BIC/TAF/FTC in treatment-naive PLWH: the experience of a centre

Authors: **Constança Antunes**[1], Sofia Rocha [1], Andreia Meseiro [2], Margarida Almeida [1], Marta Almeida [1], Dina Mendes [3], Ana Cláudia Miranda [1], Teresa Batista [1], Kamal Mansinho [1]

[1] Serviço de Infecciologia e Medicina Tropical - Unidade Local de Saúde Lisboa Ocidental (ULSLO) – Hospital de Egas Moniz (HE;M) ;

[2] Serviço de Medicina Interna - Unidade Local de Saúde do Arco Ribeirinho – Centro Hospitalar Barreiro Montijo ; [3] Serviços Farmacêuticos - ULSLO HEM

Background: BIC/TAF/FTC is a first-line antiretroviral therapy (ARV) recommended in European and American guidelines, available for use in Portugal since July 2019. This report aims to characterize the population of treatment-naive PLWH that started BIC/TAF/FTC in an Infectious diseases hospital center in west Lisbon area, since it was available in July 2019 until December 2023, to include PWLH with at least 6 months of follow-up.

Materials and methods: Demographic, epidemiological, clinical, immunologic, and virologic data was compiled and analysed, from a total of **858** PLWH on treatment with BIC/TAF/FTC with regular follow-up in Egas Moniz Hospital: **708 (82,5%)** were treatment-experienced and **150 (17,5%)** were treatment-naive, and the following results relate to the second group.

Results: This population of **150** treatment-naive PLWH showed a male predominance and an important component of migrant patients, with **52%** from Portuguese-speaking countries around the world (n=78).

Males - n=114, 76%

Females - n=34, 22,7%

Transgender women - n=2, 1,3%

Median age of 38 years old

97,3% (n= 146) reported sexual transmission:

50% (n=75) MSM,

39,3% (n=59) MSW,

8% (n=12) MSM/W

6,7% (n=10) with HBV coinfection and 4% (n=6) with HCV coinfection

The 5 nationalities that predominate in this population:

38% portuguese (n=57), 28,7% brazilian (n=43),

8,7% bissau-guinean (n=13), 6,7% cape verdean (n=10)

and 4,7% angolan (n=7)

The most common baseline comorbidities identified were cardiovascular risk factors in **36,7% (n=55)** of patients. These encompassed lifestyle factors such as smoking **(n=33, 22%)** and obesity **(n=3, 2%),** as well as established conditions including hypertension **(n=19, 12,7%)**, dyslipidemia **(n=13, 8,7%)** and diabetes mellitus **(n=5, 3,3%).**

The majority **(n= 141, 94%)** of these treatment-naïve population were diagnosed within the last three years, between 2021 and 2023. BIC/TAF/FTC was started mainly in patients in stage A of the CDC Classification **(80%)**, with 11 patients in stage C (**7,3%**).

94% (n=141) were diagnosed between 2021 and 2023

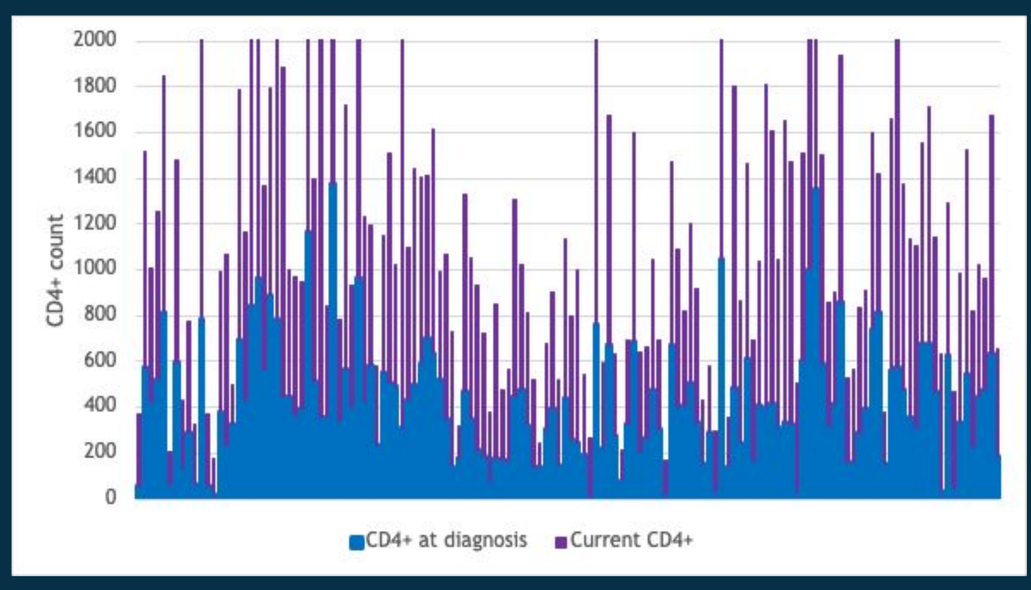
97,3% (n=146) started ARV between 2021 and 2023

31% of all patients started ARV in a *test and treat* regimen (in the first 24h after the first appointment)

Despite 75 patients with viral load above 100.000 copies/ml (50%) at diagnosis, 98,7% achieved virological control, with an average of 21 months of treatment

5,3% (n= 8) PLWH were lost to follow-up

and 6% (n= 9) discontinued ARV, mostly due to intolerance (n=3, 2 due to GI symptoms and 1 due to paresthesia) or weight gain (n=3).



There was an improvement in CD4+ cell counts with an average of 426 cells/ml at diagnosis and 725 cells/ml at the most recent evaluation (increase in 299 cells/ml) as corroborated by the graph, showing in blue CD4+ at diagnosis and in purple the most recent CD4+ as of December 2023

Conclusions: BIC/TAF/FTC is a highly effective therapy in immunologic improvement and virological suppression, recommended for treatment-naive PLWH. The data presented above is aligned with the current available literature, reinforcing the use of BIC/TAF/FTC as a reliable treatment option, and supporting its application in clinical practice. This population is still being monitored, and this project could provide a foundation for future efforts, including assessments of changes in weight and lipid profiles from a metabolic perspective.

UpToDate. (n.d.). UpToDate. https://www.uptodate.com/contents/overview-of-established-risk-factors-for-cardiovascular-disease?search=cardiovascular%20risk%20factors&source=search_result&selectedTitle=1%7E150&usage_type=default&display_rank=1#references
EACS Guidelines version 12.0, October 2023
Panel on Antiretroviral Guidelines for Adults and Adolescents. Guidelines for the Use of Antiretroviral Agents in Adults and Adolescents With HIV. Department of Health and Human Services. Available at https://clinicalinfo.hiv.gov/en/guidelines/adult-and-adolescent-arv. Accessed on 22/10/2024.
Squillace, N., Ricci, E., Maggi, P., Taramasso, L., Menzaghi, B., De Socio, G. V., Piconi, S., Celesia, B. M., Orofino, G., Sarchi, E., Pellicanò, G. F., Simeone, F., Valsecchi, L., Bandera, A., Cenderello, G., Attala, L., Angioni, G., Falasca, K., Cascio, A., . . . Bonfanti, P. (2023). Real-life safety of Emtricitabine/Tenofovir Alafenamide/Bictegravir. PLoS ONE, 18(8), e0289132. https://doi.org/10.1371/journal.pone.0289132