

# IMMUNOVIROLOGICAL OUTCOMES IN PEOPLE LIVING WITH HIV BETWEEN IMMIGRANT AND NON-IMMIGRANT AT THE HOSPITAL CLINIC OF BARCELONA (2010-2023)

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## BACKGROUND

HIV-positive immigrants face unique healthcare challenges, necessitating inclusive health strategies. This study aims to identify areas needing focused healthcare strategies by comparing **immunovirological outcomes between immigrant and non-immigrant populations.**

## MATERIALS AND METHODS

This retrospective-longitudinal study of initial consultations at the Hospital Clinic of Barcelona between 2010 and 2023 compared immigrant and non-immigrant PWH.

We assessed **demographic and clinical characteristics, viral load (VL), immunological status, rates of late diagnosis,** and outcomes for both treatment-naïve (TN) and treatment-experienced (TE) individuals.

Mixed-effects logistic and linear regression models were employed to analyze the VL and CD4 data.

## RESULTS

The study included 5344 individuals, of which 91% (n=4861) were male with a median age of 34 (29-40), men that had sex with men (MSM) was 77% (n=3887), and 46% (n=2217) were treatment-naïve (TN). Overall, there were 13% (n=390) trans/non-binary individuals. **Immigrants** comprised 65% (n=3494) of the population, had higher rates of treatment-experienced individuals (59% vs. 41%, p<0,001), had more **MSM** HIV acquisition rates (74% vs. 68%), were more frequently identified as female (9% vs. 8%, p=0.306), and had **lower rates of injecting drug users** (2% vs. 7%) compared to non-immigrants.

At baseline, TN Immigrants presented a **lower zenith VL** than non-immigrants (53945 vs 67700, p=0.001). **TE immigrants** had **lower undetectable VL** than non-immigrants (76% vs. 81%, p=0.001). The **median CD4 nadir** was also lower in immigrants (314 vs. 332, p=0.032). **There was no significant difference in late diagnosis between immigrants and non-immigrants** (49% vs. 46%, p=0.196).

At yearly follow-up, **TN undetectability rates were similar for immigrants and non-immigrants**, OR: 0.82 (95% CI [0.67; 1.01], p=0.063). TN immigrants had significantly **lower CD4 counts** than non-immigrants during the follow-up (coef: -38, 95% CI [-60; -16], p=0.001). TE immigrants also had significantly lower CD4 counts (-39.33, 95% CI [-64.4; -14.3], p=0.002).

## CONCLUSIONS

Immigrants had **lower CD4 counts throughout follow-up** than non-immigrants, yet **late diagnosis was similar**. At baseline, TE immigrants had a lower percentage of undetectable VL than non-immigrants; follow-up showed similar rates.

	Overall (n=5344)	Immigrants (n=3494)	Non-Immigrants (n=1850)	P-Value
Male	91% (n=4861)	91% (n=3168)	92% (n=1693)	0.306
Median Age (IQR)	34 (29-40)	34 (29;40)	37 (30;45)	0.001
MSM	77% (n=3887)	80% (n=2628)	72% (n=1259)	0.001
Treatment-Naive (TN)	46% (n=2217)	41% (n=1402)	59% (n=815)	0.001
Trans/Non-Binary Gender Identity	13% (n=206)	15% (n=390)	5% (n=16)	0.001
Immigrants	65% (n=3494)	-	-	-
IDU Mode of Infection	3% (n=174)	2% (n=51)	7% (n=123)	0.001
Zenith VL	58,770 (14100 ; 235000)	53,945 (13000-206000)	67,700 (15000-308000)	0.001
Detectable VL (TN)	96%	95%	97%	0.029
Median VL (TN)	-	34,360	45,015	0.001
Undetectable VL (TE)	2003 (77%)	1554 (76%)	449 (81%)	0.001
Median CD4 Nadir	320 (201 ; 448)	314 (195 ; 439)	332 (211;471)	0.032
Late Diagnosis	48% (n=1060)	49% (n=684)	46% (n=376)	0.196
CD4 Count (TN)	358.5 (220 ; 505)	353 (216 ; 492)	372 (227 ; 530)	0.001
CD4 Count (TE)	526 (364 ; 714)	524 (356 ; 710)	544 (400 ; 738)	0.002

