

Trends in mortality among HIV-infected subjects; differences by HCV coinfection

Belen Alejos for the Trends in cause-specific mortality working group of COHERE in EuroCoord

Introduction

- Coinfection by hepatitis C virus (HCV) is one of the most common comorbidities in HIV-positive individuals
- There are currently limited data on trends in cause-specific mortality in subjects co-infected by HCV and HIV compared to subjects only infected by HIV.

Objective

To study trends from 2000-14 in overall and cause-specific mortality, stratified by HCV status, among HIV-positive adults within the Collaboration of Observational HIV Epidemiological Research Europe (COHERE).

Methods

Study population

COHERE – Collaboration of Observational HIV Epidemiological Research in Europe in EuroCoord

Selection Criteria and Follow-up

- We included HIV-positive adults from Western European countries, >16 years and recruited after 2000, who were antiretroviral treatment naïve and had at least one HCV test result at baseline.
- Baseline** was defined as the date of cohort recruitment for patients with known HCV status at recruitment, or if unknown the date of first HCV test after recruitment.
- We excluded cohorts with [causes of deaths or HCV-status](#) missing in >50% of patients.

Outcome

Cause-specific mortality groups were based on a simplified algorithm adapted from the [CoDe coding system](#): AIDS-related (AR), Liver-related (LR), Non-AIDS malignancies (NADM), Non-AIDS infections (NADI), cardiovascular, and psychiatric).

Statistical Analyses

- To assess changes over time in overall and cause-specific mortality, follow-up was divided into two calendar periods (2000-2007 and 2008-2014).
- Adjusted Mortality Rate Ratios (aRR) with 2000-2007 as reference were stratified by HCV status using Poisson regression.
- We used chained equations multiple imputation of missing data including Cause of Death.

Results

Subjects characteristics 2000-2014

64,209 subjects (2,774 deaths)

36 years-old median age at entry [IQR 29-44]

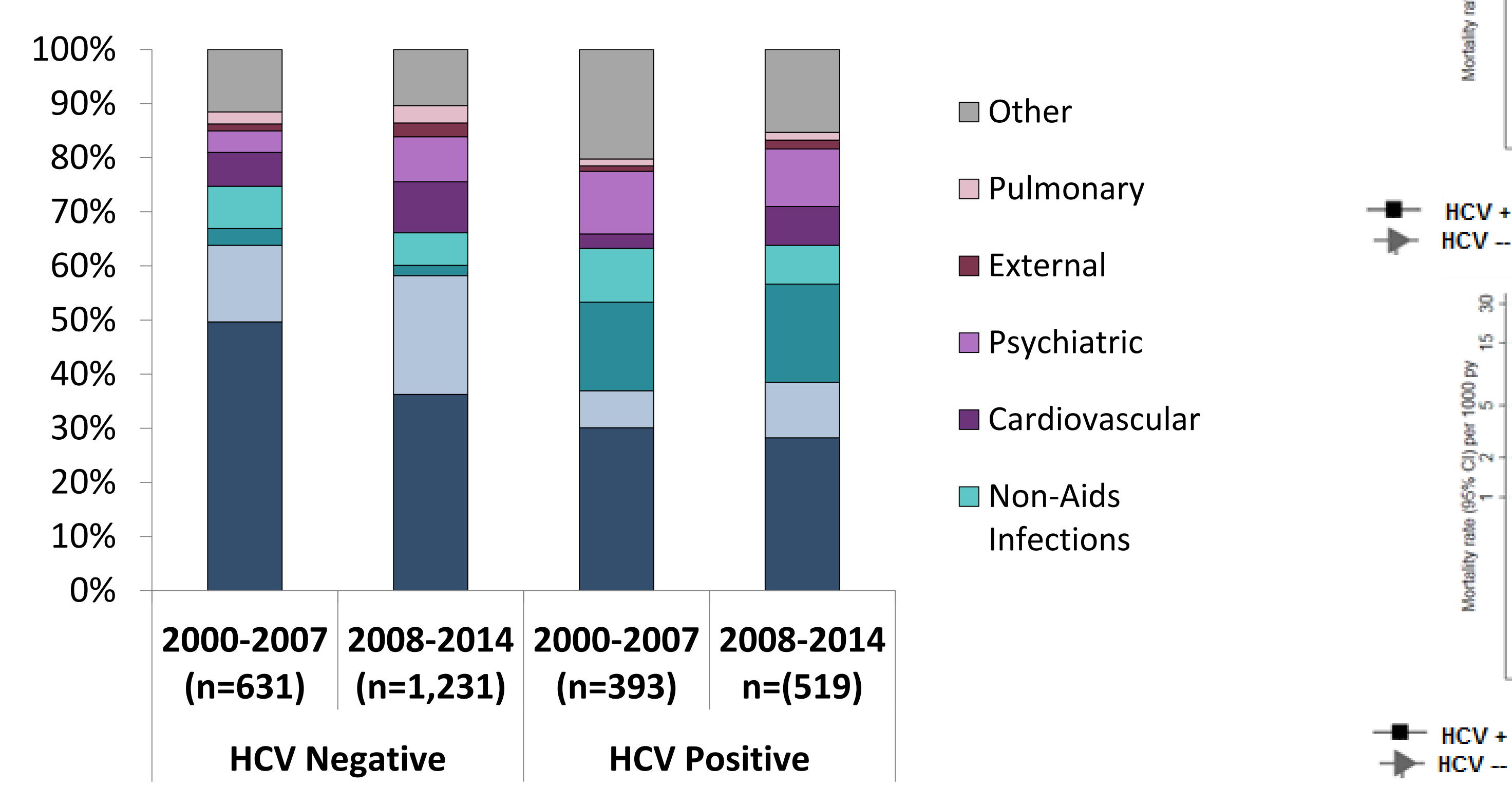
72% males

48% (n= 30,820) MSM

383 cel/mm³ median CD4 count at entry [IQR 207-570]

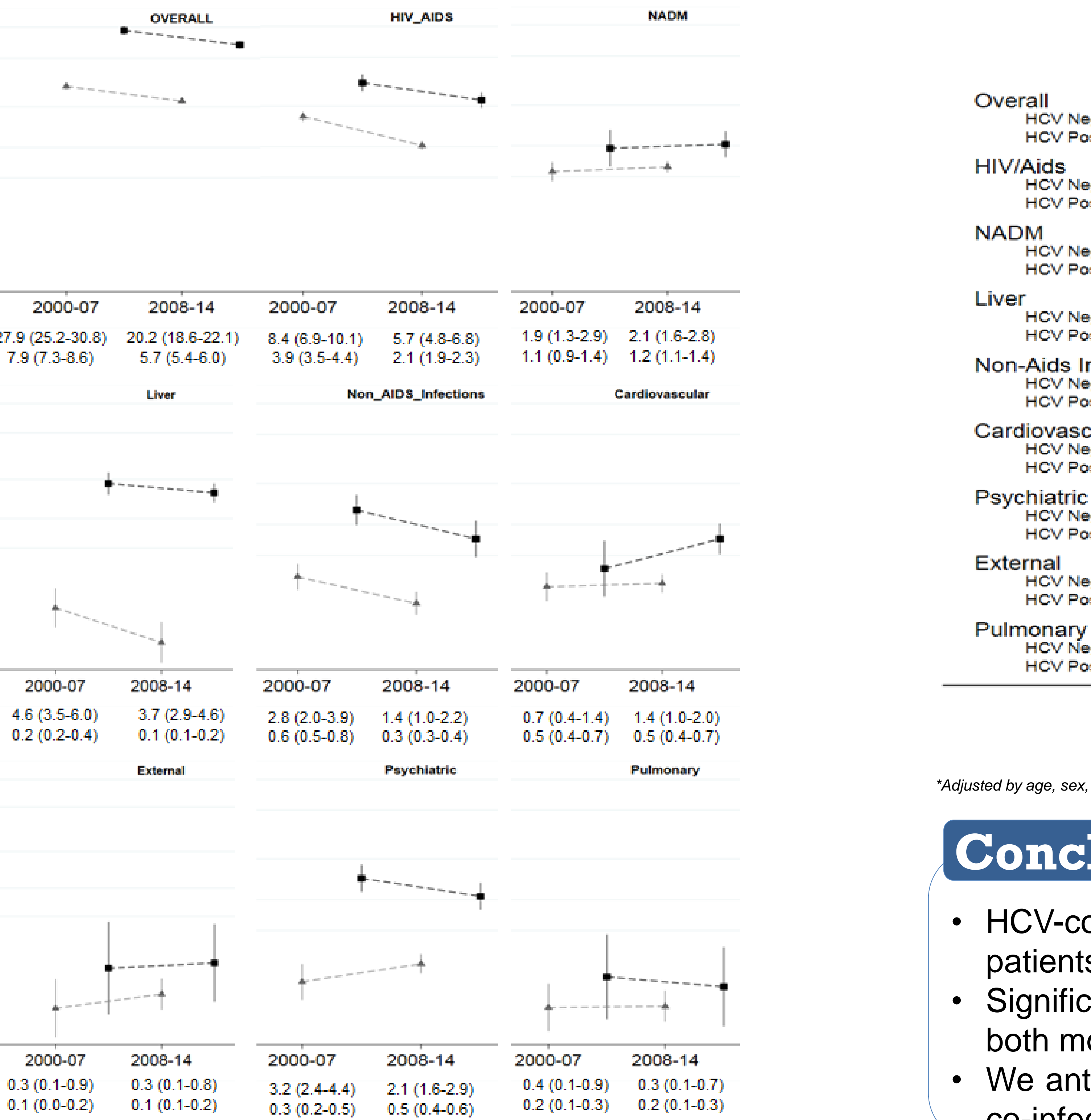
13% (n=8,174) HCV-positive at baseline

Causes of death distribution



Overall and cause-specific mortality rates

Figure 1: Mortality Rates (MR) per 1000 py stratified by period and HCV coinfection



Effect of calendar period on overall and cause-specific mortality

Figure 2: Crude and adjusted mortality Rate ratio (RR) for the effect of calendar period (2008-2014 vs 2000-2007)

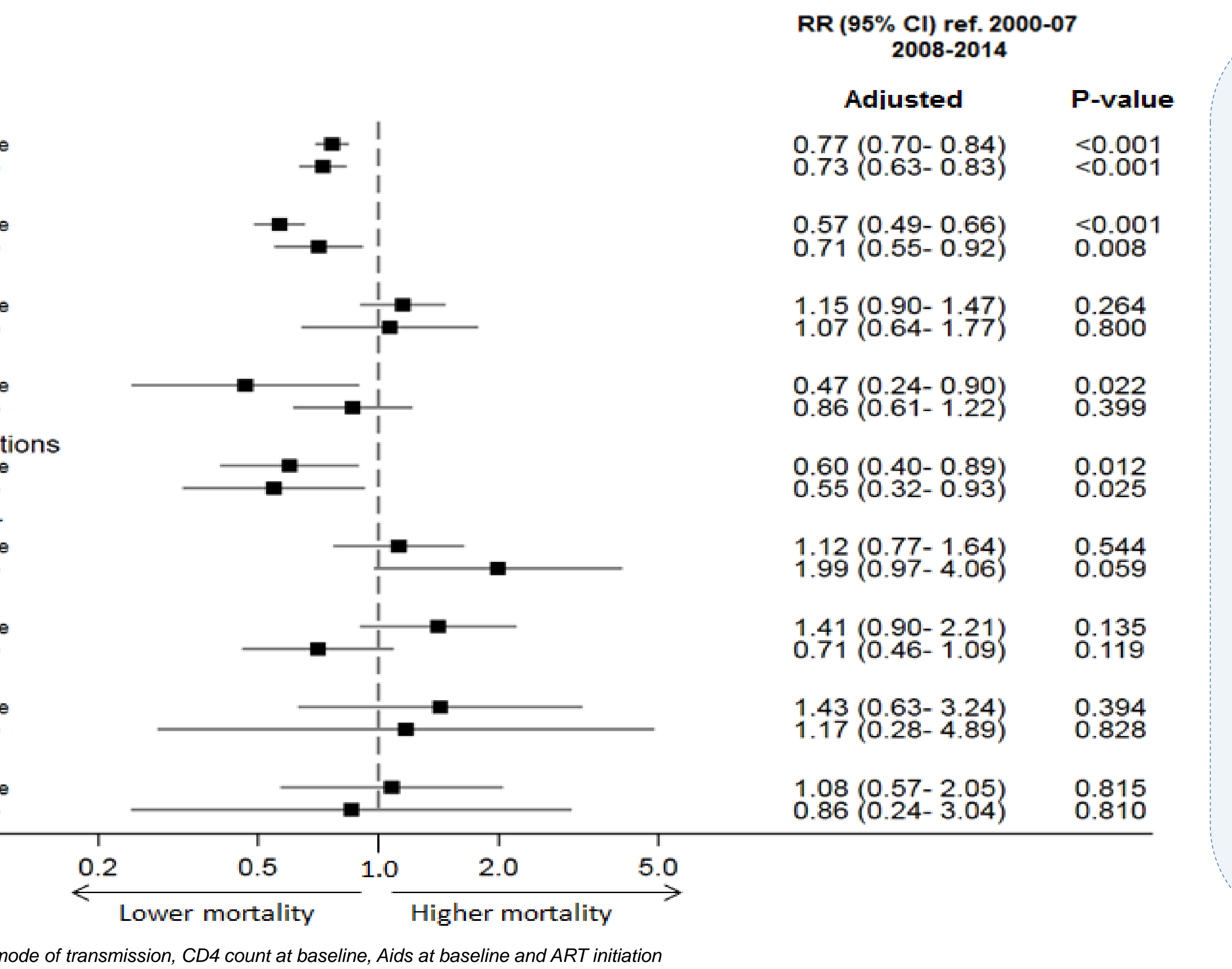


Figure 1 shows cause-specific MR per period and HCV status and Figure 2 the aRR comparing 2008-14 with 2000-07 by HCV status.

MR were substantially higher in HCV-coinfected patients for all causes of death and in both periods.

All-cause, AR and NADI mortality declined from 2000-07 to 2008-14 for both mono and co-infected individuals. Cardiovascular mortality increased almost two-fold among HCV-positives whereas it remained practically constant among HCV-negatives (interaction p=0.022); LR decreased in both populations although the relative decrease was larger among HCV-negatives (interaction p=0.108).

Conclusions

- HCV-coinfection is associated with increased all-cause and cause-specific mortality among HIV-positive patients.
- Significant relative reductions in all-cause mortality –as well as AR, LR and NADI- over time were observed for both mono and coinfected patients.
- We anticipate that the introduction of new anti-HCV regimens will significantly impact mortality patterns among co-infected subjects.