

**POSTER 51****HIV DRUG RESISTANCE PROFILES AND CLINICAL OUTCOMES IN PATIENTS WITH VIREMIA MAINTAINED AT VERY LOW LEVELS**

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We describe an updated analysis from the BIDUSI cohort, an observational study of the clinical, virologic and genotypic ART resistance profiles in HIV-positive antiretroviral adherent subjects with stable low-level viremia 50-1,000 copies/mL (LLV) for >12 months. Subjects were followed from time of first detectable LLV. HIV drug resistance genotyping (DRG) of plasma-derived HIV RNA was performed using RTPCR/nested-PCR (35/25-cycles). Standard ddNTP sequencing (ABI Prism 377) was used reading protease and the first 1Kb of RT coding regions. We identified 77 subjects with sustained LLV. Of these, 14 had multiple viremic episodes, yielding a total of 93 episodes of LLV. At time of first detectable LLV, subjects had median initial plasma viral load (PVL) of 274 (53-999) copies/mL and CD4 count of 530 (68-1155) cells/mm<sup>3</sup>; the median duration of LLV was 22 (8-106) months. At end of LLV, median PVL was 263 (50-999) c/mL and CD4 538 (77-1621) cells/mm<sup>3</sup>. Median change in PVL was -6 (-942 - +931) cells/mL and in CD4 34 (-202 - +652) cells/mm<sup>3</sup>. DRG was available for 70 (91%) of subjects at a median PVL of 296 (60-2700) copies/mL after a median of 16 (2-50) months LLV. Resistance to  $\geq 1$  and to all on-treatment ART was seen in 94% & 49% of subjects, respectively. In most individuals LLV terminated because of viremic progression (36.6%) on stable therapy, or by clinician intervention (45.2%; either due to treatment intensification (35.5%) or physician directed treatment interruption (9.7%)). In this treatment experienced population on stable ART, prolonged periods of stable viremia <1000c/mL and stable CD4 cell counts were observed, typically in the setting of significant drug resistance. Few subjects maintained LLV, with most having either gradual viremia progressing to >1000 copies/mL or had LLV terminated by clinician intervention: blinded treatment intensification or directed drug interruption. The high proportion of clinician driven termination of LLV is particularly important given the potential risks associated with interruption or with blinded treatment intensification given the lack of available resistance information in this setting.