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ORAL COMMUNICATION

The complexities of HIV infection

OC 26 All-cause mortality in people diagnosed with HIV in Italy in 1995-2019: data from the ICONA cohort

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ABSTRACT

Background: Understanding the evolution and dynamics of deaths in people with HIV (PWH) is crucial to tailor interventions aiming at improving PWH long term wellbeing. Therefore, we assessed all-cause mortality in the multicentre ICONA cohort.

Material and methods: We included all people enrolled in the ICONA cohort who were diagnosed with HIV in 1995-2019 recruited from centres with a loss to follow-up (LTFU) rate <20%. PWH have been followed up until death, administrative censoring (participation discontinuation from ICONA cohort either by PWH or recruiting centre), or 31rst December 2023. Crude yearly all-cause mortality was reported as incidence rate per 1000 person years of follow up (PYFU) according to clustered sampling design at clinical centre level. According to date of HIV diagnosis, study periods have been further stratified in five-years calendar periods (1995-1999, 2000-2004, 2005-2009, 2010-2014 and 2014-2019). Association between calendar period of HIV diagnosis and death were assessed by a mixed-effect multivariable Poisson regression model with random intercept at patient level adjusting for current age, time of diagnosis, sex, risk factor for HIV acquisition, nationality, HCV and HBV coinfection, AIDS, and comorbidities. Average CD4 level according to time of diagnosis was calculated according to mixed-effect linear regression level with random intercept at clinical centre.

Results: Out of 21,066 PWH enrolled in ICONA, 14,025 PWH were included in the analysis: 768 (5.5%) were LTFU, 1,391 (9.9%) administratively censored, 1,068 (7.6%) died, and 10,798 (77%) were alive at 31rst December 2023 (Figure 1). They were mostly males (79.9%), men who have sex with men in 45.7%, with a mean age at enrolment of 38 years. The mean age at HIV diagnosis significantly increased overtime from 35 years in 1995-1999 to 40 years in 2015-2019. The mean CD4+ T cell count at enrolment significantly reduced from 447 cell/mm3 in 1995-1999 to 364 cell/mm3 in 2015-2019. The crude all-cause mortality per 1000 PYFU is reported in Figure 2. A significant reduction in mortality was observed according to different period of diagnosis: 27 (95% CI 11-42) per 1000 PYFU in 1995-1999 vs 12 (95% CI 4-19) in 2000-2004 vs 10 (95% CI 4-17) in 2005-2009 vs 6 (95% CI 2-9) in 2010-2014 vs 5 (95% CI 2-9) in 2015-2019 (Figure 3). In the multivariable model when compared to the 1995-1999 period a lower adjusted hazard of death was observed in each subsequent calendar period [aHR 0.44 (0.31-0.63) in 2000-2004 vs 0.39 (0.28-0.55) in 2005-2009 vs 0.21 (0.15-0.29) in 2010-2014 vs 0.20 (0.14-0.28) in 2015-2019].

Conclusions: All-cause mortality in PWH enrolled in the ICONA cohort significantly reduced overtime. This reduction seems to reach a plateau for people diagnosed with HIV after 2010.

Figure 1

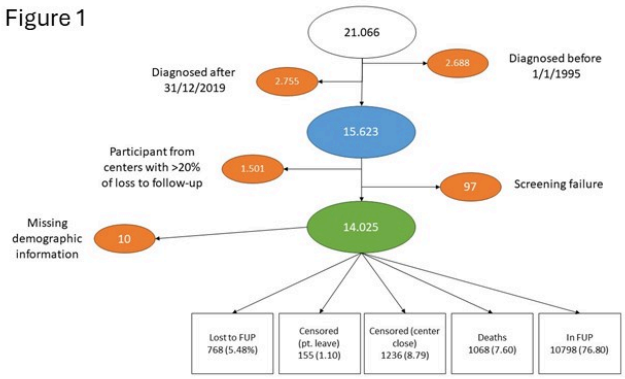

Figure 2

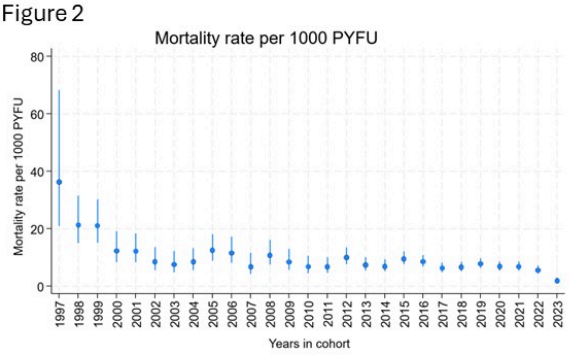

Figure 3