



# BIC/FTC/TAF MAINTAINS VIRAL SUPPRESSION IN PATIENTS WITH DOCUMENTED M184V/I MUTATIONS: A REAL WORLD EXPERIENCE



Nicholas Chamberlain<sup>1</sup>, Leandro Mena<sup>2,1</sup>, James B. Brock<sup>1</sup>

<sup>1</sup>Department of Medicine, Division of Infectious Disease, University of Mississippi School of Medicine, Jackson, MS

<sup>2</sup> Department of Population Health Science, John D. Bower School of Population Health, Jackson, MS

## INTRODUCTION

The M184V/I mutation is a common mutation acquired by treatment-experienced patients in the context of virologic failure and confers resistance to lamivudine and emtricitabine.

Some data support virologic efficacy of single tablet regimens in patients with archived M184 mutations or virologic failure from M184 mutants.

Our objective is to assess the effectiveness of bicitegravir (BIC)/emtricitabine (FTC)/tenofovir alafenamide (TAF) in a real-world setting in achieving and maintaining viral suppression in patients with documented M184V/I mutations.

## METHODS

This case series is comprised of treatment-experienced HIV-positive patients with documented historical or newly-identified M184V/I mutations who were placed on BIC/FTC/TAF as a switch strategy or as therapy for patients who had failed a prior regimen. Patients with any resistance to tenofovir or bicitegravir were excluded. Our primary outcome was sustained viral suppression (HIV viral load <200 copies/mL) at 12 months after initiation of BIC/FTC/TAF.

## RESULTS

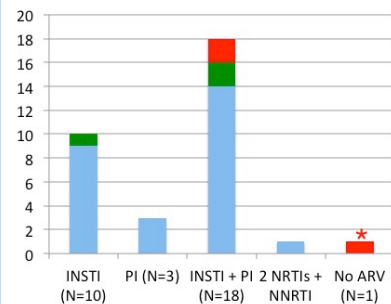
**Table 1. Demographic and Clinical Characteristics**

	N = 33 (%)
Median Age in Years (range)	49 (36-63)
Black Race	31 (93.9)
Male Sex	17 (51.5)
Insurance Type	
• Uninsured	14 (42.4)
• Medicare/Medicaid	12 (36.4)
• Commercial	7 (21.2)
HBsAg <sup>+</sup> *	0 (0)
HCV Infection*	4 (13.8)
HIV Viral Load >200 copies/mL at Baseline	6 (18.2)
HIV Viral Load >200 copies/mL at 12 Months**	3 (9.1)
Median Baseline CD4 (range)	530 (129-1560)
Median 12 Month CD4 (range)	662 (205-1396)

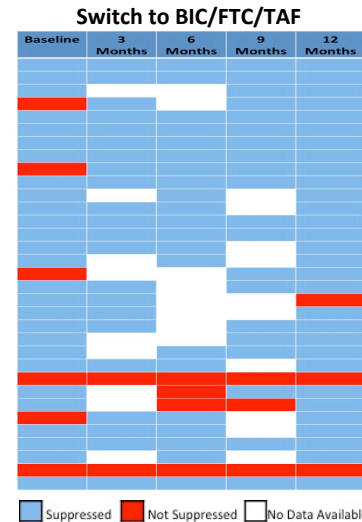
\* HBsAg and HCV status documented in only 28 cases

\*\* Viral loads were 744 copies/mL, 1,569 copies/mL and 51,839 copies/mL respectively

**Figure 1. Baseline and 12 Month Viral Load Status by Prior ARV Regimen**



**Figure 2. Baseline and Quarterly Viral Load Status by Case After Switch to BIC/FTC/TAF**



For Figures 1 and 2 (\*) indicates the one case that developed an R263K mutation conferring resistance to bicitegravir

## CONCLUSIONS

- In our study, patients with documented M184V/I mutations who were adherent to medications were able to achieve or maintain viral suppression on BIC/FTC/TAF at 12 months.
- Only one case of treatment-emergent resistance to bicitegravir was observed in the setting of poor medication adherence.
- These findings add to an increasing body of evidence supporting the use of BIC/FTC/TAF in patients with M184V/I mutations.

## REFERENCES

- Miller et al. The impact of the M184V substitution in HIV-1 reverse transcriptase on treatment response. *HIV Medicine*. 2002, 135-145.
- Turner et al. Multiple effects of the M184V Mutation in the Reverse Transcriptase of Human Immunodeficiency Virus Type 1. *Clin Diagn Lab Immunol*. 2003 Nov; 10(6): 979-981.
- Andreatta et al. Switching to bicitegravir/emtricitabine/tenofovir alafenamide maintained HIV-1 RNA suppression in participants with archived antiretroviral resistance including M184V/I. *J Animicrob Chemother*. 2019 Dec 1;74 (12):3555-3564.