Time to ART Initiation from HIV Diagnosis and Survival to Fatal and Non-Fatal Severe Events: An Analysis of the Atlanta Veterans Affairs Cohort Study—2005-2019

Elizabeth Rabold, MD, MPH
Thesis Committee: Jodie L. Guest, PhD, MPH (Chairperson); Vincent C. Marconi, MD

BACKGROUND

- Despite impressive life expectancy gains for people with HIV (PWH), an 8-year gap relative to HIV-uninfected individuals attributable to non-AIDS diseases persists.1,2
- Several studies have demonstrated morbidity and mortality benefits from early initiation of antiretroviral treatment (ART).3,4
- Rapid ART initiation within 7-14 days after diagnosis results in an increased likelihood of viral suppression and retention in care at 12 months, as compared to standard of care.5
- Atlanta VA Medical Center (AVAMC) began rapid ART initiation at first clinic visit in December 2016.

OBJECTIVE

- This analysis examined the association between time to ART initiation from HIV diagnosis and time to severe events, including death.

METHODOLOGY

- Study design: Survival analysis.
- Population: Veterans (age ≥ 18 years) without prior ART exposure initiating ART at AVAMC between 1/1/05 and 5/31/18, with follow-up to 5/31/19.
- Data sources: HIV Atlanta VA Cohort Study (HAVACS),6 Clinical Case Registers,7 and electronic medical records.
- First primary endpoint (composite):
  - AIDS-defining illness
  - Severe liver disease
  - Invasive infection
  - Malignancy
  - Atherosclerotic cardiovascular disease (ASCVD)
- Second primary endpoint: All-cause mortality
- Unadjusted hazard ratios for time to first event of the composite outcome

RESULTS

- Of 4,765 veterans in the HAVACS cohort, 520 (10.9%) were eligible for analysis, contributing 2991.8 person-years. Demographics were similar across the three groups (Table 1).
- Of the 520 participants, 159 (30.6%) had a primary composite outcome of fatal or severe non-fatal event; 65 (12.5%) died during the study period (Figure 1).
- Unadjusted hazards ratios for the composite outcome for the intermediate and late initiation groups compared to the early initiation group were not significant (Figure 2). Adjusted hazard ratio for the late initiation group showed an 81% increase in hazards of any event.
- Unadjusted hazard ratio of all-cause mortality for the intermediate and late initiation groups compared to the early initiation group were not significant (Figure 2). The adjusted model showed a 149% increase in hazards for the intermediate initiation group and an 181% increase in hazards for the late initiation group.
- In the subdistribution model, death and ASCVD had the highest cumulative incidence among the components of the composite outcome (Figure 3).

REFERENCE

1. Marcus JS, et al. Reviewing the partners in care role: the understanding of providing health care to a population of people living with HIV. Patient Centered Care...Second to None...One Veteran at a Time. 2019. 73(8): p. 39.
6. Marcus JS, et al. The HAVACS cohort study is approved by the Emory Institutional Review Board. Support is provided by the Emory Center for AIDS Research (P30AI05049). We express our gratitude for the patients and staff of the Atlanta VAMC.

ETHICS, FUNDING, AND SUPPORT

The HAVACS cohort study is approved by the Emory Institutional Review Board. Support is provided by the Emory Center for AIDS Research (P30AI05049). We express our gratitude for the patients and staff of the Atlanta VAMC.