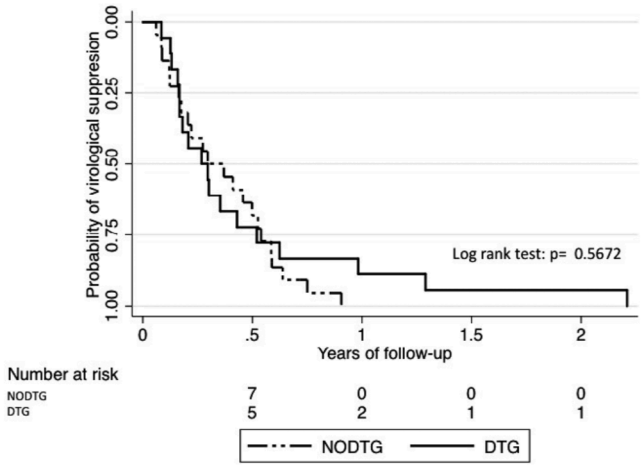
Abstract P060 – Table 1. Baseline characteristics of the study population

	DTG regimes N = 20	NODTG regimes N = 23	*p* value
Sex Male, n (%)	17 (85.0)	19 (82.6)	0.832
Median age, years [IQR]	33.5 [28 to 42]	45 [40 to 53]	0.006
Risk, n (%) Heterosexual	4 (20.0)	8 (34.8)	0.281
Risk, n (%) MSM	16 (80.0)	15 (65.2)	
Country of origin, n (%) Italy	17 (85.0)	18 (78.3)	0.573
Country of origin, n (%) Romania	2 (10.0)	2 (8.7)	
Country of origin, n (%) Africa	0 (0.0)	1 (4.4)	
Country of origin, n (%) Norway	1 (5.0)	0 (0.0)	
Country of origin, n (%) Portugal	0 (0.0)	1 (4.4)	
Country of origin, n (%) Peru	0 (0.0)	1 (4.4)	
Reason for HIV test, n (%) Risk perception	8 (40.0)	6 (26.1)	0.441
Reason for HIV test, n (%) Flu-like syndrome	6 (30.0)	6 (26.1)	
Reason for HIV test, n (%) Positive partner	3 (15.0)	2 (8.7)	
Reason for HIV test, n (%) Blood donation	0 (0.0)	1 (4.4)	
Reason for HIV test, n (%) Screening for other diseases	0 (0.0)	3 (13.0)	
Reason for HIV test, n (%) Unknown	3 (15.0)	5 (21.7)	
HCV Ab positive, n (%)	1 (5.0)	0 (0.0)	0.278
HBsAg positive, n (%) Negative	19 (95.0)	14 (60.9)	0.028
HBsAg positive, n (%) Positive	1 (5.0)	6 (26.1)	
HBsAg positive, n (%) Unknown	0 (0.0)	3 (13.0)	
Resistance at baseline, n (%) Negative	14 (60.0)	23 (100)	0.005
Resistance at baseline, n (%) NRTI	2 (10.0)	0 (0.0)	
Resistance at baseline, n (%) NNRTI	2 (10.0)	0 (0.0)	
Resistance at baseline, n (%) NRTI+NNRTI	1 (5.0)	0 (0.0)	
Resistance at baseline, n (%) PI	1 (5.0)	0 (0.0)	
Median CD4 diagnosis cells/μL [IQR]	504 [311 to 710]	557 [339 to 717]	0.792
Median HIV-RNA Log 10 copies/mL [IQR]	6.0 [5.4 to 6.4]	5.5 [4.9 to 6.3]	0.173
Median days from diagnosis to start therapy [IQR]	10 [5 to 18]	22 [4 to 28]	0.387
Median time to achieve <50 copies/mL (day)	103 [58 to 190]	121 [60 to 197]	0.903
Number of drugs 2	1 (5.0)	0 (0.0)	0.554
Number of drugs 3	15 (75.0)	18 (78.3)	
Number of drugs 4	4 (20.0)	5 (21.7)	
Single tablet regimen, n (%)	6 (30.0)	11 (47.8)	0.233
Fever >38°, n (%)	10 (50.0)	9 (39.1)	0.430
Lymphoadenopathy, n (%)	10 (50.0)	12 (52.2)	0.887
GI symptoms (diarrhoea/vomit), n (%)	5 (25.0)	2 (8.7)	0.149
CD4 < 350 cells/mm^3 at diagnosis, n (%)	6 (30)	6 (26.1)	0.081
Lue serology positive at the diagnosis, n (%)	3 (15.0)	3 (13.0)	0.853

INI) all in DTG group (p = 0.005). The 184V mutation was detected in two patients on 3TC/ABC, both undetectable at the end of follow-up. The probability of achieving virological suppression during the follow-up is shown in Figure 1 (log rank: p = 0.5672). One patient on DTG with 184V achieved virological suppression after 2 years. CD4+ cell count, and CD4+/CD8+ ratio increased significantly within groups at 3, 6, 12, 24 and 36 months (p < 0.05 for all comparisons), without significant differences between the two groups.



Abstract P060 – Figure 1. Kaplan-Meier for the probability of virologic suppression by group.

Conclusion: In our setting, antiretroviral therapy in AHI is started very early. DTG shows excellent viro-immunological efficacy even when NRTI transmitted mutations are present, interruptions rarely occur due to neurological toxicity.

P061

Acute HIV infection detection: rapid fourth-generation test or rapid molecular point-of-care HIV test?

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Background: Acute HIV infection (AHI) is defined by the presence of p24 Ag and/or HIV-RNA in the absence of HIV Ab [1]. Standard third-generation tests do not detect AHI. High HIV incidence (2.8%) [2] and prevalence (17.1%) [3] estimates in Portuguese MSM and regular HIV testing (≈7 months between visits) [2], peer counsellor training for

AHI syndrome recognition, rapid linkage to care (<72 hours) and access to anonymous partner notification [4] at CheckpointLX (community-based sexual health centre for MSM) increase the possibility of finding AHI cases [5]. This study aims to compare two screening algorithms for AHI detection at CheckpointLX.

Methods: Between November 2016 and November 2017 (enrolment Σ = 9.5 months), adult MSM were tested with a combined rapid Ag/Ab test (algorithm 1, AlereTMHIV Combo [6]) and all adult MSM with AHI syndrome OR reactive Ag/Ab test OR whose sexual partner was diagnosed with HIV at CheckpointLX in the prior 6 weeks were tested with rapid molecular HIV-RNA test (algorithm 2, AlereTMq HIV-1/2 Detect [7]). All cases were assessed for CD4 cells count (AlereTM-Pima [8]) and linked to care (<48 hours).

Results: Algorithm 1: 0% AHI detected (0 in 2890 tests, 88 reactive: one for Ag [confirmed negative]; one for Ab/Ag [confirmed positive]; 86 for Ab [four confirmed negative]; five for Ag [all confirmed negative] were not considered due to be part of faulty lots, according to manufacturer notice). Algorithm 2: 0.87% (one in 115 tests: 27 non-reactive rapid Ag/Ab tests [one confirmed positive], one for Ab/Ag [confirmed positive], one for Ag [confirmed negative], 86 for Ab [four confirmed negative, nine refusals to onsite confirmation]). Twelve percent of people confirmed positive were linked to care earlier due to CD4 count <250 cells/mm^3. 6.33% of people were confirmed negative.

Conclusions: Fourth-generation tests did not add value in AHI detection. Targeted molecular HIV-RNA allowed AHI detection and spared clients from unnecessary medical appointments and anxiety when reactive tests were confirmed negative immediately. Onsite confirmation reduced the lag time between a reactive test and diagnosis from 6 weeks to 1 hour. Onsite CD4 count enabled priority referrals when immunosuppression was found. HIV testing centres screening algorithms can benefit from onsite HIV-RNA and CD4 count POC technologies.

References

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P062

Primary HIV: clinical experience from an outpatient HIV clinic in Portugal

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Background: Diagnosis of early HIV infection provides an opportunity to start antiretroviral therapy during the earliest stages of the infection, with benefits on the establishment of the viral set point and immune function preservation as well as reducing the risk of transmission to other individuals [1]. Our aim with this study was to estimate the prevalence of HIV primary infection in a cohort of naïve HIV patients starting antiretroviral therapy and to identify associated sociodemographic, clinical and outcome characteristics.

Materials and methods: Observational retrospective study. We selected all newly diagnosed HIV patients that started antiretroviral therapy after enrolment between January 2015 and December 2017 in our HIV outpatient clinic in Centro Hospitalar São João in Oporto, Portugal. Primary HIV infection was considered when there was a positive plasma p24 antigen or HIV-RNA; negative/indeterminate initial anti-HIV antibody and clinical symptoms compatible with HIV acute infection (when present). We recovered clinical data regarding baseline characteristics, mode of transmission of HIV, baseline CD4+ count and HIV viral load at 1 month after the beginning of antiretroviral therapy.

Results: We identified 332 patients with newly diagnosed HIV infection. The mean age (±SD) was 40.3 (±12.5) years and 254 (76.5%) were men. From these patients, there were 28 cases of primary HIV infection (8.4%, 95% CI 5.68 to 11.66). Patients who were diagnosed with a primary HIV infection had a significantly lower mean (±SD) age (35.9 ± 10.5 vs. 40.7 ± 12.6 years; $p = 0.073$), were male (96.4% vs. 74.7%; $p = 0.004$), were MSM (60.7% vs. 44.4%; $p = 0.072$) and were admitted from the emergency department (50.0% vs. 12.5%; $p < 0.001$). They also had higher median [IQR] CD4 cell count at admission (434.5 [361.5 to 532.5] vs. 386 [149.5 to 545]; $p = 0.069$). Most started INSTI (85.7% vs. 65.5%; $p = 0.02$). After the first month under ART primary HIV patients had a significantly higher median CD4 count increase (210 [91 to 304] vs. 110 [38 to 209]; $p = 0.013$). At the end of follow-up (mean of 17 months, not significantly different between groups) primary infected patients attained a higher median CD4 cell count (830 [644 to 943] vs. 626 [395 to 859]; $p = 0.002$).

Conclusions: Patients with early HIV infection and subsequent early diagnosis and beginning of ART appear to do better than the other patients in terms of immune function recovery after ART, supporting the current recommendation to start ART immediately in these cases.

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