

Late presentation and HIV-1 subtype diversity among Ukrainian migrants newly diagnosed with HIV in Poland.

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Introduction: Migration is a well-established factor associated with late HIV diagnosis. War in Ukraine forced displacement of ~6 million people, with large proportion taking refuge in Poland, which is now also hosting >3500 Ukrainian migrants living with HIV [1]. Majority were diagnosed and initiated antiretroviral therapy still in the home country, however approximately 25% of people living with HIV in Ukraine were estimated to be undiagnosed. Here we present the data on the national survey on new HIV diagnosis in Ukrainian migrants since the beginning of war.

Methods: Clinical data from 439 Ukrainian migrants newly diagnosed with HIV in Poland since February 2022 were collected from eleven Polish HIV treatment centres. Where available, baseline HIV-1 sequence was analysed for subtype [2] and drug resistance [3]. Late diagnosis was defined using updated definition [4] and associated with clinical and virologic variables. Time trends in diagnosis were calculated using logistic regression, while for association of late diagnosis with clinical and virologic variables multivariate logistic model was implemented.

Results: Gender distribution in the group was similar (49.2% female, 50.8% male), with median age at HIV diagnosis of 37 (IQR:31-44) years and lymphocyte CD4 count of 198 (IQR: 50-428) cells/ul (Table 1). Transmission route was mostly heterosexual (72.4%). AIDS was diagnosed in 153 patients (34.9%), 32.9% of these had tuberculosis. Hepatitis B surface antigen was detectable in 3.8% while 19.4% of people presented with anti-hepatitis C virus (HCV) antibodies (72.5% of them with replicative HCV virus). A6 variant was predominant (88.5%) with drug resistance mutations to non-nucleoside reverse transcriptase inhibitors (NNRTI) observed in 13.7% of sequences, mutations to other drug classes being infrequent. Late presentation was common (68.6%) and associated with older age, heterosexual and injection drug use transmission routes, HCV coinfection and presence of subtype A6 while timely diagnoses more common among men who have sex with men, people with diagnosed syphilis and subtype B (Figure 1,2).

Proportion of late diagnosed migrants was stable across the two years since outbreak of war (Figure 3).

Table 1. Clinical characteristics Ukrainian migrants with newly diagnosed HIV infection.

	Total	Late diagnosed (n=301, 68.6%)	Timely diagnosed (n=138, 31.4%)	p
Age, median (IQR)	37 (31-44)	40 (34-45)	33 (27-40)	<0.0001
Gender, n (%)				
- Male	223 (50.8)	153 (68.6)	70 (31.4)	0.98
- Female	216 (49.2)	148 (68.5)	68 (31.5)	
Transmission route, n (%)				
- Heterosexual	317 (72.4)	219 (69.1)	98 (30.9)	<0.0001
- Men who have sex with men	76 (17.3)	41 (52.6)	36 (47.4)	
- People who inject drugs	45 (10.3)	41 (91.1)	4 (8.9)	
Lymphocyte CD4 count at care entry, cells/ul median (IQR)	198 (50-428)	106 (20-210)	508 (428-672)	<0.0001
HIV-RNA levels at baseline, log copies/ml median (IQR)	5.1 (4.28-5.7)	5.4 (4.77-4.98)	4.22 (3.68-4.98)	<0.0001
HBV surface antigen positive (HBsAg), n (%)	16 (3.8)	14 (4.9)	2 (1.5)	0.08
HBV core antibody positive (HBcAb), n (%)	110 (30.2)	84 (33.5)	26 (23.0)	0.04
HBV surface antibody (HBsAb) > 10 IU/ml (positive), n (%)	73 (20.6)	50 (20.5)	23 (20.9)	0.92
Anti-HCV IgG antibody positive, n (%)	82 (19.4)	64 (22.2)	18 (13.5)	0.037
HCV-RNA detectable (Only analysed in anti-HCV positive), n (%)	58 (72.5)	43 (71.7)	15 (75.0)	0.2
Syphilis non-treponemal serology (VDRL) or equivalent positive, n (%)	50 (12.8)	28 (10.45)	22 (18.2)	0.035
HIV variant, (available for 227 cases), n (%)				
- A6	201 (88.5)	151 (75.1)	50 (24.9)	0.002
- B	22 (9.7)	8 (38.1)	14 (63.6)	
- Other	4 (1.7)	3 (1.3)	1 (0.4)	

Figure 1 Multivariate logistic regression analysis demonstrating the odds ratios (OR) and 95% confidence intervals

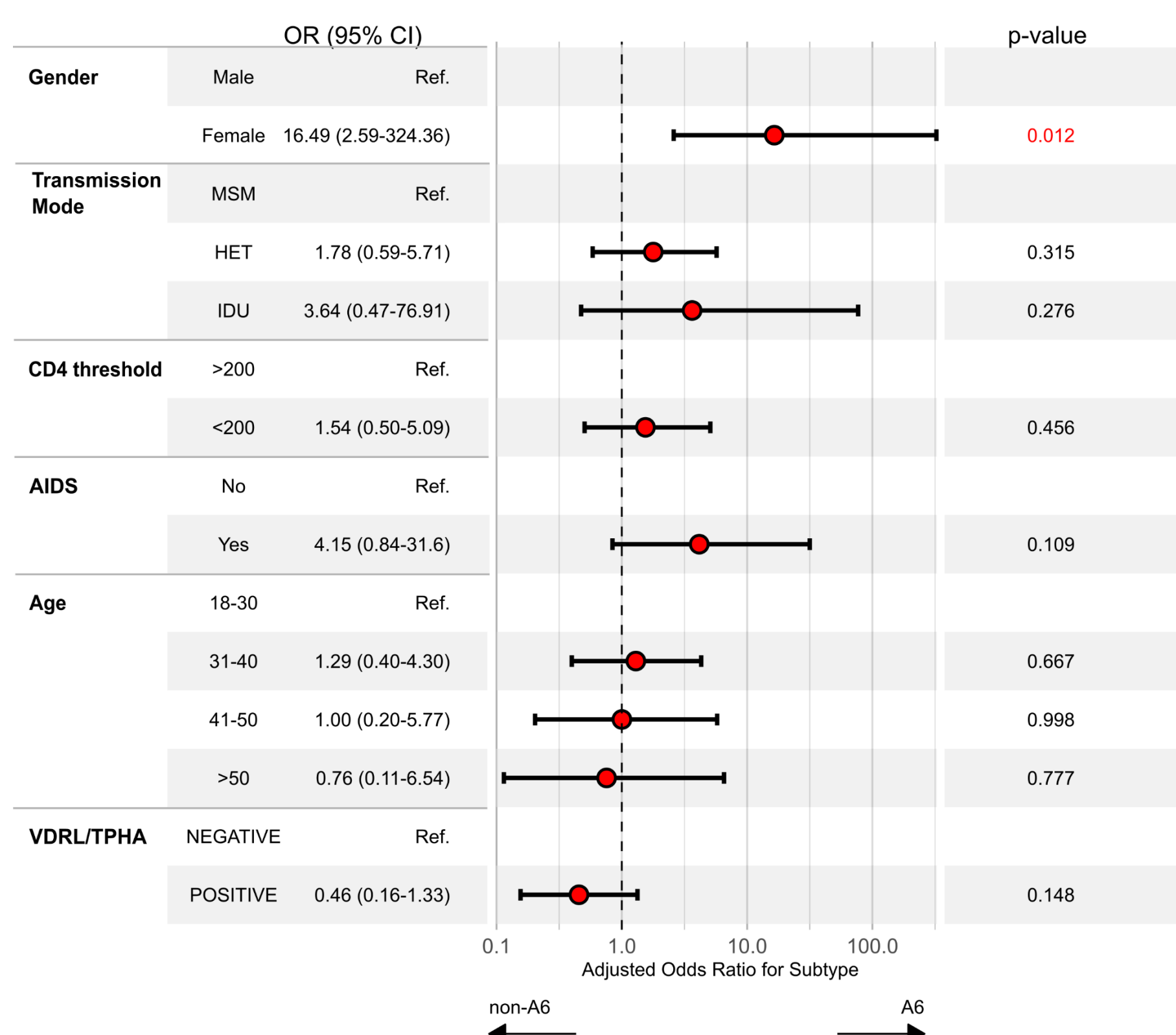


Figure 2 Multivariate logistic regression analysis demonstrating the odds ratios (OR) and 95% confidence intervals

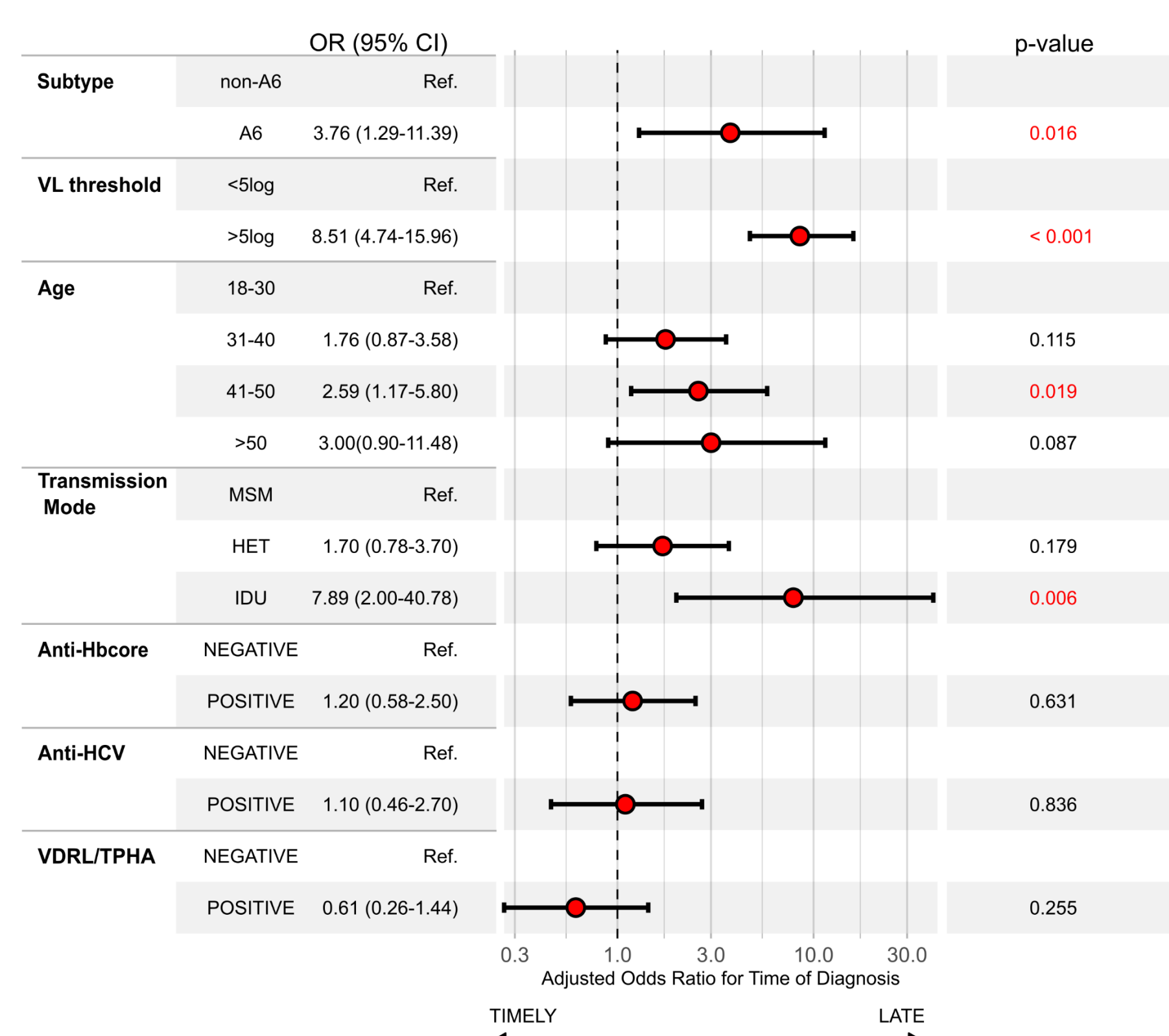
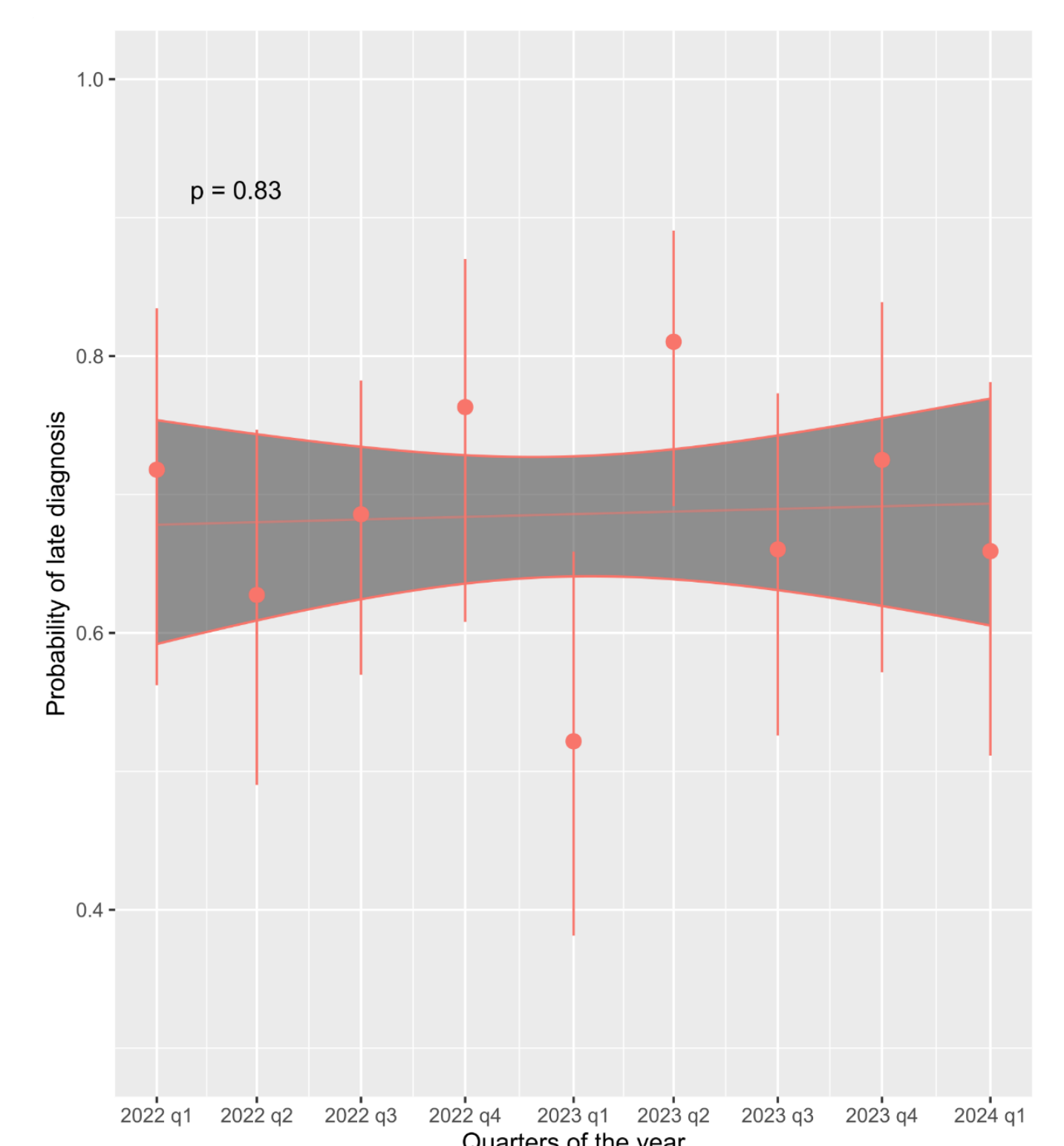


Figure 3: Time trends in late HIV diagnosis since the beginning of war in Ukraine among newly diagnosed migrants and refugees.



Conclusions: Late HIV diagnoses remain frequent among Ukrainian migrants with tuberculosis as the most common AIDS defining condition. Transmissions of A6 variants continue to predominate in the group with common NNRTI drug resistance

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