TRENDS IN THE DARUNAVIR GENOTYPIC RESISTANCE LANDSCAPE

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Methods

- We examined samples submitted for routine phenotypic and genotypic patient testing that had a DRV fold change (FC), fold change of IC50 relative to a reference, greater than the lower clinical cutoff (FC ≥ 10, N=2,665).
- Samples were collected from mid-2006 through March 2010 and were grouped by quarter.
- We considered 11 IAS DRV mutation trends (V11I, V33I, L33F, I47V, I50V, I54L/M, T74P, L76V, I84V, L89V) with phenotypic response.
- Average frequency of each mutation per quarter was calculated, as well as the mean DRV FC and total count of IAS DRV mutations.
- Significance of trends was evaluated using the Jonckheere-Terpstra test.

Results

- While the overall number of samples with phenotypic resistance to DRV declined over the last 16 quarters, amongst isolates with DRV FC ≥ 10, the mean number of IAS DRV RAMs increased from 2.7 in Q2 2006 to 4 in Q1 2010 (p-value < 0.001) while DRV FC increased from a mean of 38 to 151 (p-value < 0.001).
- A significant increase in prevalence within IAS mutations was found for V32I, I54L (p-values = 0.001) after correcting for multiple testing.