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ORAL COMMUNICATION

Long-Acting Cabotegravir/Rilpivirine from different perspectives

OC 74 Outcomes of cabotegravir-rilpivirine in key groups of people with HIV (PWH): data from the ICONA cohort

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ABSTRACT
Background: The widespread adoption of cabotegravir (CAB)/rilpivirine (RPV) long-acting (LA) in clinical practice may be limited not only by organizational challenges but also by clinical uncertainties due to limited real-world evidence in selected key-subgroups of people with HIV (PWH).
Methods: PWH enrolled in the Icona Cohort who started CAB/RPV with HIV-RNA < 50 cp/ml and with ≥1 follow-up (FU) were included. Aim: to estimate the risk of treatment failure (TF, defined as CAB/RPV discontinuation for any cause, TD, or virological failure, VF50, 2 HIV-RNA >50 cp/ml or a single >1000 cp/ml followed by ART change), according to selected exposures of interest: PWH aged ≥60 years (vs <60), females (vs males), migrants (vs Italy-born), PWH without availability of genotype resistance test (GRT) before CAB/RPV start, PWH with previous HBV infection (HBcAb pos vs HBcAb neg), body mass index (BMI)≥30kg/m2 (vs <30kg/m2).
TF was compared across exposure groups using standard survival analysis (Kaplan-Meier (KM) curves) and multivariable Cox regression models stratified by center. Covariate adjustment for each exposure was guided by a directed acyclic graph. Secondary analysis of TD and VF50 were also performed, VF was also evaluated as 2 HIV-RNA >200 cp/ml or one >1000 cp/ml followed by ART change (VF200).
Results: Overall, 920 PWH started CAB/RPV LA (Table 1): 11.6% females, 10.8% ≥60 years, 7.4% with BMI ≥30 kg/m2, 11.7% non-Italians, 17.9% anti-HBc pos and 8.7% without previous GRT available (% excludes missing data). In a median FU of 21 months (interquartile range, IQR, 10-30) 104 TF occurred (12 VF50 and 92 TD); the estimated cumulative probability of TF was 9.2% (95% CI 7.4-11.4%) at 1-yr and 12.4% (10.2%-15.0%) at 2-yrs.
KM curves showed comparable cumulative probabilities of TF across the selected exposures (Figure 1). In the adjusted Cox regression model, no evidence for a difference between the groups in TF was observed (females vs

males, adjusted hazard rate, aHR, 1.02, 95% CI 0.52-1.99; migrants vs Italian-born, 0.90, 0.47-1.69; obese vs BMI<30 kg/m2, 1.33, 0.65-2.74; previous GRT available vs not, 0.49, 0.21-1.16; age>= 60 ys vs < 60, 0.82; 0.41-1.64; AntiHBc pos vs AntiHBc neg, 1.14, 0.66-1.97) (Table 2).
Estimated cumulative probability of TD, mainly driven by toxicity/adverse events (69.3%), was 9.2% (7.4-11.4%) at 1-yr and 12.2% (10.0-14.8%) at 2-yrs. Similarly, no evidence for a difference in aHR of TD was detected.
Estimated cumulative probability of VF50 was 1.5% (0.8-2.6%) at 1-yr and 11/12 VF occurred <1yr from CAB/RPV start. The estimated 1-yr probability of VF200 was 0.7% (0.3-1.6%).
Conclusions: In this real-world Italian study, rate of TF of CAB/RPV was 12.4% at 2 years, with no evidence of differences across the key groups evaluated, supporting a broader use of this strategy across heterogeneous groups, while acknowledging the low prevalence of key exposures; residual confounding and potential selection bias cannot be excluded.

Table 1:Main characteristics of PWH switching to CAB+RPV LA (n=920)

Female sex, N (%)	107 (11.6%)
Nation of birth Italy, N (%)	812 (88.3%)
Mode of HIV transmission, N (%)	
Heterosex	258 (28.0%)
IDU	34 (3.7%)
MSM	595 (64.7%)
Other/Unknown	30 (3.3%)
Transgender	3 (0.3%)
BMI, median (IQR)	24.4 [22.6, 26.7]
BMI, N (%)	
>= 30 kg/m²	60 (6.5%)
< 30 kg/m²	749 (81.4%)
Missing information in Icona	111 (12.1%)
CD4 at BL, cell/mmc, median (IQR)	769 [583, 984]
CD4 at nadir, cell/mmc, median (IQR)	389 [242, 547]
Age, median (IQR)	46.0 [38, 54]
Age >= 60 years, N (%)	99 (10.8%)
Years of viral suppression, median (IQR)	7.1 [3.7, 9.9]
ART exposure, years, median (IQR)	7.7 [4.5, 10.5]
HBcAb, N (%)	
Positive	140 (15.2%)
Negative	643 (70.0%)
Missing information in Icona	137 (14.9%)
Availability of GRT pre-CAB/RPV, N (%)	
Yes	700 (76.1%)
No	67 (7.3%)
Missing information in Icona	153 (16.6%)

Figure 1: Estimated probability of treatment failure by key exposure groups

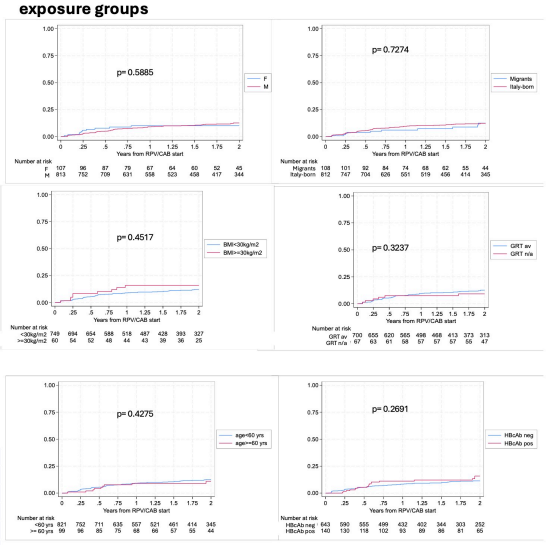

Table 2: Cox regression model for treatment failure

	HR	95%CI		p	aHR*	95%CI		p
Female (vs Male)	1,02	0,52	1,99	0,953	1,02	0,52	1,99	0,953
Migrants (vs Italy-born)	0,90	0,47	1,69	0,733	0,90	0,47	1,69	0,733
Obese (BMI<30 kg/m2)	1,46	0,72	2,97	0,297	1,33	0,65	2,74	0,438
GRT available (vs no)	0,51	0,22	1,20	0,121	0,49	0,21	1,16	0,106
Age>=60 years (vs <60)	0,82	0,41	1,64	0,567	0,82	0,41	1,64	0,567
HBcAb pos (vs neg)	1,17	0,70	1,96	0,556	1,14	0,66	1,97	0,626

*Set of adjustments: HBcAb positivity adjusted for age and HIV transmission mode, CD4 ART initiation; obesity adjusted for age, sex and mode HIV transmission; absence of pre-cabotegravir/rilpivirine GRT adjusted for year of ART initiation, previous virological failure. Age, sex and migrant status were included as baseline exposures and were not adjusted for upstream covariates.
Notes: HR, hazard rate; aHR, adjusted hazard rate; BMI, body mass index; GRT, genotype resistance test