LONG-TERM OUTCOMES IN PEOPLE WITH HIV WHO SURVIVE A MAJOR ADVERSE CARDIOVASCULAR EVENT

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BACKGROUND

- People with HIV (PWH) have a life expectancy comparable or equal to that of the general population[1]; this, together with HIV-related chronic inflammation[2], lead to an increase in prevalence of age-associated illnesses[3].
- Major Adverse Cardiovascular Events (MACEs) are one of the leading causes of morbidity and mortality in PWH[4].
- PWH have a 2-fold higher risk of developing cardiovascular events when compared to uninfected individuals[5], and the most common cardiovascular event in PWH is myocardial infarction, while the risk of stroke in PWH is 30% higher than in uninfected individuals[6].

AIM OF THE STUDY

- To evaluate **overall survival in PWH after a first MACE**
- To evaluate **predictors of survival in PWH who survived a first MACE**

Among PWH who survive a MACE, the *overall survival probability at 5 and 10 years is 89% and 80%,* respectively, and *19.8%* of individuals *experienced a new MACE* during a median follow-up of 5.6 years.

Implementation of preventive approaches and a careful choice of antiretroviral therapy is imperative to achieve a better prognosis in this population.

Table1. Characteristics of MACE survivors according to outcome (survival or death).

VARIABLES	Overall (n=319)	Alive at the end of follow-up (n=274)	Dead at the end of follow-up (n=45)	p-value
Age (years)	56.4 (50.8-62.9)	56.1 (50.7-62.5)	58.8 (50.7-65.6)	0.341
Male sex assigned at birth	281 (88.1%)	242 (88.3%)	39 (86.7%)	0.751
Years since HIV infection at BL	20.6 (14.2-27.0)	20.8 (14.0-27.3)	18.5 (15.0-24.6)	0.522
CD4+ at BL (cells/mm3)	664 (459-844)	670 (475-854)	582 (365-835)	0.076
HIV-RNA < 50 copies/ml at BL	274 (85.9%)	236 (86.1%)	38 (84.4%)	0.954
Diabetes diagnosis at BL	59 (18.5%)	46 (16.8%)	13 (28.9%)	0.053
Hypertension at BL	178 (55.8%)	145 (52.9%)	33 (73.3%)	0.011
Smoking at BL (active or previous)	203 (63.6%)	169 (61.7%)	34 (75.6%)	0.073
New MACE diagnosis during FU	63 (19.8%)	41 (15.0%)	22 (48.9%)	<.001
Use of PIs during FU	146 (45.8%)	119 (43.4%)	27 (60.0%)	0.039
Use of INSTIs during FU	246 (77.1%)	222 (81.0%)	24 (53.3%)	<.001

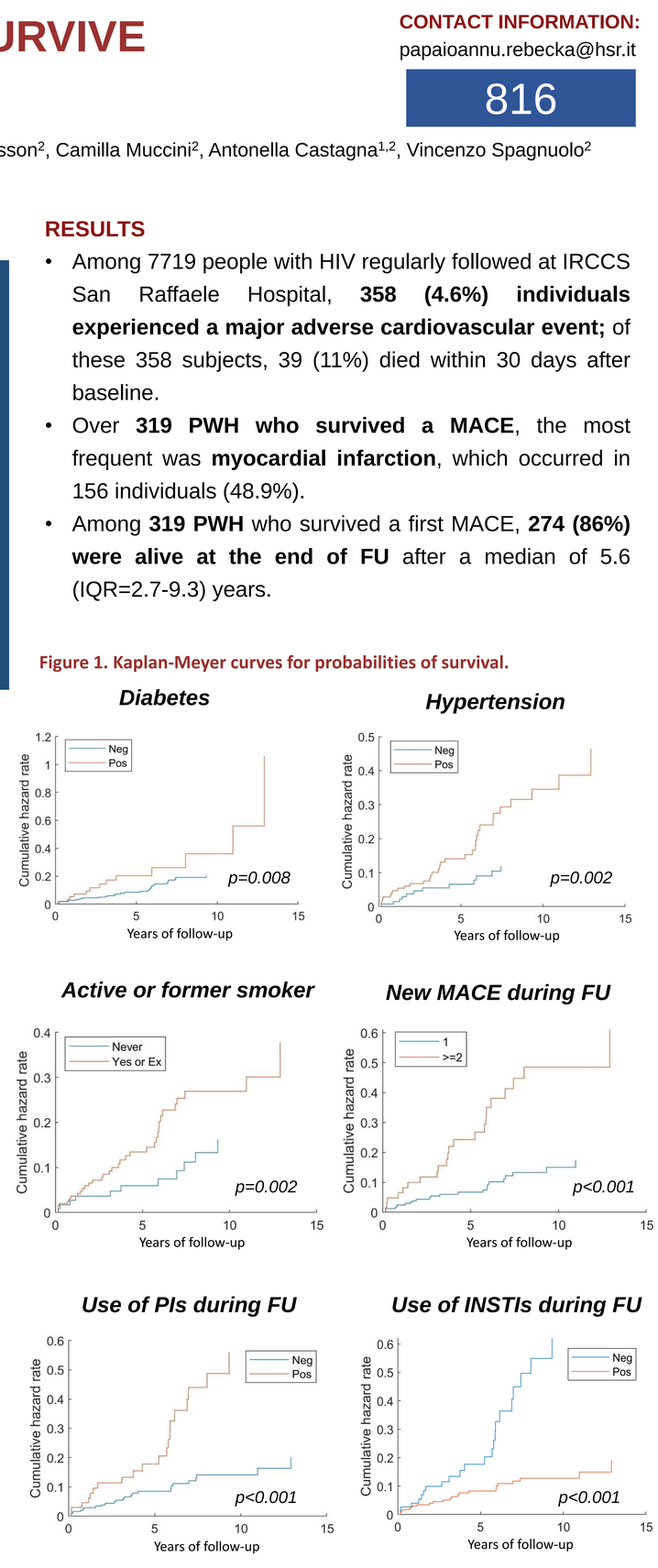
METHODS

- Retrospective, cohort study on **PWH** followed at IRCCS San Raffaele, Milan, Italy, **who experienced at least one MACE between 1st Jan 2008 and 31st Dec 2023.**
- **Follow-up: from the date of first MACE (baseline, BL) until death or last visit.**
- Individuals who died within 30 days since baseline were excluded from the analysis.
- MACEs were defined according to the **REPRIEVE trial**: *myocardial infarction; hospitalization for unstable angina; stroke; transient ischemic attack; peripheral arterial ischemia; revascularization of a coronary, carotid, or peripheral artery; cardiovascular death.*
- Baseline characteristics were compared using the Chi-square, Fisher's exact test or the Mann-Whitney U test.
- Probabilities of survival after the first MACE were estimated by Kaplan–Meyer curves.
- Factors associated with mortality were evaluated by multivariate Cox regression model.

RESULTS

- Among 7719 people with HIV regularly followed at IRCCS San Raffaele Hospital, **358 (4.6%) individuals experienced a major adverse cardiovascular event;** of these 358 subjects, 39 (11%) died within 30 days after baseline.
- Over **319 PWH who survived a MACE**, the most frequent was **myocardial infarction**, which occurred in 156 individuals (48.9%).
- Among **319 PWH** who survived a first MACE, **274 (86%) were alive at the end of FU** after a median of 5.6 (IQR=2.7-9.3) years.

Figure 1. Kaplan-Meyer curves for probabilities of survival.



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