

THE LANCET HIV

Supplementary appendix

This appendix formed part of the original submission and has been peer reviewed.
We post it as supplied by the authors.

Supplement to: Touizer E, Alrubayyi A, Rees-Spear C, et al. Failure to seroconvert after two doses of BNT162b2 SARS-CoV-2 vaccine in a patient with uncontrolled HIV. *Lancet HIV* 2021; **8**: e317-18.

Figure: Post SARS-CoV-2 immune response profiles

(A) S1 IgG antibody titres on the Y-axis at the days indicated below the X-axis after two vaccine doses for the index case (uncontrolled HIV/SARS-CoV-2 naïve) and in a control (HIV negative/SARS-CoV-2 naïve) as per the legend. Dotted line indicates the detection threshold of the assay. **(B)** Anti-S1 semi-quantitative IgG antibody titres after BNT162b2 mRNA vaccination for HIV-positive donors without (n=6) or with prior exposure to SARS-CoV-2 (n=7) and HIV-negative subjects without (n=17) or with prior exposure (seropositive) (n=26) to SARS-CoV-2 infection. Samples were collected at a median of 14 and 19 days post first dose of BNT162b2 for HIV-positive and negative subjects respectively. All HIV-positive participants with viral load <50 copies/ml. Prior SARS-CoV-2 infection and HIV status are indicated below the X-axis. Dotted line indicates the detection threshold of the assay. **(C)** Magnitude of the IFN- γ -ELISpot T cell responses to SARS-CoV-2 Spike or CMV peptides pre and post vaccination with BNT162b2 at the indicated time points in an HIV negative subject with no prior history of SARS-CoV-2 infection and the index patient. **(D)** Magnitude of SARS-CoV-2 Spike (S) T cell responses, via IFN- γ -ELISpot expressed as SFU/10⁶ PBMCs, in HIV-positive donors without (n=6) or with prior exposure to SARS-CoV-2 (n=5) and HIV-negative subjects without (n=5) or with prior exposure (seropositive) (n=8) to SARS-CoV-2 infection. **(E)** Flow cytometric plots showing antigen-specific CD4 or CD8 T cell responses following 6-hour stimulation with media alone (Media) or overlapping peptides against SARS-CoV-2 Spike (SARS-CoV-2), or CMV pp65 (CMV) in the index patient at 44 days post second dose of BNT162b2. **(F)** Overlaid cell populations on to viSNE plots in the HIV negative (SARS-CoV-2 naïve control donor) and the viraemic HIV positive index donor (lower panel). **(G)** viSNE analysis of CD3 T cells the HIV negative (SARS-CoV-2 naïve control donor) and the viraemic HIV positive index donor (lower panel) sampled at 44 days post second dose of BNT162b2. Each point on the high-dimensional mapping represents an individual cell and colour intensity represents expression of selected markers.

