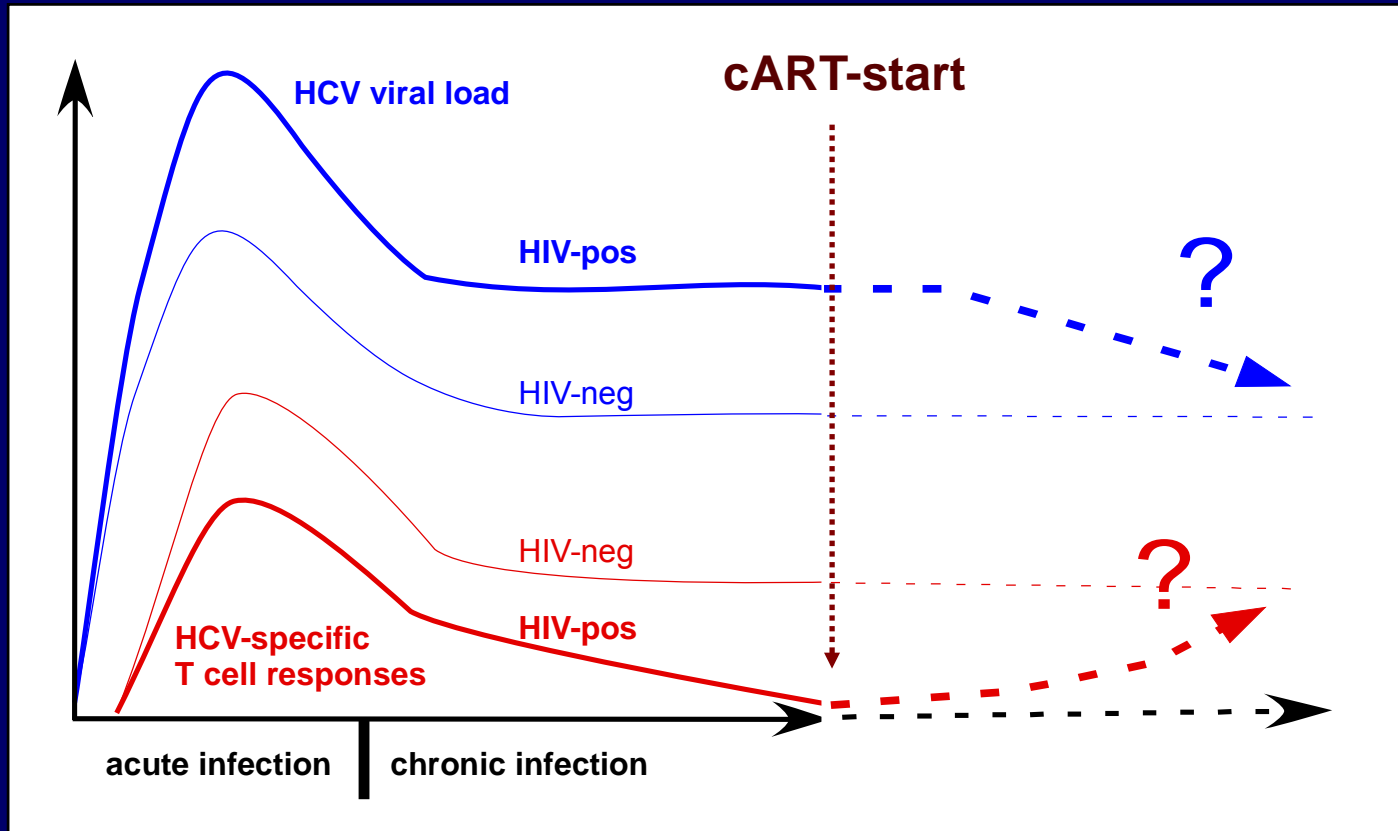


Successful antiretroviral therapy is associated with increasing HCV-specific T cell responses

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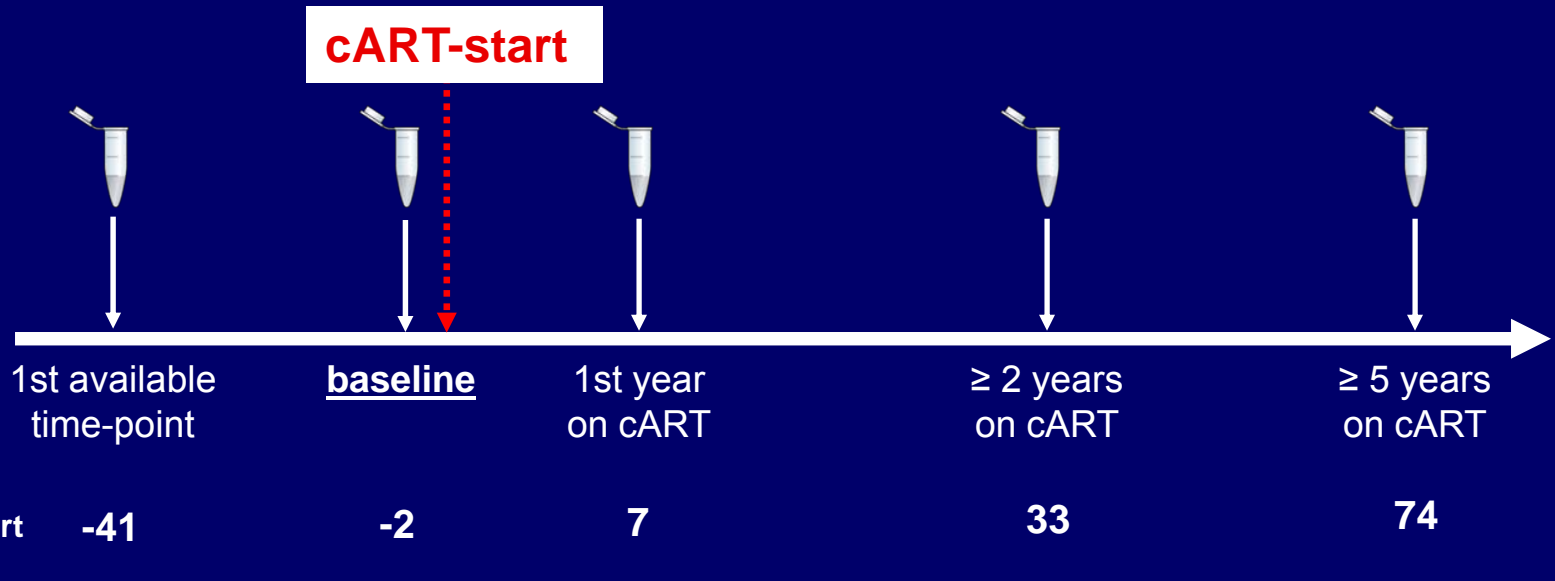
Background and Hypothesis



Study questions

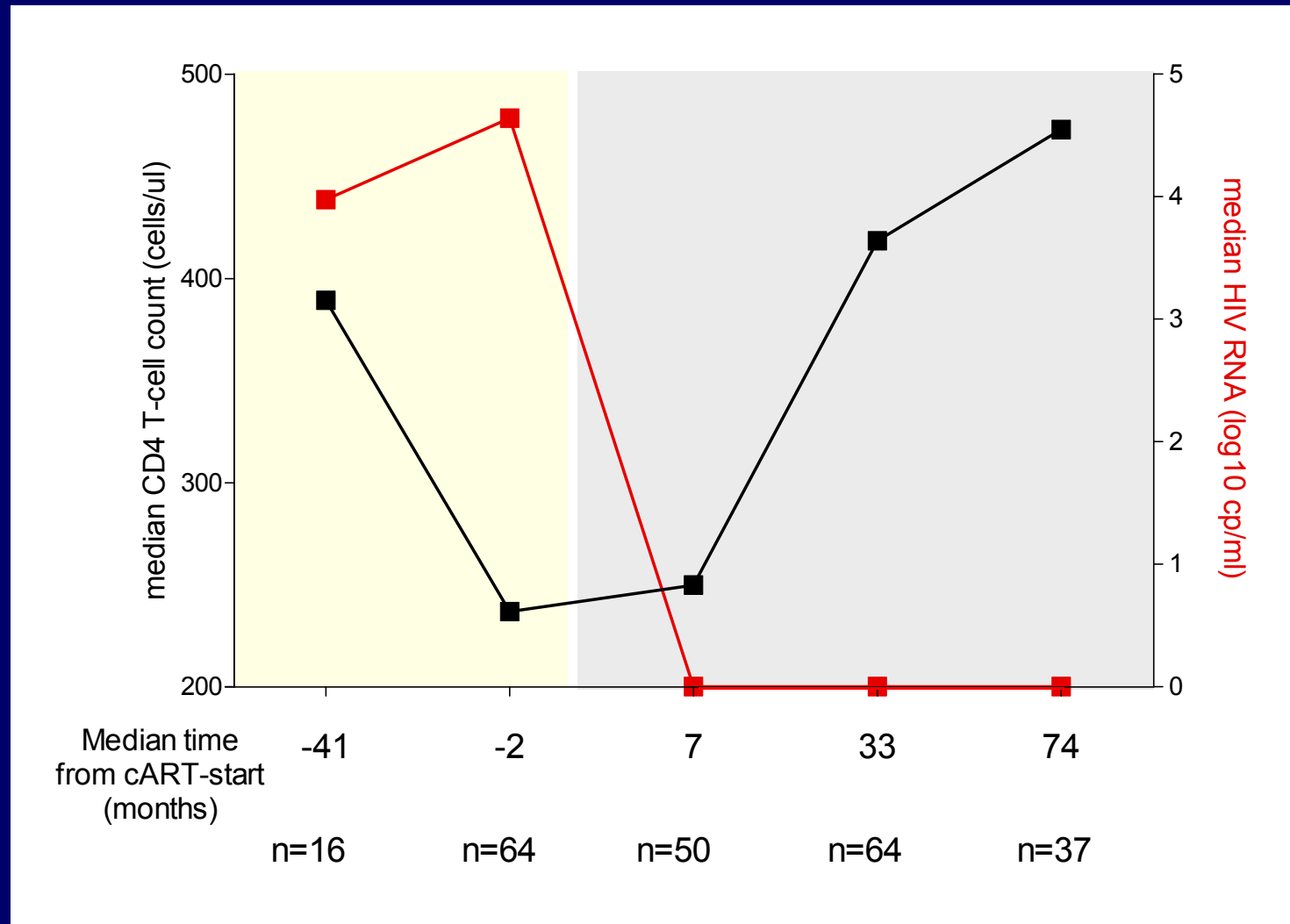
1. Does a successful cART restore HCV-specific T cell responses?
2. Does a successful cART improve the control of HCV-RNA levels?

Study design



- **Longitudinal analysis** of HCV-RNA levels and of HCV specific cellular immune responses before and on successful (HIV-RNA <1000 cp/ml) cART in HIV/HCV-coinfected individuals
- All analyses were before the first HCV-treatment

HIV-RNA levels and CD4 T cell count in our study population



Methods

ELISpot assay

→ T cell reactivity by ex vivo IFN- γ responses of PBMCs to 20mer HCV core-derived peptides that stimulate predominantly CD4-T cell responses

(Semmo, Lancet 2005; 365:327; Harcourt, Gut 2006; 55:1484; Danta, J Infect Dis 2008; 197:1558)

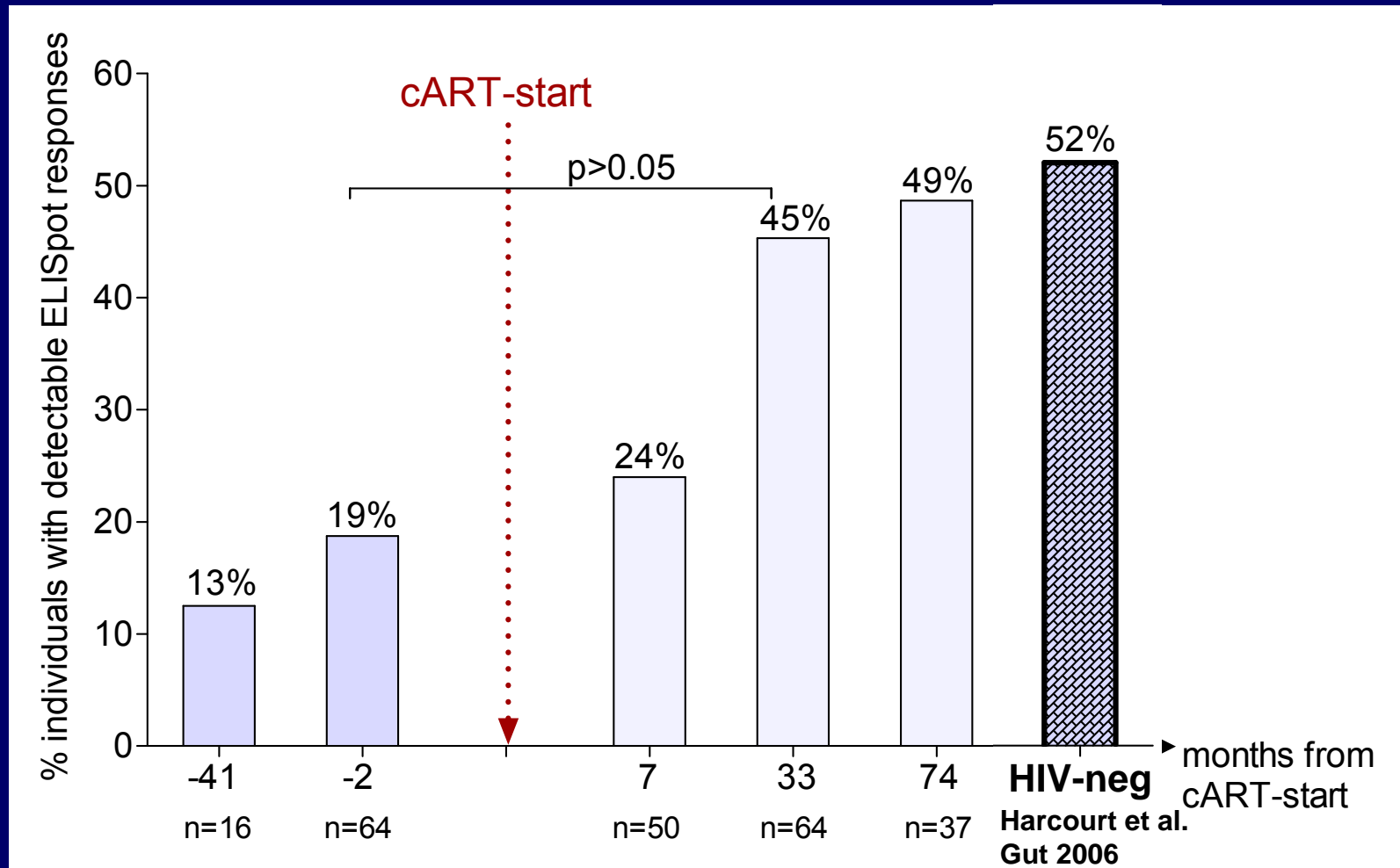
Viral load assay

→ “in house” real-time PCR

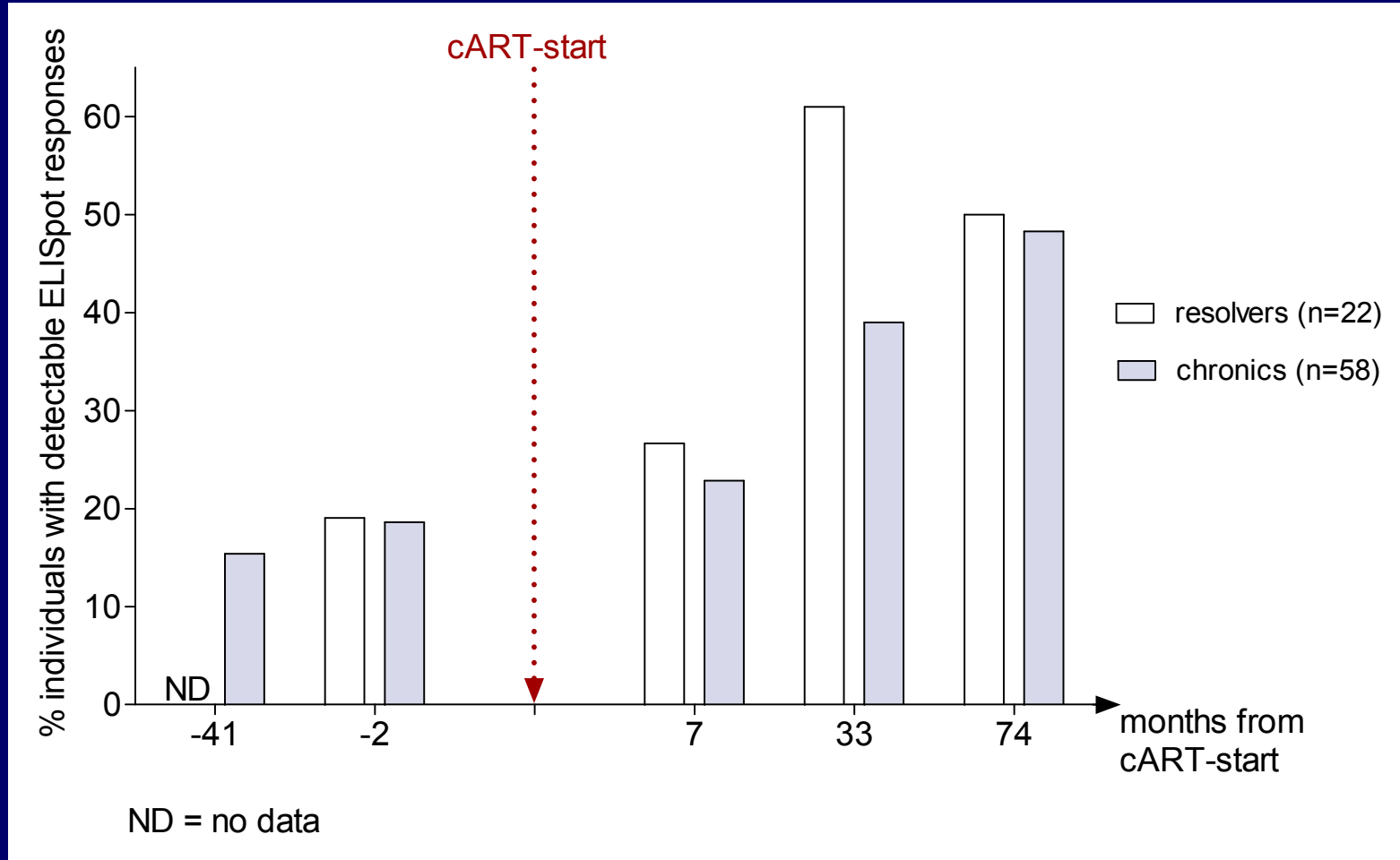
(adapted from Castelain, J Clin Virol 2004;31: 227–234)

Updated analysis from data presented at CROI 2009

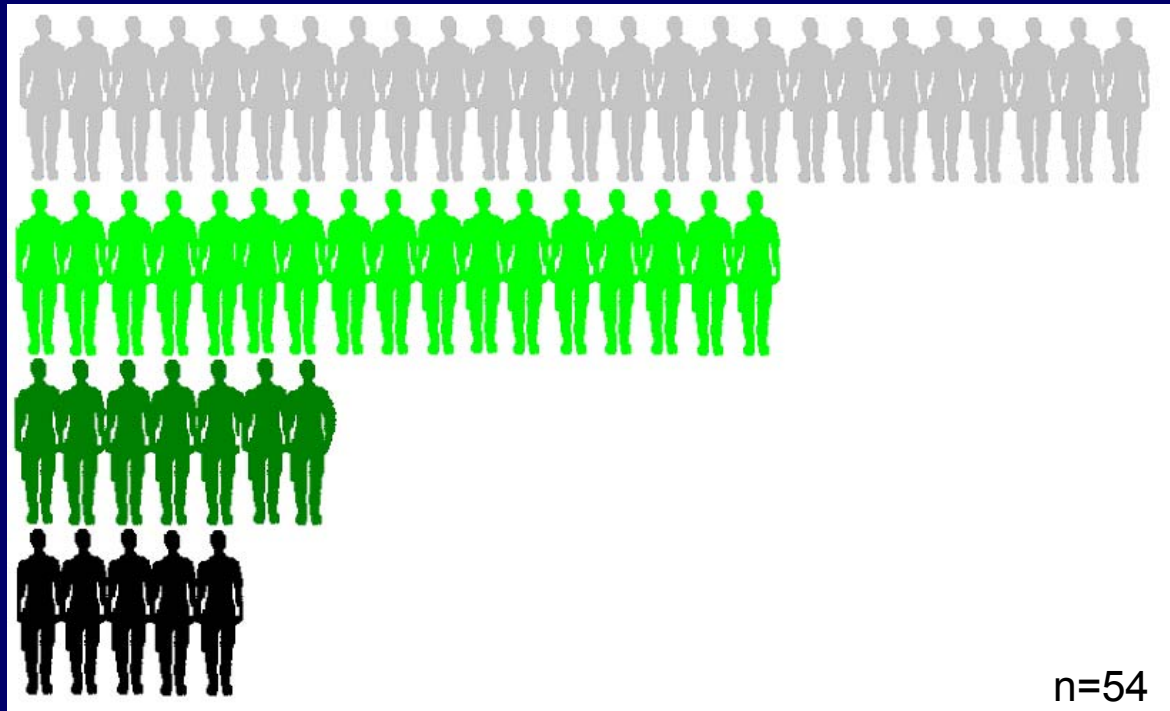
Successful cART is associated with increasing CD4 T-cell responses to HCV-core peptides







T cell responses also increase in individuals with spontaneous Hepatitis C resolution

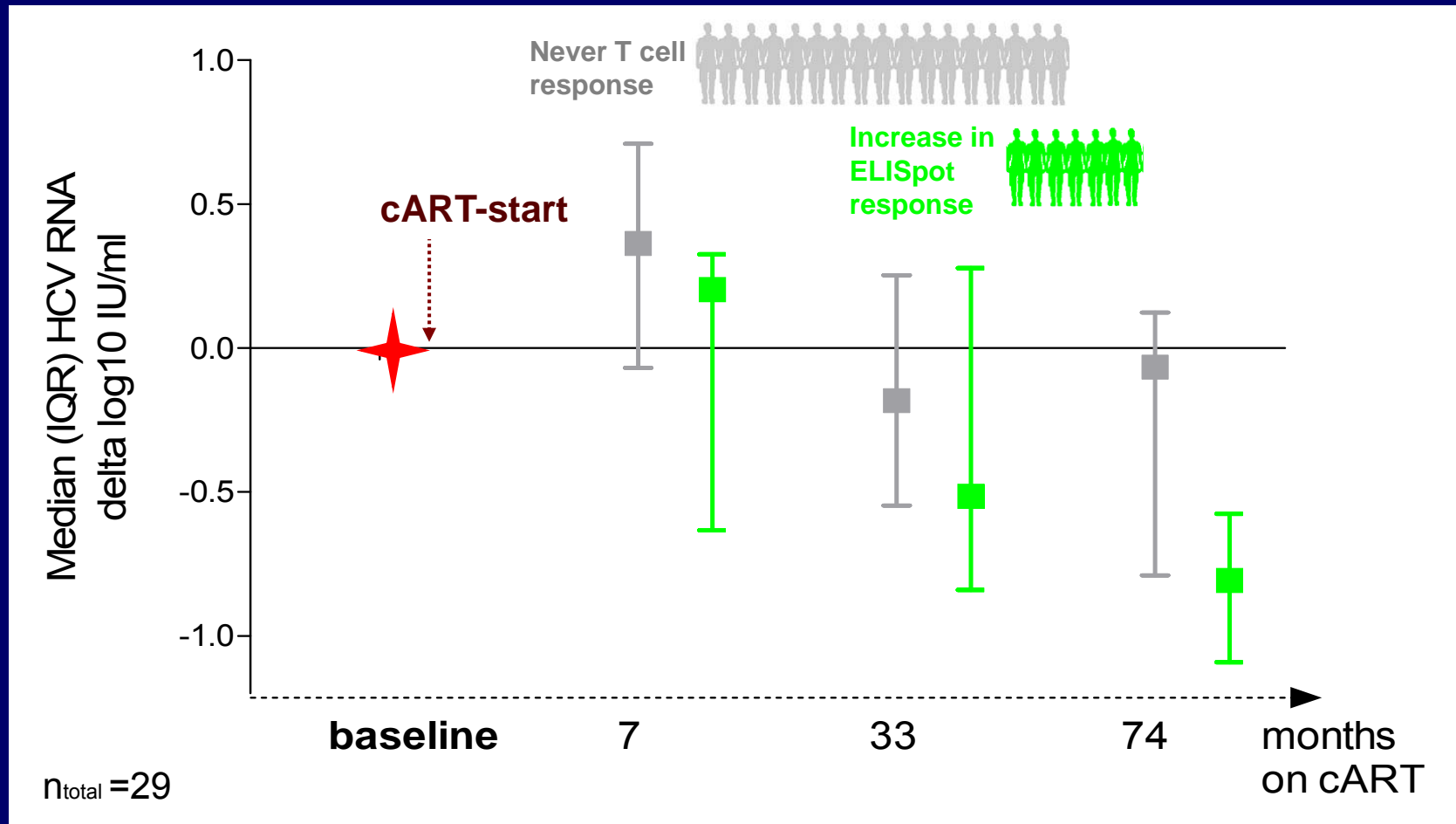


Longitudinal analysis of ELISpot responses to HCV-core peptides before and on cART

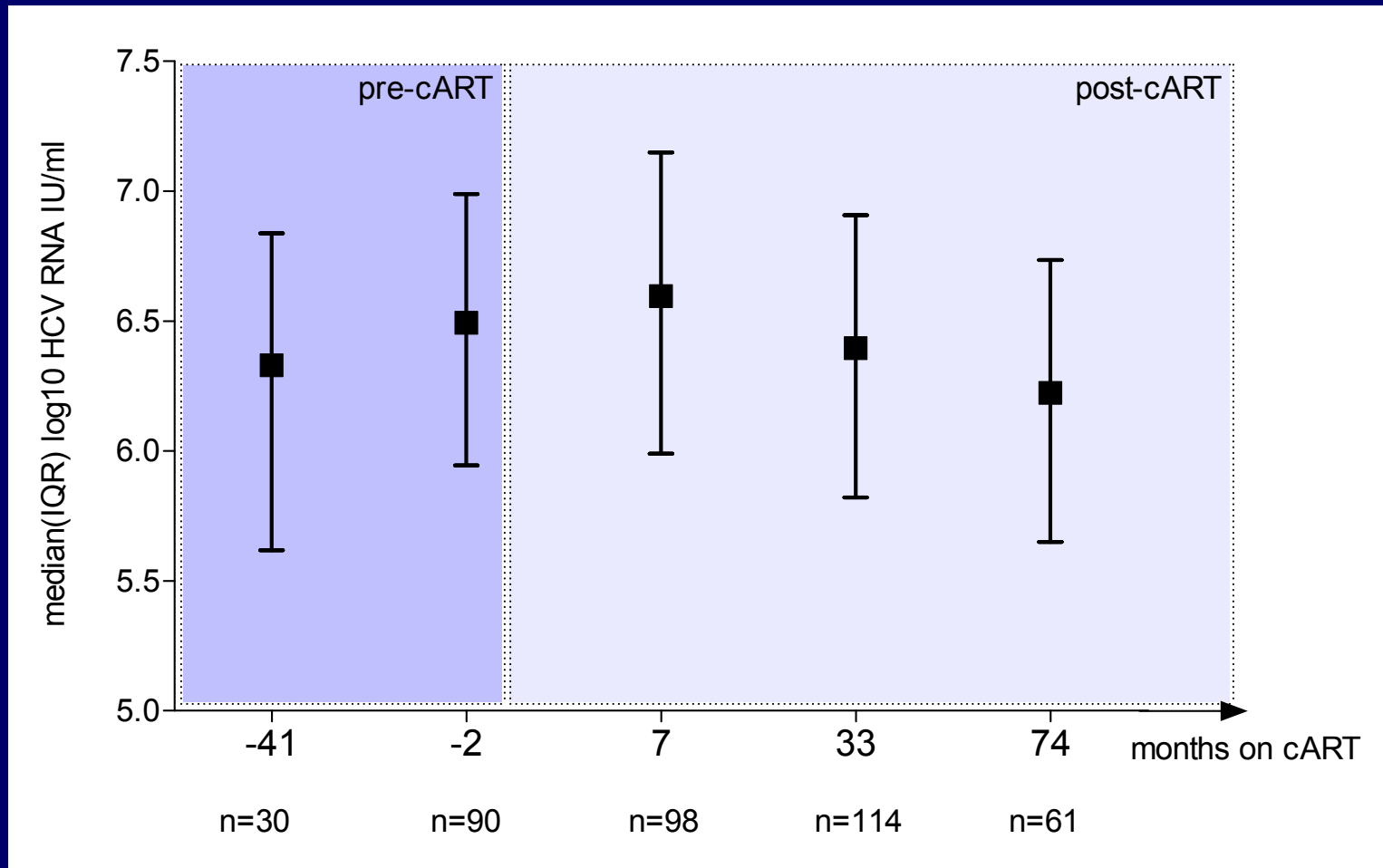


ELISpot responses at time-point		Pre cART	On cART
Group		No	No
Group		No	Yes
Group		Yes	Yes
Group		Yes	No

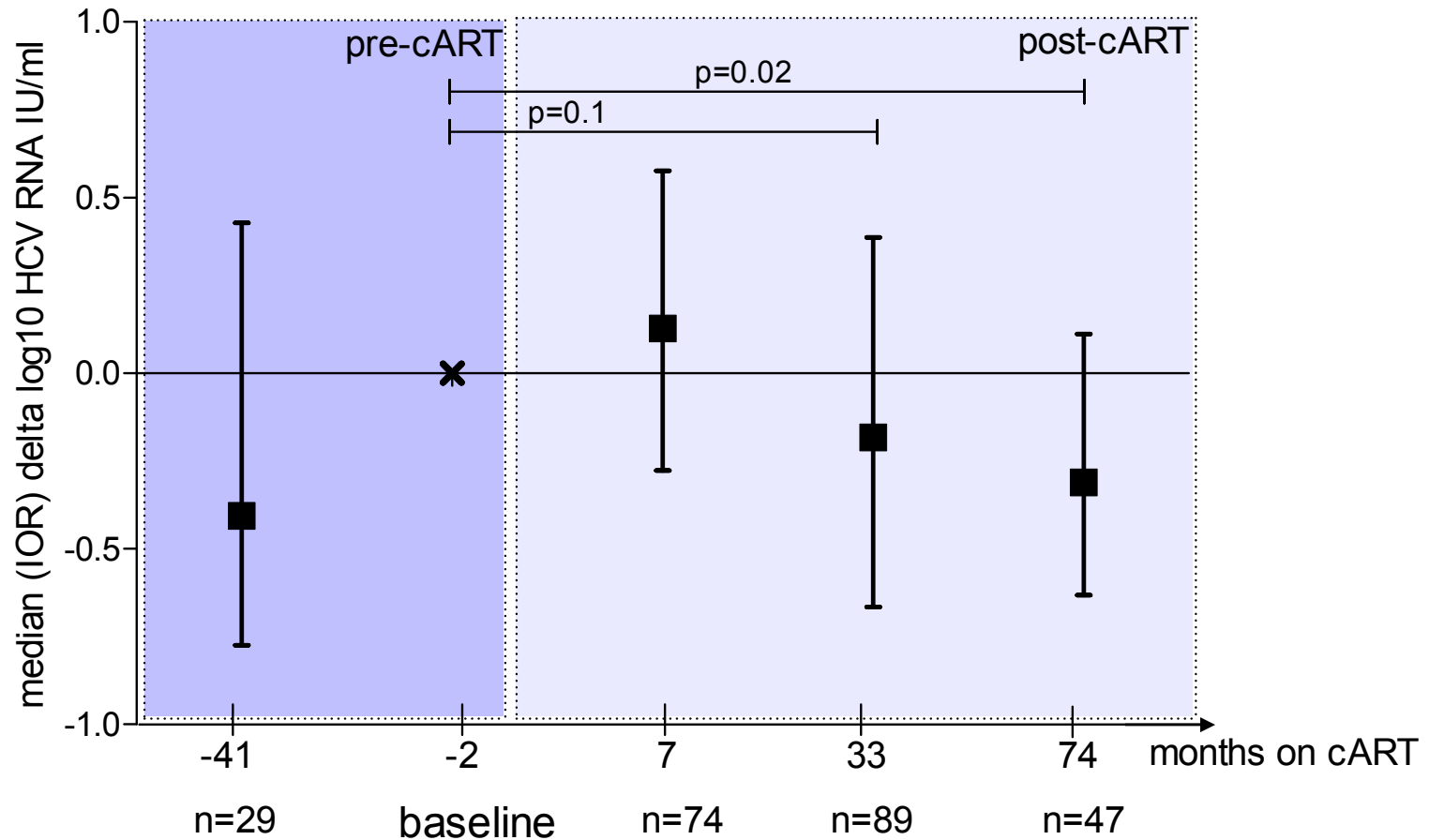
Change in HCV viral loads within individuals by ELISpot responses



Impact of cART on HCV-RNA levels

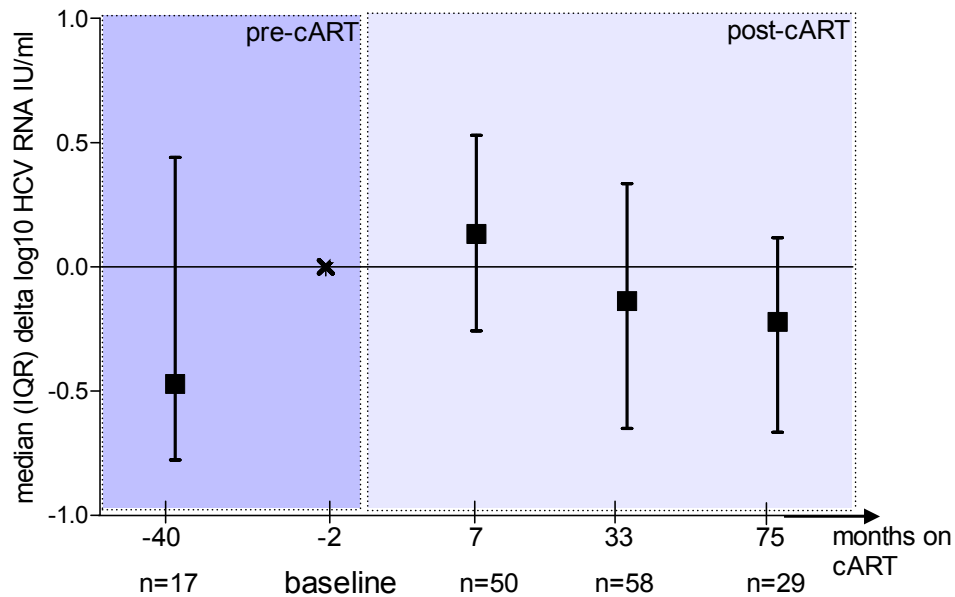


Longitudinal effect of cART on HCV viral loads within individuals

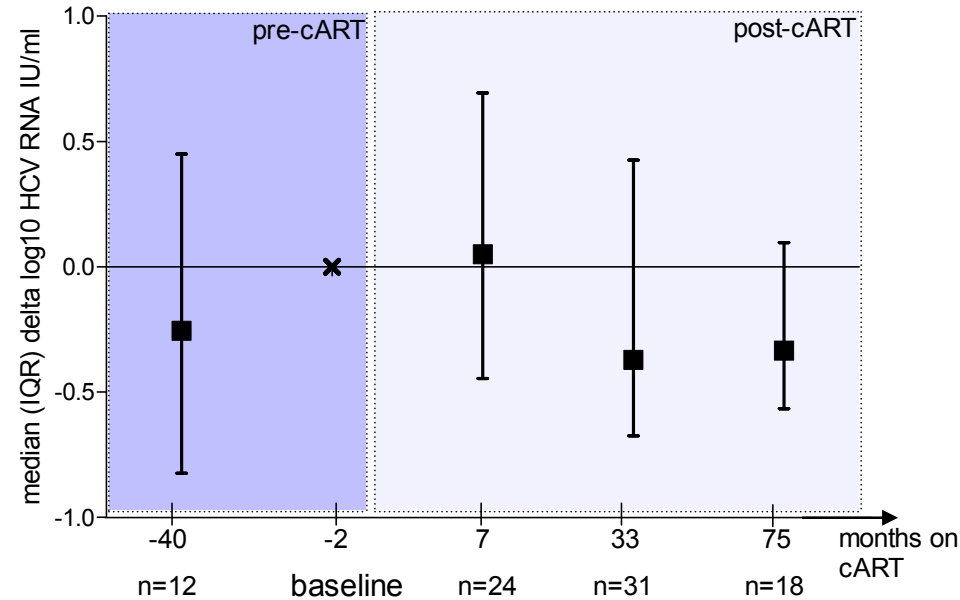


Effect of cART on HCV-genotype 1 and 3 RNA levels within individuals

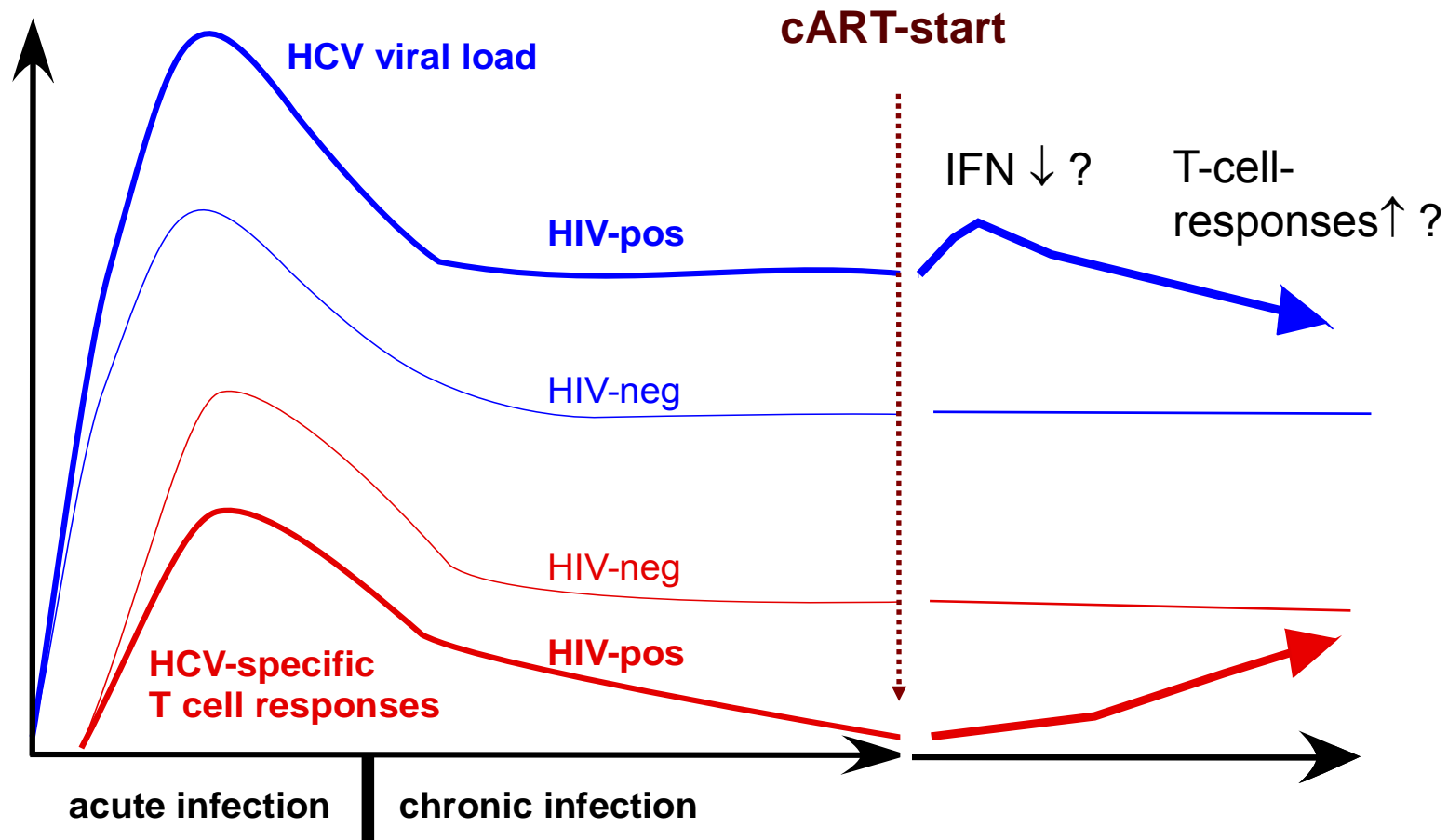
Genotype 1



Genotype 3



Impact of HIV and cART on HCV-specific immunity and HCV viral loads



Acknowledgements

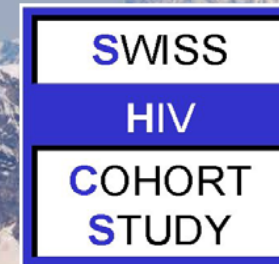
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