

Targeting Immunity to Biothreats

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Report Documentation Page

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| Abstract | | |
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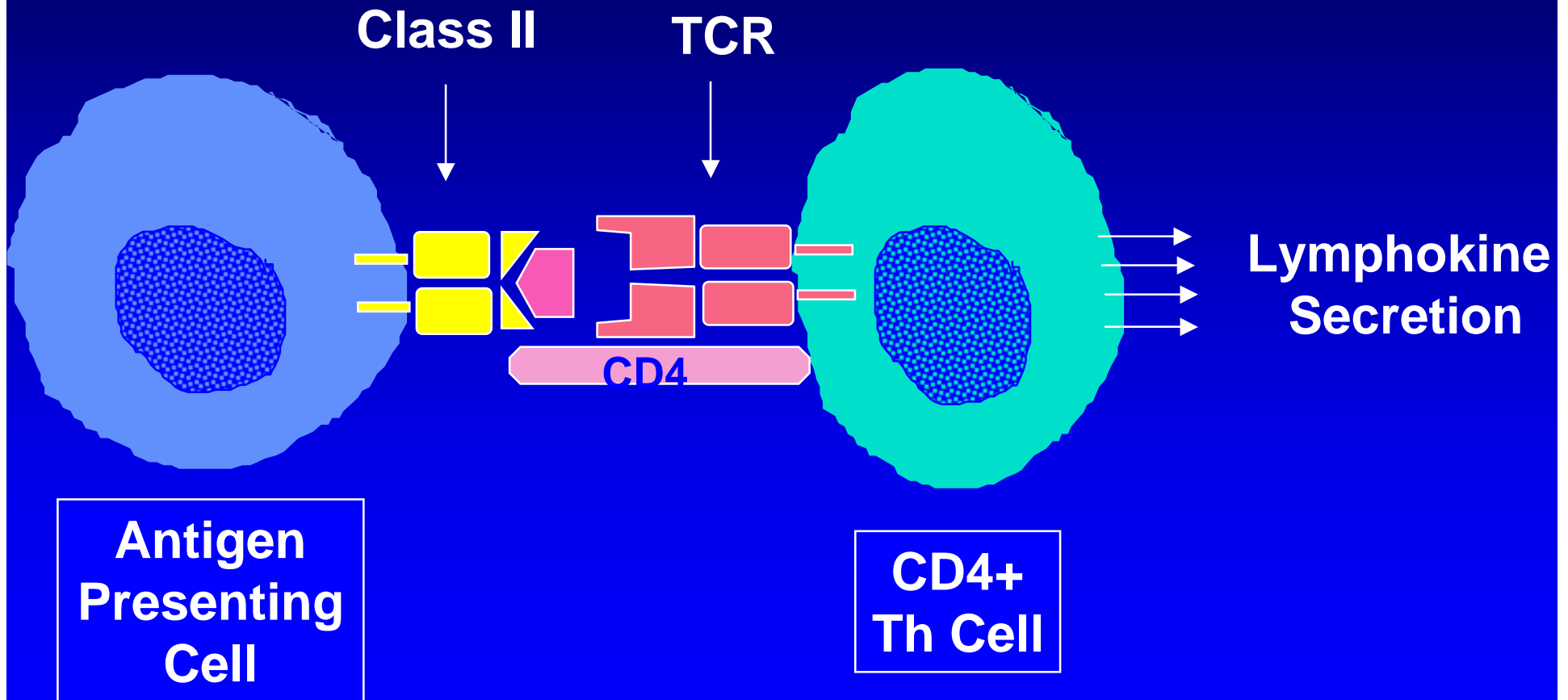
Cellular immunity and HIV disease

Immune control of HIV infection is possible without anti-retroviral therapy

Evidence for CTL control of HIV

- Negative correlation between CTL and viral load by more sensitive assays (Ogg et al)
- Increase in SIV viremia with CD8 cell depletion (Schmitz et al; Jin et al)
- Association between appearance of CTL and decline in viremia in acute infection (Koup et al; Borrow et al)

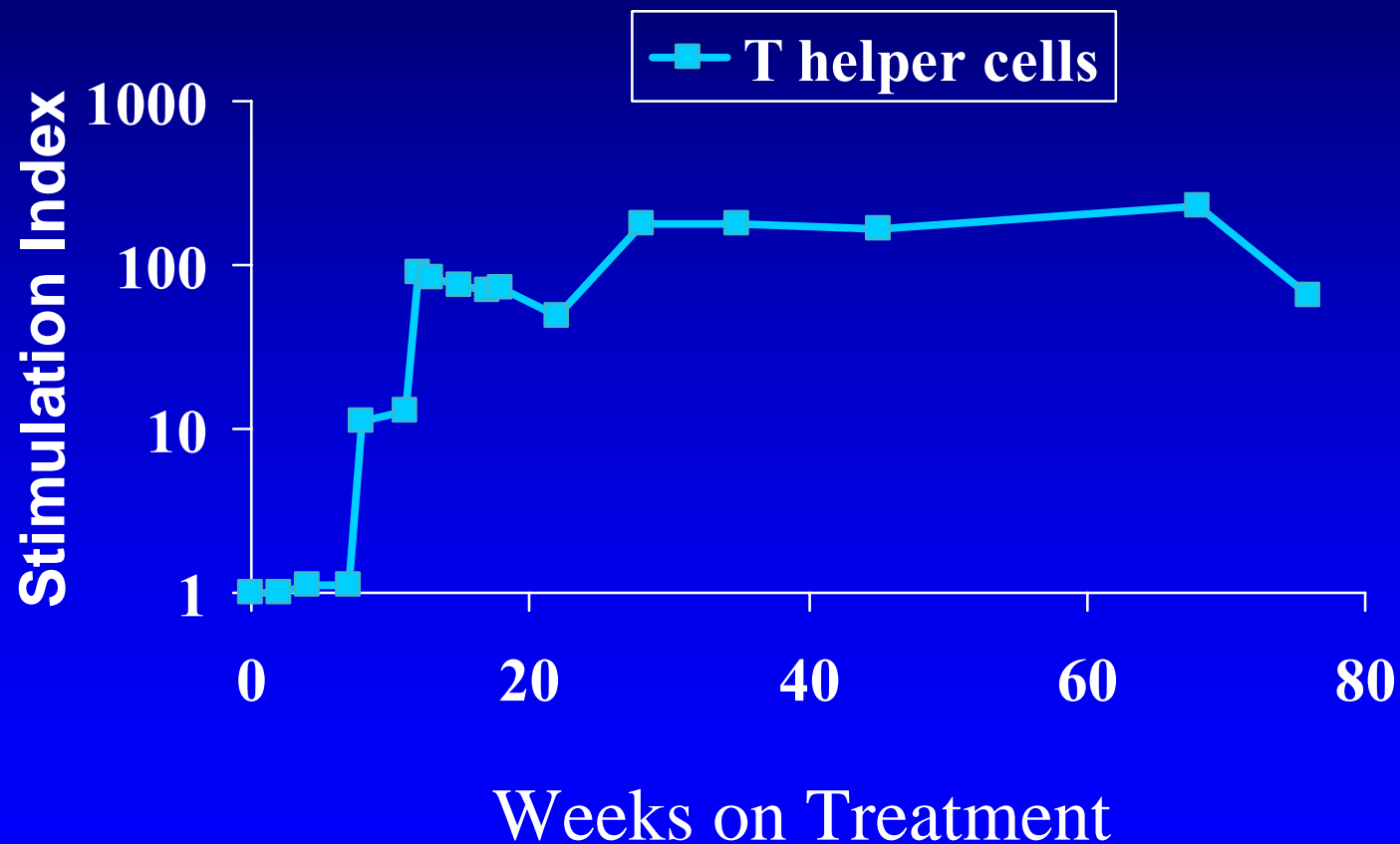
Optimal CTL function depends on virus-specific T helper cells



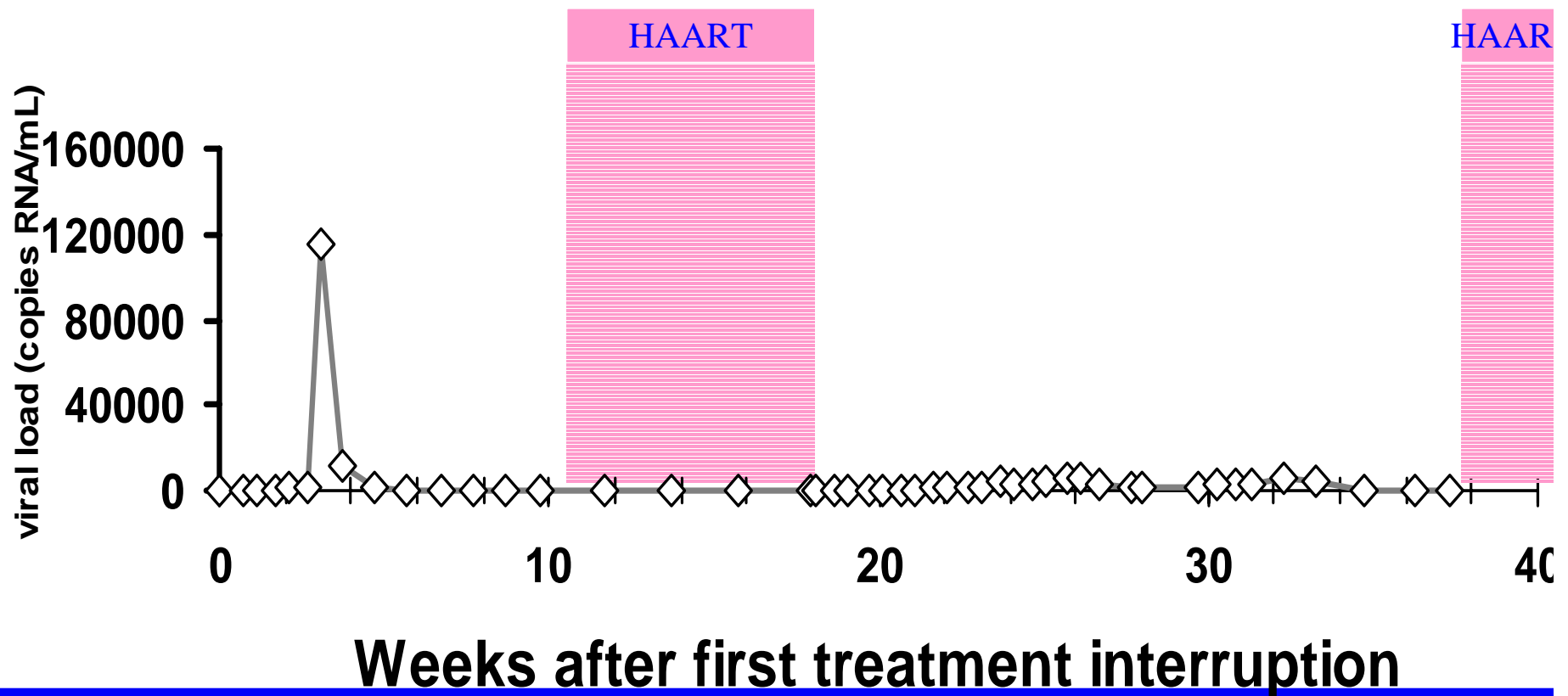
**HIV-specific CD4+ T cell
responses are associated with
control of HIV**

Rosenberg et al. Science 1997; 278, 1447

Treatment of acute HIV-1 infection results in augmentation of T helper cell responses

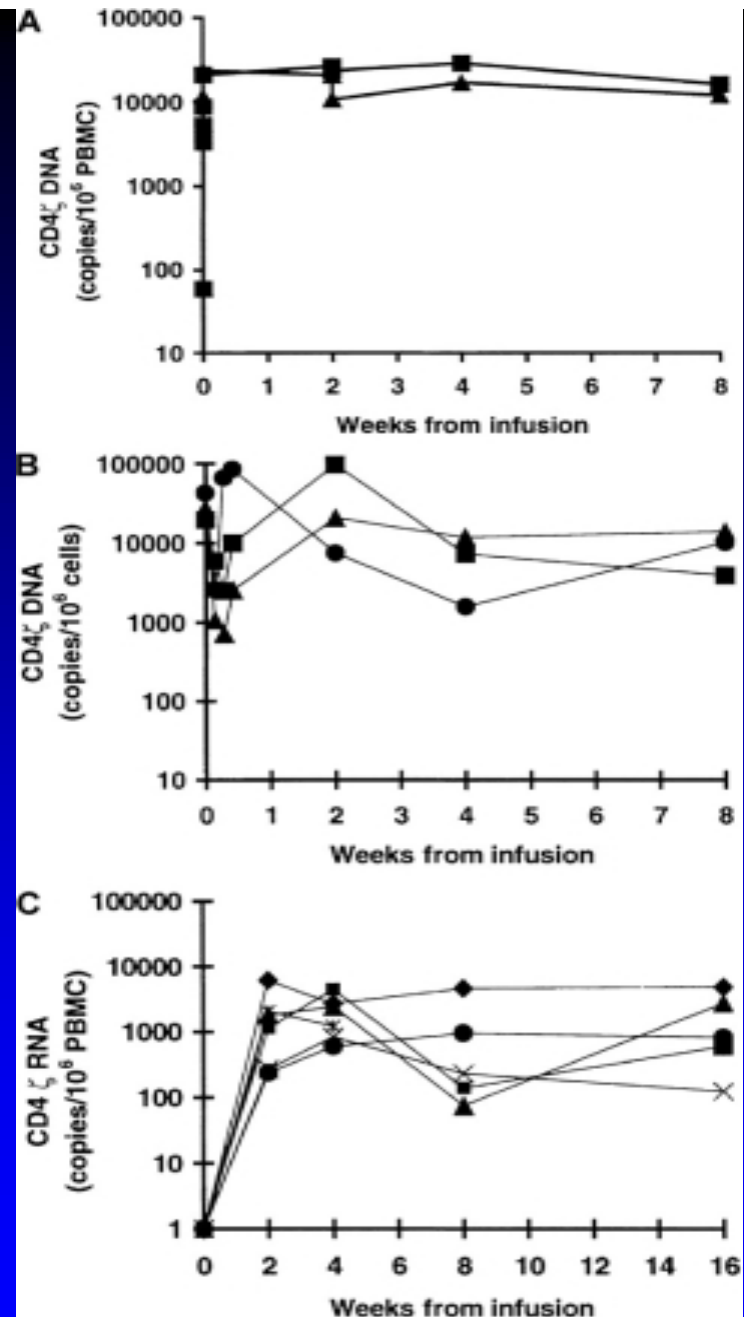


Preserved HIV specific T cell helper function is associated with control of HIV without HAART



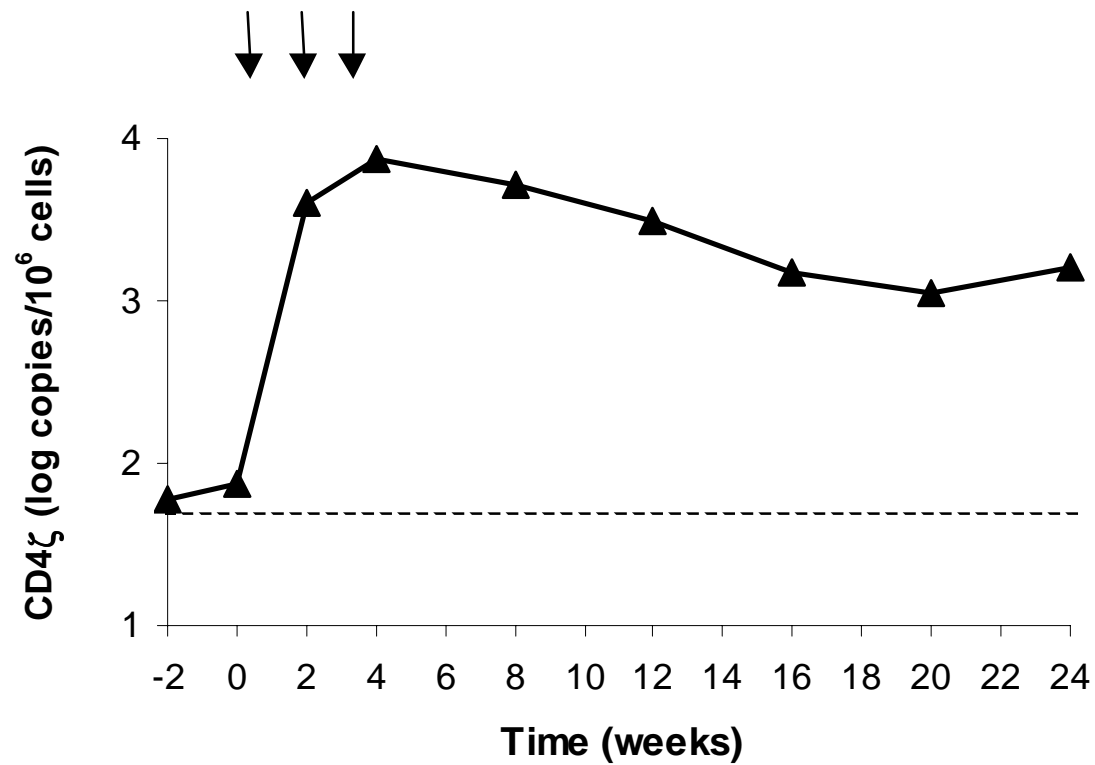
**Structured treatment
interruptions (STI) in acute
HIV infection may result in
immunologic control of viremia**

CD4 ζ -modified T-cell survival and gene expression in peripheral blood mononuclear cells (PBMCs)

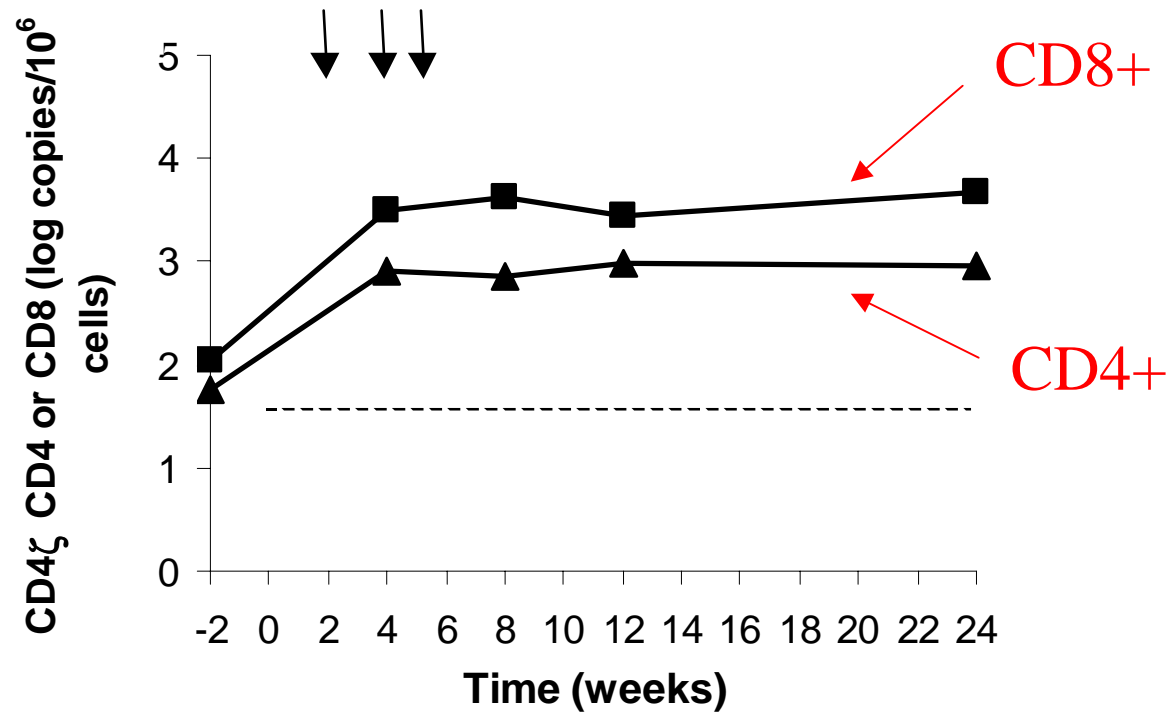


Mitsuyasu et al, *Blood* 2000; 96:785

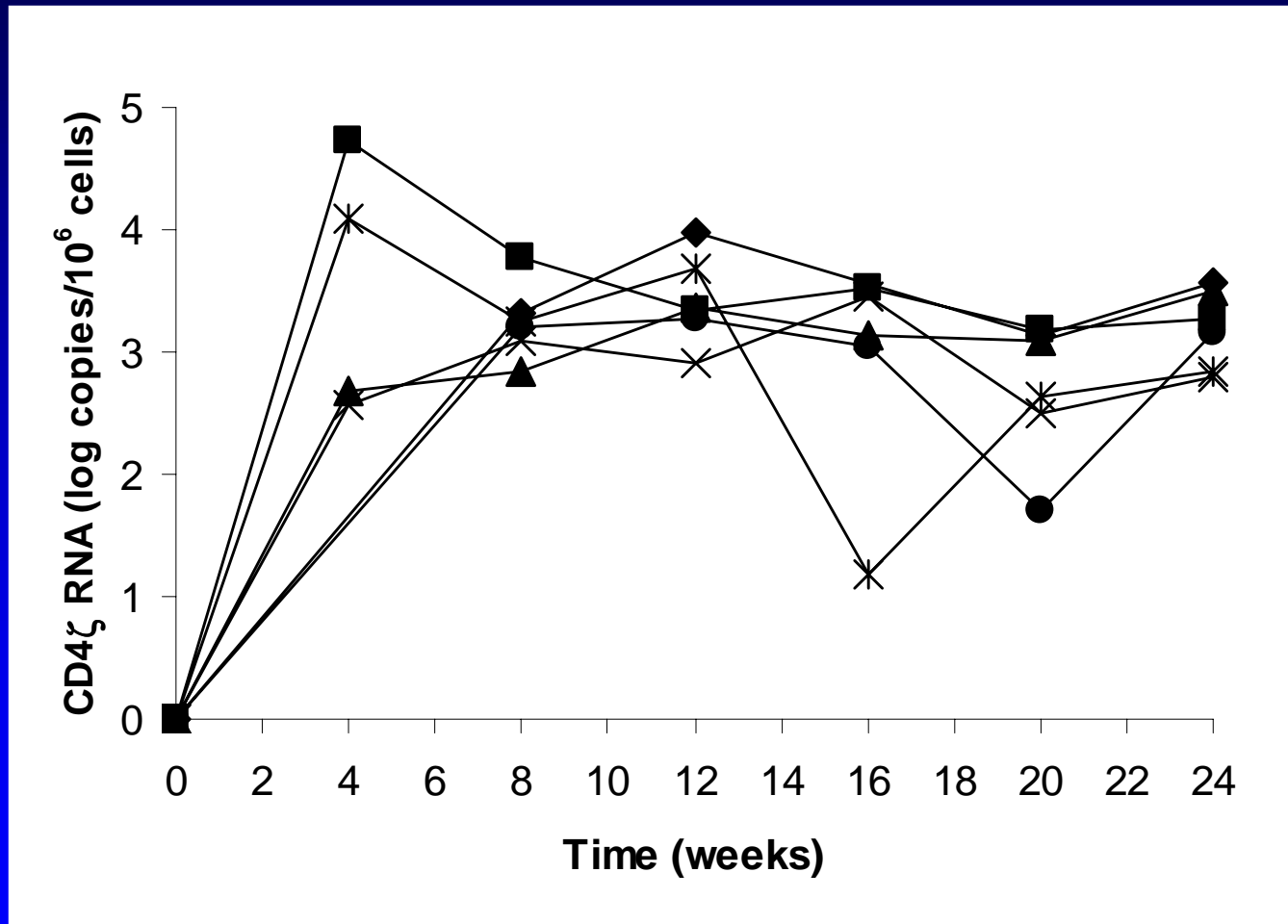
Persistence of cells with chimeric TCR DNA



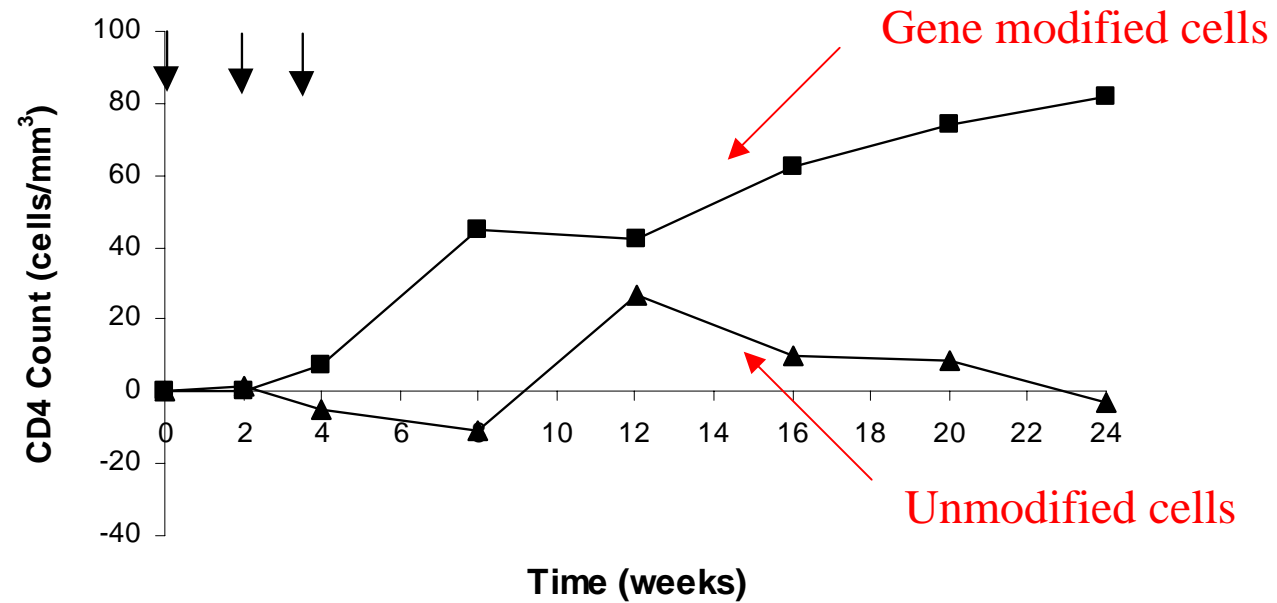
Persistence of cells with chimeric TCR DNA



Persistence of cells expressing chimeric TCR RNA



CD4+ T cell counts after cell infusions



Plasma viral load over time

