

Abstract category: B29 Intermittent or pulsed therapy, CD4 guided therapy

Abstract title:

Inferior Clinical Outcomes with Episodic CD4-guided Antiretroviral Therapy Aimed at Drug Conservation (DC) in SMART Study: Consistency of Finding in All Patient Subgroups

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Abstract text:

Background: Episodic CD4+-guided DC strategy in SMART study was found to be inferior to continuous ART (viral suppression, VS) in delaying progression of disease (POD), including death. Consistency of this finding was assessed in subgroups of patients defined by baseline characteristics.

Methods: Patients with CD4>350 cells/mm³ at entry were randomized to DC group (start ART at CD4+ <250 and stop at CD4+>350 cells/mm³) or VS group. Expanded Cox models with an interaction term between treatment and the subgrouping factor used to assess hazard ratio (HR) consistency across subgroups.

Results: A total of 5,472 patients were enrolled: 95% of patients ART experienced; mean age 46; 27% women; 30% Black; median CD4+ 598 cells/mm³; median CD4% 30%, median nadir CD4+ 251 cells/mm³; 71% HIV RNA <400 copies/ml, 24% AIDS, 2.3% hepatitis B & 15.1% hepatitis C co-infection. Overall, HR (DC/VS) was 2.5 (P<0.0001) for POD. This finding was consistent (P value for interaction>0.05) for subgroups defined by: age, sex, HIV risk, prior AIDS, nadir CD4+ count, prior CD4+ trajectory, baseline CD4+ count, CD4%, ART naïve/experienced, on/off ART, years on ART, ART class exposure, HIV mutations and hepatitis B/C. However, HR varied by race (3.6 Blacks vs 2.0 others) (P=0.02) and by HIV RNA level in patients on ART at entry (3.8 HIV RNA < 400 vs 1.1 > 400 copies/mL) (P<0.0001).

Conclusions: HR for DC/VS groups for POD was consistent in a number of subgroups with no patient subgroup having lower POD rate in DC arm. Patients with HIV RNA<400 copies/ml (on ART at Entry) had significantly higher HR estimates (DC/VS), as this subgroup of patients had low POD rates in VS arm. Episodic ART as per SMART design is inferior to VS across a number of a priori defined subgroups.