

# CHARACTERISTICS OF INDIVIDUALS WITH HETEROSEXUALLY- ACQUIRED COMPARED WITH HOMOSEXUALLY- ACQUIRED HIV AND IMPLICATIONS FOR CLINICAL PRACTICE.

## Authors:

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## Background:

Little is known about the clinical characteristics of Australian individuals who acquire HIV heterosexually.

## Methods:

We compared patients enrolled in AHOD since 1999 who reported only heterosexual (Het-HIV) or only homosexual (Hom-HIV) exposure as likely mode of HIV acquisition. Multivariate models were adjusted *a priori* for age, sex, country of birth, hepatitis B (HBV) and C (HCV) serology, CD4 count and viral load at treatment initiation, and year of combination antiretroviral therapy (cART) initiation.

## Results:

806 Het-HIV and 3125 Hom-HIV patients were included and contributed 5,287 and 25,731 person-years of follow-up, respectively. Median age at diagnosis was 33.6 vs 33.3 years for Het-HIV vs. Hom-HIV. Compared with Hom-HIV, Het-HIV were more often born outside Australia (51.4% vs 30.5%,  $p < 0.001$ ), had lower median CD4 counts at both diagnosis (307 vs 465 cells/ $\mu$ L,  $p < 0.001$ ) and cART initiation (277 vs 320,  $p < 0.001$ ), and were less likely to have had past exposure to HCV (6.6% vs 9.1%,  $p = 0.045$ ) but not HBV ( $p = 0.808$ ). Previous AIDS diagnoses were no different between groups ( $p = 0.323$ ). Among those with Het-HIV, time to viral suppression was no different (aHR 1.08, 95% CI 0.95-1.24), although the risk of virological failure was lower in Het-HIV (aHR 0.77; 95% CI 0.61-0.98). Among Het-HIV, the risk of loss-to-follow-up (LTFU) was higher ( $p = 0.009$ ) and the risk of all-cause mortality was lower (aHR 0.62; 95%CI 0.39-1.00). Overall, Het-HIV achieved similar immunological recovery despite cART initiation at lower CD4 counts, although CD4 reconstitution was lower for Het-HIV among the subgroup who started cART after 2006.

## Conclusions:

Compared with Hom-HIV, Het-HIV had lower CD4 counts at diagnosis and cART initiation, lower risk of virological failure and lower risk of all-cause mortality. However, a higher rate of LTFU among Het-HIV suggests greater efforts may be required for this group to maintain engagement in care.

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