Effectiveness of Tenofovir Alafenamide in Patients with Chronic Hepatitis B Treated in Usual Clinical Practice: Results from the TARGET-HBV Cohort Study

INTRODUCTION
- Antiviral therapy for chronic hepatitis B (HBV) has improved outcomes and reduced the incidence of complications of cirrhosis and hepatocellular carcinoma.
- Tenofovir alafenamide (TAF), approved in 2016, has demonstrated efficacy and an improved safety profile in phase 1 trials.

OBJECTIVE
- To evaluate the characteristics and clinical outcomes of patients being treated with TAF as either initial therapy or after switching from a prior antiviral agent.

METHODS
- TARGET-HBV is a longitudinal, observational cohort study of patients with HBV managed according to local practice standards at 26 academic and community sites in the United States. (Figure 1) The study design includes a retrospective phase which reflects a 3-year prospective evaluation of patients on TAF and allows for a future prospective data collection phase.
- Presenters here are the retrospective data from the medical records of the first 499 patients enrolled into the retrospective phase of the study, thus the enrolled population includes adult patients with HBV who are currently taking TAF.
- After written informed consent was obtained, adult patients on TAF for chronic HBV and without hepatitis delta or HIV coinfection were enrolled in TARGET-HBV.
- Data were acquired from health records from the previous 3 years, including medical history, narratives, laboratory and radiological reports, and pharmacy records, to assess virologic response, measures including medical history, narratives, laboratory and radiological measurements (Figure 4).

RESULTS
- In this planned interim analysis, 499 patients were enrolled at 26 sites (15 academic/11 community) in the U.S. Median age 55 yrs, 66% male, 66% Asian, and 82% had been treated with at least one antiviral agent (predominantly tenofovir disoproxil fumarate) prior to starting TAF (Table 1).

Table 1. Baseline Demographics

| Age at Study Entry (years), Median (range) | 55.0 (25.0 - 87.0) | 499 |
| Gender, n [%] | Male | 171 (34.3) | 499 |
| Race, n [%] | White | 100 (20.2) | 499 |
| | Black or African American | 45 (9.2) | 499 |
| | American Indian or Alaskan Native | 2 (0.4) | 499 |
| | Asian | 322 (64.6) | 499 |
| | Other | 19 (3.8) | 499 |
| Ethnicity, n [%] | Hispanic or Latino | 26 (5.2) | 499 |
| | Not Hispanic or Latino | 451 (91.9) | 499 |
| | Not Available | 14 (100.0) | 499 |

BMI (kg/m²) at Enrollment, Median (range) | 25.0 (19.5 - 40.0) | 499

Prior Therapies, n, *T*4
- Adefovir | 57 (11.4) |
- Efavirenz/Tenofovir DF | 14 (2.8) |
- Entecavir | 102 (20.6) |
- Lamivudine | 63 (12.7) |
- Pegylated Interferon | 23 (4.6) |
- Telbivudine | 6 (1.2) |
- Tenofovir DF | 363 (73.2) |
- Not Available | 38 (7.6) |

Median duration of TAF dosing was 96 weeks (range, 2-186 weeks) and only 10 patients (2%) discontinued TAF (insurance coverage [3], patient request [1], renal insufficiency/disease [1], tolerability [1], cost concerns [1], unknown [2], patients can have more than one reason for discontinuing).

- Reasons for switching to TAF included perceived safety of TAF (22%), physician choice (11%), abnormal renal function (9%), risk of bone disease (5%), patient request (3%), copay assistance program for TAF (4%), insurance no longer covers previous therapy or provides greater coverage for TAF (3% each), or no reason recorded (28%) (Figure 2).
- Most recent lab data prior to starting TAF: 76% HBsAg, 58% undetectable HBV DNA, median ALT=29 IU and creatinine clearance=90mL/min.

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CONCLUSIONS
- Among patients with TAF use in the TARGET-HBV cohort, switching to TAF from another antiviral regimen was well tolerated and associated with further improvement in serum ALT in 56% and a decrease in HBV DNA in undetectable levels among those on TAF for 12 months.
- Creatinine clearance did not change with further improvement after 12 months of therapy with TAF.
- These results compare favorably to those reported in phase 3 clinical trials.


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