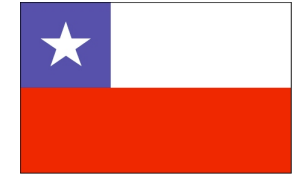


# Impact of Baseline CD4 Count and Both, Immune Recovery and Viral Suppression at 1 year of first HAART on Survival, AIDS Defining Events and Immune Recovery Reactions



C. Cortés<sup>1 2</sup>, M. Wolff<sup>1 2</sup>, C. Beltran<sup>2</sup> <sup>1</sup>University of Chile School of Medicine, <sup>2</sup>Chilean Aids Cohort (ChiAC), Santiago, Chile



ccortes@sidachile.cl  
Phone/fax: (56) 2-5554327  
Santa Elvira 629; Santiago, Chile



Chiac network

## Objectives

Baseline (BL) CD4 cell count is a major factor influencing outcome of HAART; treatment induced immune recovery and virological response can modulate this outcome. The purpose of this study was to evaluate the relationship between these 3 variables at one year of first HAART regimen and the outcome in terms of mortality, AIDS defining events and immune recovery reaction

## Methods

Prospective study in 2050 patients (pts) on first HAART regimen with a follow up (f/u) of at least 1 year. All had BL CD4 and viral load (VL) counts which were repeated at least twice a year. Pts were grouped according to BL CD4 (cells/mm<sup>3</sup>) in <100 (G1), 100-199 (G2) and ≥200 (G3). Groups were further divided according to immune and virological response at 1 year in those reaching CD4 > or < 200 and those with detectable or undetectable (< 80 copies/mL) VL. (Fig 1). Outcome measured were death, AIDS defining events (ADE) and, as a surrogate marker of immune recovery reaction, herpes zoster (HZ). For statistical analysis chi square test was used

## Results

Mortality: At 1 year of f/u 113/1044 (10.8%) of pts had died in G1, 17/675 (2.5%) pts in G2 (G1-2 p<0.05); and 9/331 (2.7%) pts in G3 respectively, (G2-3 p NS). (Fig 2)  
ADE incidence: 125/917 (13.6%) pts alive at 1 year had had at least one ADE in G1 and 55/643 (8.5%) in G2 (p <0.05); and 20/322 (6.2%) in G3 (G2-3 p NS) respectively. (Fig 3). ADE in pts with CD4 at 1 year > or < 200 were: 25/274 (9.1%) and 100/643 (15.7%) in G1 (p <0.005); 28/404 (6.9%) and 27/239 (11.2%) in G2 (p NS) and 18/281 (6.4%) and 2/41 (4.8%) in G3 respectively (p NS) (Fig 4). Detectable VL was an added risk for ADE only in G1 without CD4 recovery (< 200).  
HZ was seen in 6.6% of G1 vs 4% in G2 (p < 0.05) and 4.3% in G3. (Fig 5). HZ rate was higher in all groups reaching CD4 >200 at 1 year of f/u than those who did not, with statistically significant difference at p< 0.05 only in G1 (9.5% vs 5.3%) (Fig 6)

Patient distribution at baseline (BL) and follow up

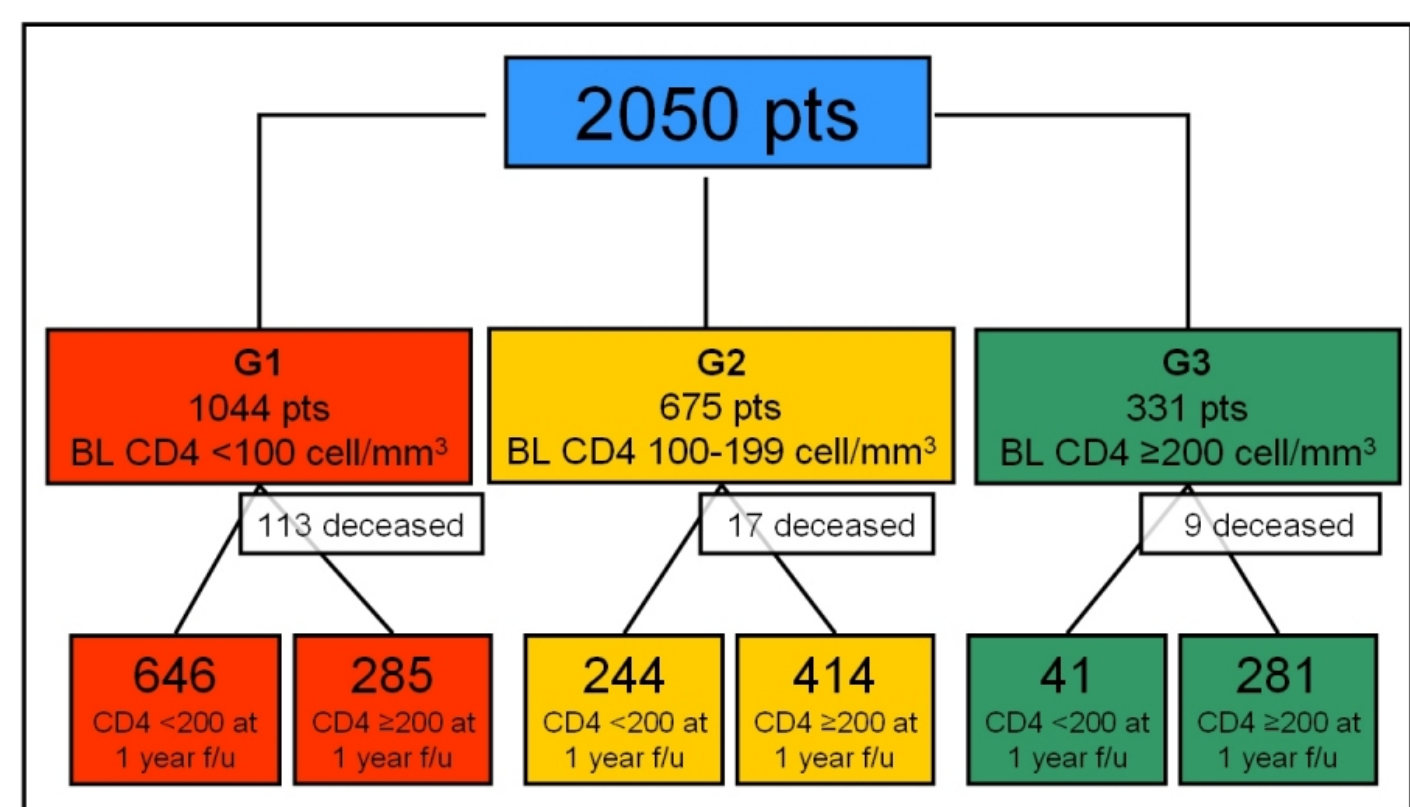


Fig 1

Mortality at 1 year of first HAART according to baseline CD4 count

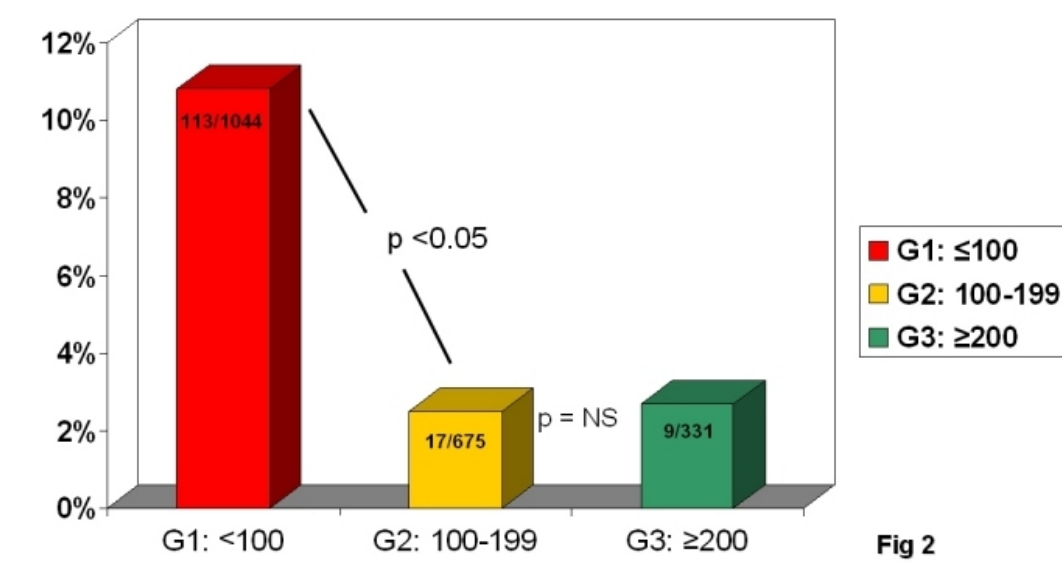


Fig 2

AIDS defining events at 1 year of first HAART according to baseline CD4 count

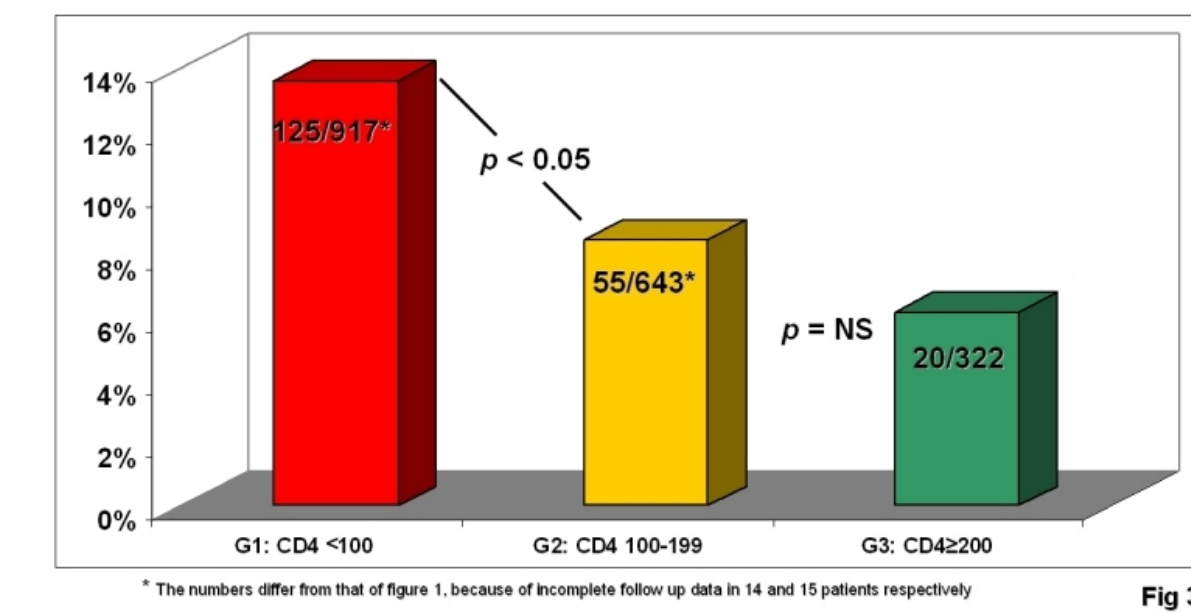


Fig 3

Herpes Zoster at 1 year of first HAART according to baseline CD4 count

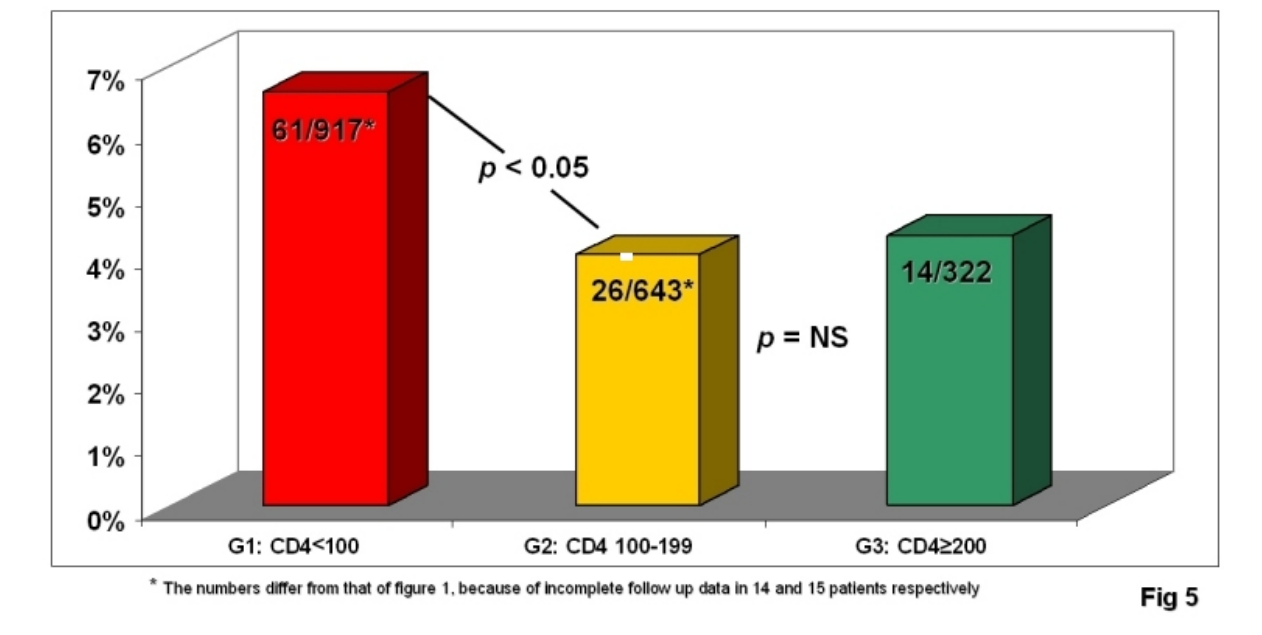


Fig 5

AIDS defining events at 1 year of first HAART according to baseline and 1 year f/u CD4 count

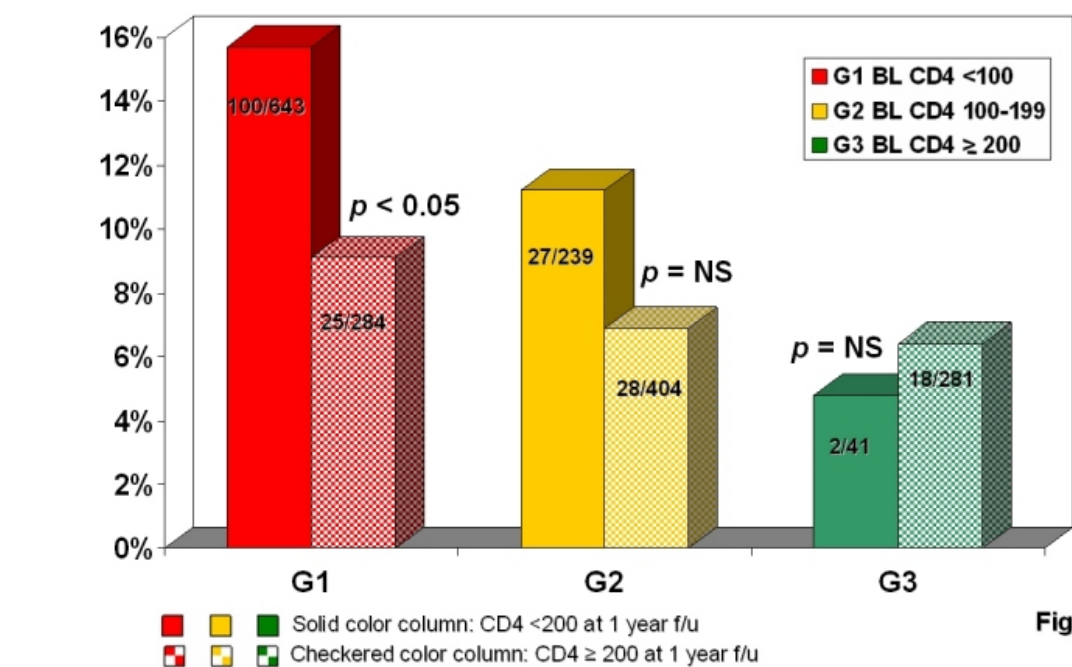


Fig 4

Herpes Zoster at 1 year of first HAART according to baseline and 1 year f/u CD4 count

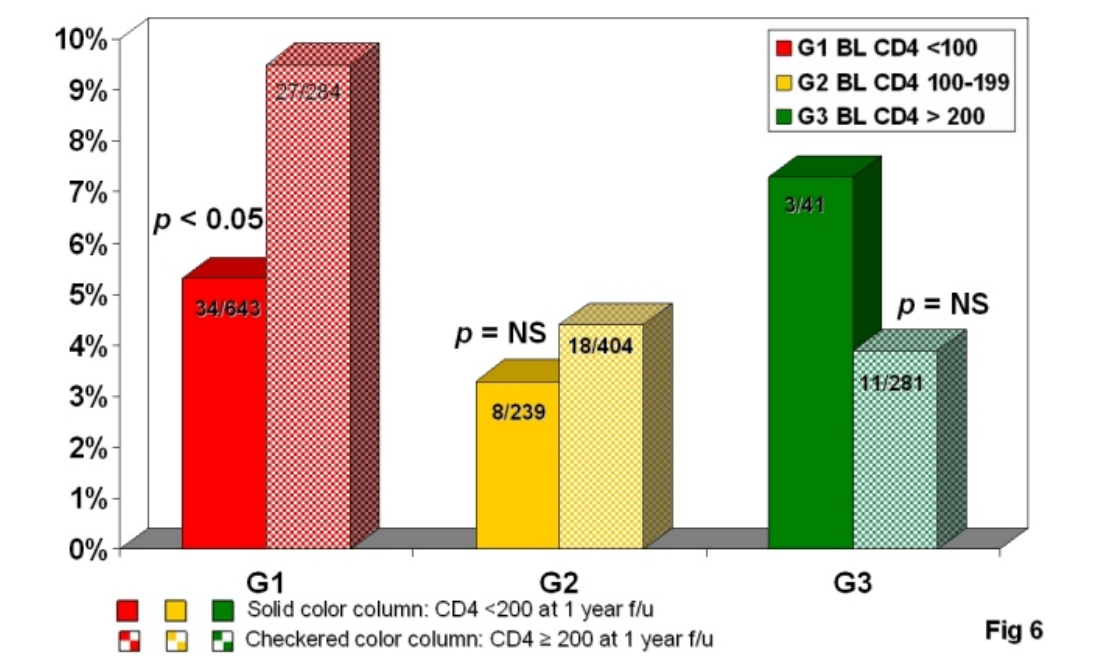


Fig 6

## Conclusions

The occurrence of death and opportunistic complications during the first year of HAART was significantly higher in patients with a baseline CD4 <100/mm<sup>3</sup> but no statistically significant difference was observed from BL CD4 above 100/mm<sup>3</sup>. Immune recovery during f/u in the more immunosuppressed group greatly improved survival and reduced rate of opportunistic complications. The group with lowest BL CD4 and greater immune recovery showed the highest rate of herpes zoster clinical infection as a surrogate marker of immune recovery reaction.