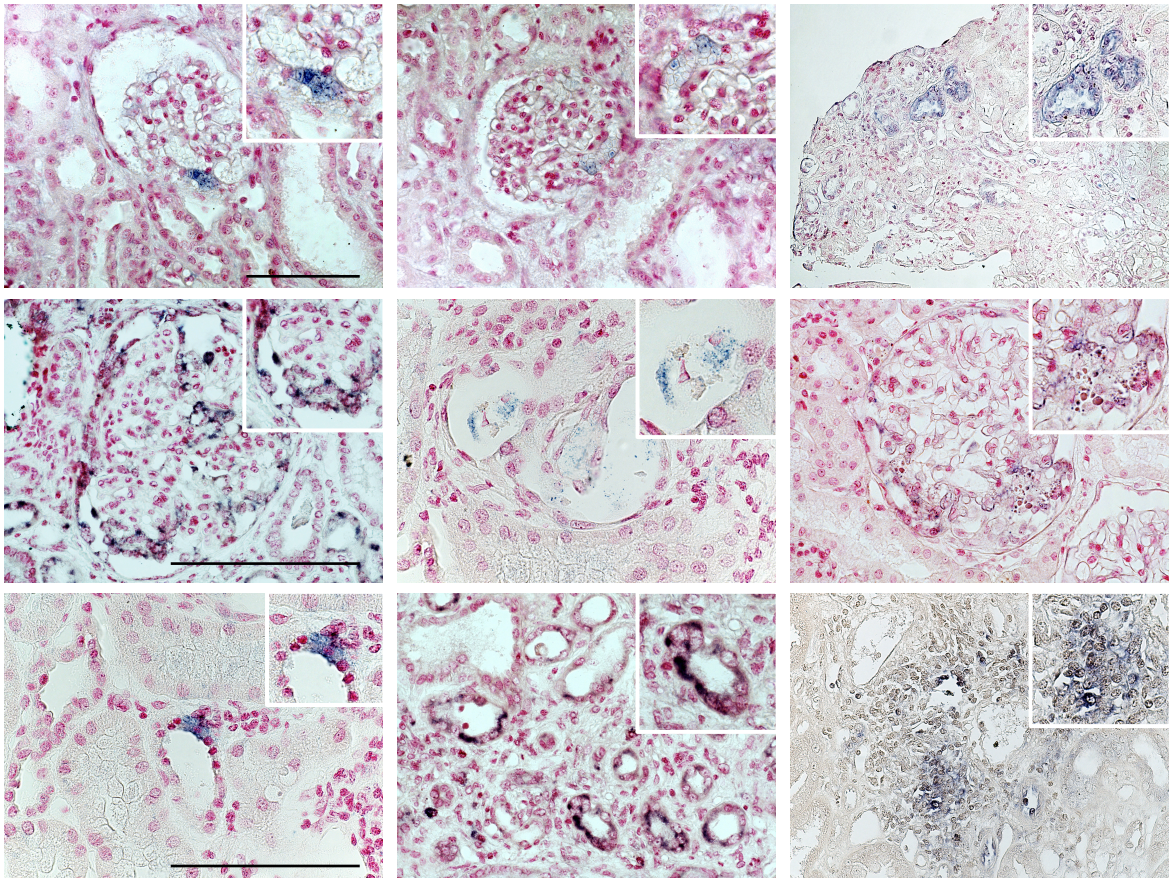
Supplementary Figure 1: Additional representative *in situ* hybridization. Additional representative *in situ* hybridization of HIV-1 RNA performed with antisense probes on transplant biopsies in patients with either podocyte or tubular cells HIV-1 infection. Scale bar: 50 mm.

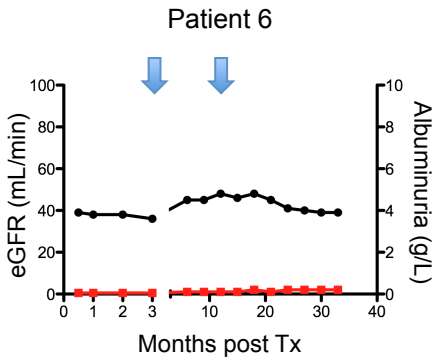
Supplementary Figure 2: Functional impact of the allograft tubular cells infection by HIV-1. Representative graphics of the estimated glomerular filtration rate (eGFR) (black plot) and albuminuria (red plot) for each patient. The blue arrows represent transplant biopsies, and the red arrows represent steroid pulses for the treatment of acute cellular rejection.

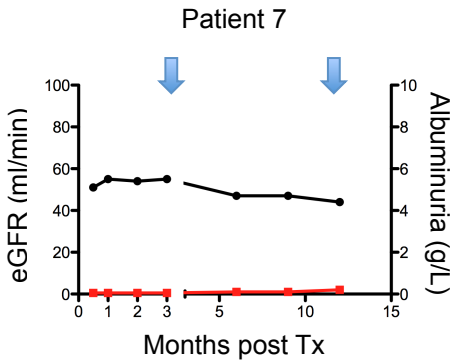
Supplementary Figure 3: Podocytes infection is associated with podocytes dedifferentiation and depletion at 3 months post-transplantation (Tx). A) Representative immunostaining of podocin in HIV-1 transplant recipients with eihter tubular cells infection or podocytes at 3 months post-Tx. B) Quantification of WT1-positive glomerular cells, podocin, nephrin and synaptopodin glomerular area in biopsies from HIV-1 Tx recipients without allograft infection, HIV-1 Tx recipients with tubular cells infection and HIV-1 Tx recipients with podocyte infection at 3 months post-Tx. Data are means ± SD. ANOVA followed by the Tukey-Kramer test; HIV-1 Tx recipients without allograft infection *versus* HIV-1 Tx recipients with podocytes infection: *P < 0.05 and **P<0.01; HIV-1 Tx recipients with tubular cells infection *versus* HIV-1 Tx recipients with podocyte infection: #P<0.05 and ## P < 0.01. Scale bar: 50 mm.

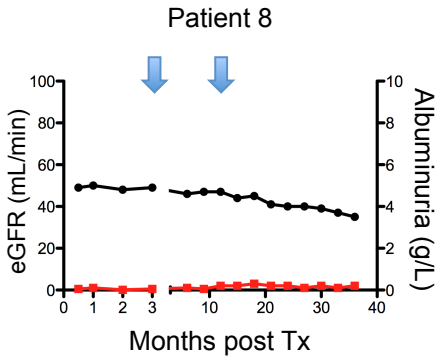
Supplementary Figure 4: Allograft tubular cells infected by the HIV-1 sloughing in tubular lumen. Representative *in situ* hybridization of HIV-1 RNA performed with antisense probes on kidney transplant biopsy in patients with HIV-1 tubular cells infection and positive urinary PCR for HIV-1 RNA. Scale bar: 50 mm.

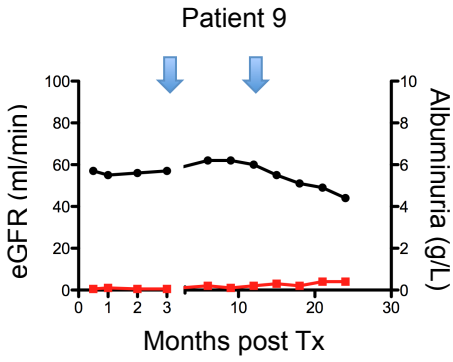


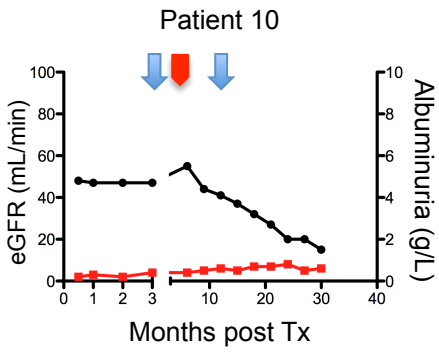
Supplementary Figure 1

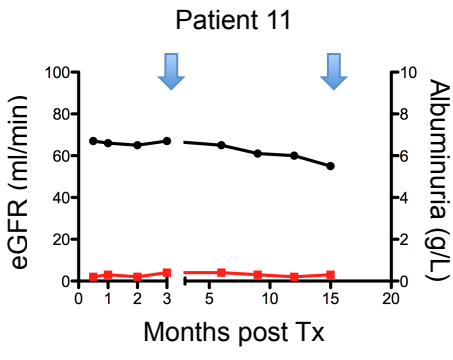


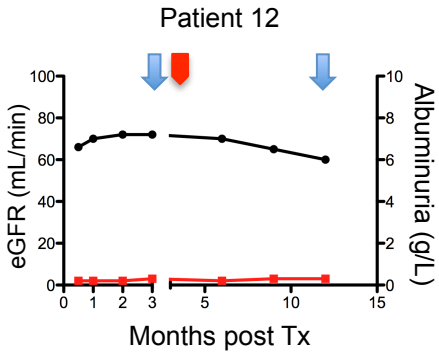


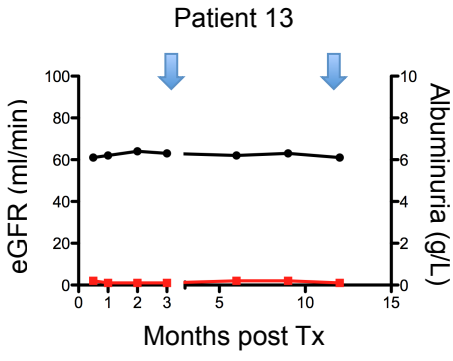






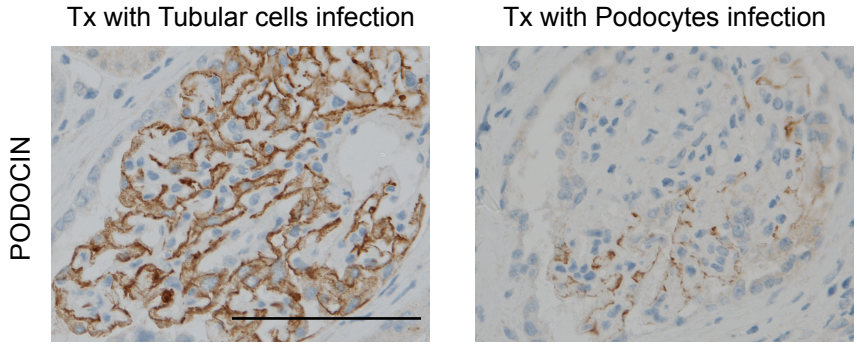




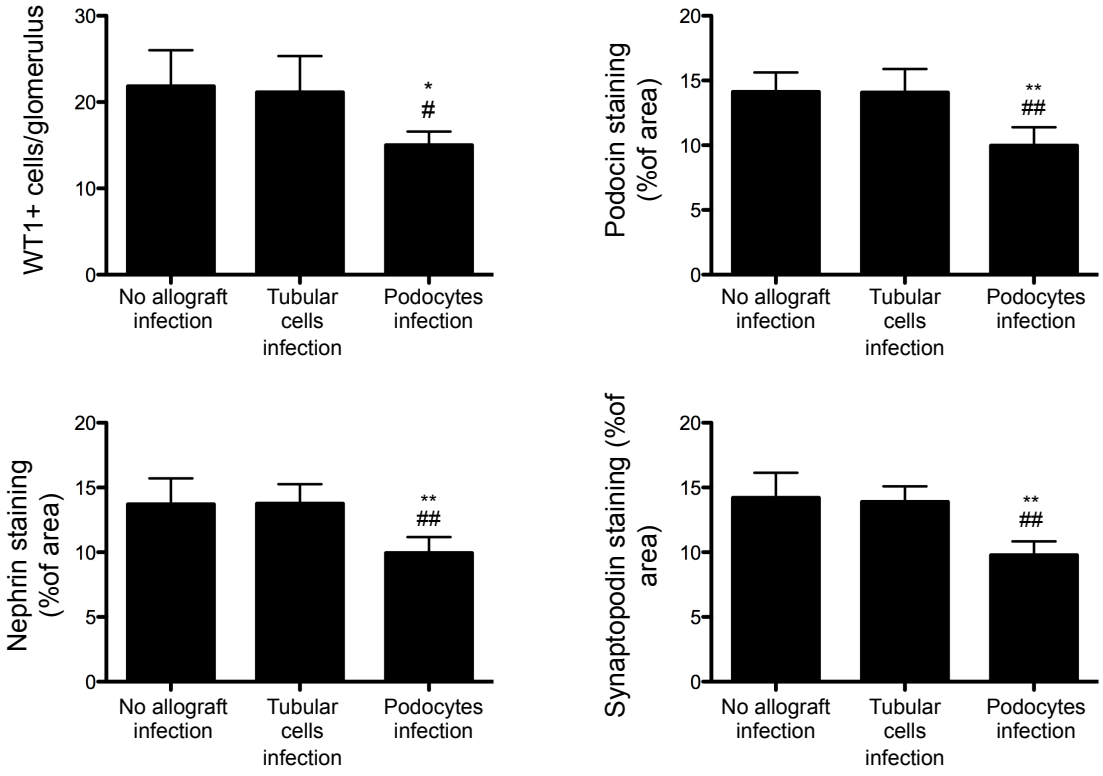


Supplementary Figure 2

A

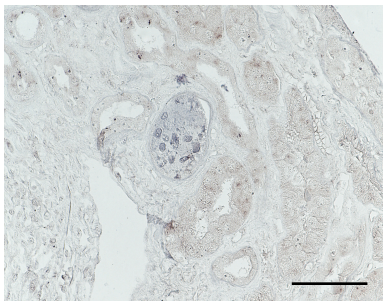


B

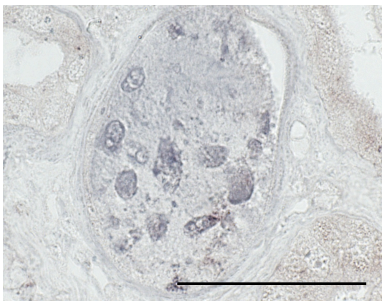


Supplementary Figure 3

Antisense



Antisense



Supplementary Figure 4