HIV Drug Resistance Mutations Associated with Virologic Failure in Women on Efavirenz-based ART following PROMISE Study

CL. Boyce1,2, T. Stas, R. Minei1, D. Koz, A. Wong-on-Wingj, M. Mackay3,2, N. Higa1, IA Back2, S. Styrchak2, P. DeMarmels2, C. Tierney2, MG. Fowler1, LM. Fertel4,5, for the PROMISE Study Team

1 University of Washington, Department of Global Health, Seattle, WA, USA; 2 Seattle Children’s Research Institute, Seattle, WA, USA; 3 Cornell University, Ithaca, NY, USA; 4 Harvard T. H. Chan School of Public Health, Center for Biostatistics in AIDS Research, Boston, MA, USA; 5 Johns Hopkins University, Department of Pathology, Baltimore, MD, USA; 6 University of Washington, Department of Pediatrics and Laboratory Medicine, Seattle, WA, USA

### Introduction

- **Efavirenz-based antiretroviral therapy (EFV-ART) is a WHO-recommended 1st-line ART**
- **Pre-treatment HIV drug resistance (PD0R) to 1st-line non-nucleoside reverse transcriptase inhibitor (NNRTI) is increasing in low-resource countries**
- **Studies of Kenyan initiating NNRTI-ART from 2006-14: PDR increased to 11% and to 20%-25% in women 18-24y**
- **In 2014, drugs switched: NVP to EFV and ZDV to TDF**
- **Virologic failure (VF) varied by ART regimen (Figure 1):**

### Methods & Analyses

- **METHODS & ANALYSES**
  - **Enrollment plasma HIV RNA known at month 0-20 and selected mutations, particularly in women, in part from treatment to prevent mother-to-child HIV transmission (PMTCT)**

### Results

- **Figure 2. PROMISE randomization schema**

### Objective of this Study

- **Assess if pre-EFV-ART DR or PROMISE Study participants who subsequently initiated EFV-ART is associated with VF**

### Methods

- **Participants in PROMISE study 1077BF (or strategies for PMTCT; Figure 2) who subsequently started EFV-ART for their own health; initiated EFV-ART at any point during the study**

### Summary & Conclusions

- **CONCLUSIONS**
  - **Pre-EFV-ART drug resistance data from PROMISE trial align with previous observations in Kenya:**
  - **Single or multiple NRTI or NNRTI DRMs were not associated with VF compared to no DRM**
  - **Implications for PMTCT**

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