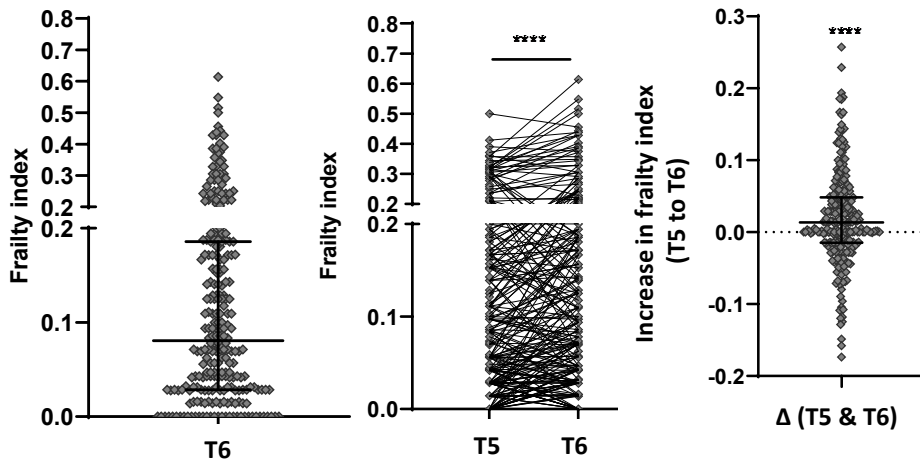


**Supplementary figure 3. CMV-specific antibody levels.** (a) Results of the data of CMV-specific antibodies in both long-term CMV<sup>+</sup> individuals and CMV seroconverters is summarized. (b) Duration of CMV infection: CMV-specific antibody levels of recently seroconverted individuals (max  $<5.5$  year after CMV seroconversion,  $n = 19$ ) compared with those of long-term CMV<sup>+</sup> individuals ( $n = 136$ ,  $> 25$  years CMV<sup>+</sup>), and similar comparison separately in women and men (middle and right panel, respectively). (c). Age at seroconversion: CMV-specific antibody levels of individuals that seroconverted at younger age ( $\leq 38$ yr of age,  $n = 26$ ) or older age ( $\geq 45$ yr of age,  $n = 18$ , mean age  $58.5 \pm 8.1$ , shortly after CMV seroconversion ( $< \max 5.5$  years)), with similar comparison separately in women and men (middle and right panel, respectively). (d) Schematic summary of results of CMV-specific antibody levels. GMT: geometric mean titer, 95% CI: 95% confidence interval.



**Supplementary figure 4. Cytokine profiles after stimulation with CMV-specific peptide pools.**

**(a)** Representative flow cytometry plots in the CMV-specific T-cell stimulation assay after stimulation with CMV-specific peptides. **(b,c)** Percentage of cells that produce IFN $\gamma$ , TNF $\alpha$ , MIP-1 $\beta$ , CD107, IL-2, or a combination of these cytokines after *in vitro* stimulation of PBMCs for CD8<sup>+</sup> T-cells **(b)** and **(c)** CD4<sup>+</sup> T-cells.



**Supplementary figure 5.** Frailty index score at time point (T)6 (left panel) and the difference in frailty index score between T5 and T6 (middle and right panel).