

Table. Hepatic Safety Parameters in Participants with HIV/HCV Co-infection and HIV Mono-infection Receiving CAB + RPV LA Q4W or Q8W through Week 48 in ATLAS-2M

Liver abnormality, n (%)	HIV/HCV co-infection (N=10)	HIV mono-infection (N=1035) ^a
ALT ≥3 × ULN	0	18 (2)
ALT ≥3 × ULN, BIL ≥2 × ULN, and ALP <2 × ULN	0	3 (<1)
Hepatocellular injury ^b	0	15 (1)
Hepatocellular injury and BIL ≥2 × ULN	0	3 (<1)
Liver stopping event	0	4 (<1) ^c

ALP, alkaline phosphatase; ALT, alanine aminotransferase; BIL, bilirubin; CAB, cabotegravir; HCV, hepatitis C virus; LA, long-acting; Q4W, every 4 weeks; Q8W, every 8 weeks; RPV, rilpivirine; ULN, upper limit of normal.

^aN=1031 for laboratory abnormalities. ^bDefined as ((ALT/ALT ULN)/(ALP/ALP ULN)) ≥5 and ALT ≥3 × ULN. ALT and ALP must be measured on the same day. ^cAll liver stopping events occurred after treatment started. Events included acute hepatitis B virus infection (n=2; both participants withdrew from the study), acute hepatitis E virus infection (n=1; continued CAB + RPV LA dosing), and acute hepatitis C virus infection (n=1; continued CAB + RPV LA dosing; not resolved).

Conclusion. CAB + RPV LA was effective and well tolerated in this small cohort of participants with HIV and asymptomatic HCV co-infection.

Disclosures. Ronald D'Amico, DO, MSc, GlaxoSmithKline (Shareholder) ViiV Healthcare (Employee) Paul Benn, MB ChB FRCP, ViiV Healthcare (Employee) Shankar Thiagarajah, MB ChB, GlaxoSmithKline (Employee, Shareholder) Susan L. Ford, PharmD, GlaxoSmithKline (Shareholder) ViiV Healthcare (Employee) Eileen Birmingham, MD, MPH, Janssen Research and Development (Employee, Shareholder) Ojesh R. Upadhyay, MPH, MBA, GlaxoSmithKline (Employee) Louise Garside, PhD, GlaxoSmithKline (Employee) Rodica Van Solingen-Ristea, MD, Janssen Research and Development (Employee) ViiV Healthcare (Employee) Kati Vandermeulen, M.Sc., Janssen Research and Development (Employee) William Spreen, PharmD, GlaxoSmithKline (Shareholder) ViiV Healthcare (Employee)

834. Characterization of Heavily Treatment Experienced HIV-1 Infected Clinical Trial Participants Infected with SARS-CoV-2 COVID 19: Fostemsavir BRIGHTHE Phase 3 Clinical Trial

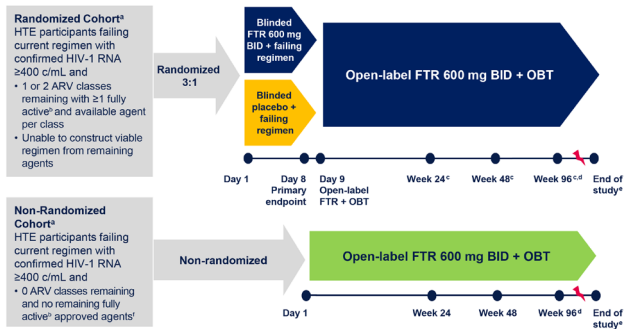
Shiven Chabria, MD¹; Stephane De Wit, MD²; Amy Pierce, BS¹; Bronagh M. Shepherd, PhD³; Michael Warwick-Sanders, BM BSc DPM MFPM⁴; Fangfang Du, MS in Statistics⁵; Marcia Wang, PhD²; Andrew Clark, MD¹; Peter Ackerman, MD¹; ¹ViiV Healthcare, Branford, CT; ²CHU Saint-Pierre, Université Libre de Bruxelles, Brussels, Brussels Hoofdstedelijk Gewest, Belgium; ³GlaxoSmithKline, Brentford, UK; ⁴GSK, London, UK; ⁵Temple University, Chesterbrook, PA

Session: P-46. HIV: Complications and Co-infections

Background. BRIGHTHE is an ongoing global study evaluating the gp120 attachment inhibitor fostemsavir (FTR) in heavily treatment-experienced (HTE) adults with multidrug resistant (MDR) HIV-1 unable to form a viable antiretroviral (ARV) regimen. An estimated 2 million people living with HIV-1 have been infected with SARS-CoV-2. Those with HIV viremia and/or low CD4+ counts are at increased risk of serious adverse outcome. We describe the reported COVID cases in a clinical trial population of people living with MDR HIV and immune suppression.

Methods. At the start of the COVID pandemic, all ongoing BRIGHTHE subjects had achieved ≥ 192 weeks on FTR and optimized background ARV; results through Week 96 were presented previously. Investigators used WHO guidelines for COVID diagnosis and reported exposure, testing results and symptom presence.

Figure 1. BRIGHTHE Study Design



^aThere were no screening TMR IC₅₀ criteria. ^bFully active = no current or historical evidence of resistance and the participant is tolerant of, eligible for, and willing to take (in the case of enfuvirtide) the ARV. ^cMeasured from the start of open-label FTR 600 mg BID + OBT. ^dWeek 96 database lock August 14, 2018. ^eThe study is expected to be conducted until an additional option, rollover study, or marketing approval is in place. Use of investigational agents as part of OBT was permitted.

BoT symbol, onset of COVID-19 pandemic; ARV, antiretroviral; BID, twice daily; HTE, heavily treatment experienced; OBT, optimized background therapy.

Results. 371 subjects [272 Randomized Cohort (RC), 99 Non-Randomized Cohort (NC)] were enrolled; 44% were ≥ 50 years of age and 86% had an AIDS history. Median CD4+ count at study start was 80 cells/mm³ (IQR 11–202); 30% with ≤ 20 cells/mm³. 250 subjects remained in BRIGHTHE at pandemic start. By April 2021, 17 subjects (14 RC, 3 NC) had confirmed COVID infection (positive PCR test). Severity was Grade 1–3, all cases resolved with no deaths. Six subjects were hospitalized (Table 1); most recent CD4+ count prior to COVID were 293–1641 cells/mm³ and 5/6 subjects

were virologically suppressed. Treatments often included prophylactic anticoagulants and supplemental oxygen; no cART changes were made. The remaining 11/17 confirmed cases were managed outpatient. Five more subjects had suspect COVID not confirmed by PCR and 2 subjects had negative PCR tests.

Table 1. Characterization of Participants with Serious AEs of Confirmed COVID-19 Infections – All Hospitalizations

Participant/ Treatment Cohort	Demographics and Baseline		COVID Case Positive COVID Test Date / Event Duration / Severity Grade / Outcome Relevant medical history or known exposure risks Pre COVID CD4+ (cells/mm ³) and HIV-1 RNA (c/mL) Reported Treatment
	Age (years) / Gender / Race Country	CD4+ (cells/mm ³) / HIV-1 RNA (c/mL)	
00376/ Randomized Cohort	54 / Female / Black Brazil	75 cells/mm ³ , 82,270 c/mL	15 Apr 2020 / 16 days / Grade 3 / Recovered HIV-1, diabetes, systemic arterial hypertension, no known exposure 823 cells/mm ³ , <40 c/mL ceftriaxone IV, azithromycin, oseltamivir, cefuroxime, enoxaparin, supplemental oxygen via nasal catheter
00631/ Randomized Cohort	47 / Male / Other (Mestizo) Panama	196 cells/mm ³ , 25,694 c/mL	24 May 2020 / 19 days / Grade 3 / Recovered HIV-1, systemic arterial hypertension, obesity, recent exposure in community 293 cells/mm ³ , <40 c/mL Orphenadrine, acclaminophen, enoxaparin, albuterol, ipratropium
00626/ Randomized Cohort	38 / Male / White Argentina	131 cells/mm ³ , 373,289 c/mL	07 Jul 2020 / 19 days / Grade 2 / Recovered HIV-1, smoker, no known exposure 876 cells/mm ³ , <40 c/mL Enoxaparin, omeprazole
00312/ Randomized Cohort	71 / Male / Black Belgium	207 cells/mm ³ , 2,395 c/mL	26 Oct 2020 / 16 days / Grade 3 / Recovered HIV-1, chronic renal failure/dialysis, recent visit to healthcare facility 310 cells/mm ³ , <40 c/mL Dexamethasone, enoxaparin, aspirin, tramadol, moxifloxacin, furosemide, bilastine, darbeopetin alfa, valproic acid, potassium, sodium bicarbonate, calcium carbonate, supplemental oxygen via nasal catheter
00524/ Randomized Cohort	55 / Male / Other (Mulatto) Brazil	7 cells/mm ³ , 112,343 c/mL	12 Feb 2021 / 17 days / Grade 3 / Recovered HIV-1, systemic arterial hypertension, recent exposure in community 563 cells/mm ³ , 117 c/mL Ceftriaxone, ciprofloxacin, dexamethasone, enoxaparin, loperamide, oxygen support
00449/ Randomized Cohort	55 / Female / White Brazil	368 cells/mm ³ , 54,925 c/mL	09 Mar 2021 / 43 days / Grade 2 / Recovered HIV-1, asthma, recent exposure in community + visit to healthcare facility 1641 cells/mm ³ , <40 c/mL Dexamethasone, oxygen support

Conclusion. A total of 22/250 COVID-19 cases (17 confirmed, 5 unconfirmed) have been reported in BRIGHTHE. Outcomes were reassuring with no deaths or known persistent sequelae, despite having advanced HIV and comorbid diseases at baseline associated with poorer COVID outcomes. Outcomes may have benefitted from immunologic improvement during the trial.

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835. Improvement in Diet Attenuates Antiretroviral Therapy (ART) Associated Weight Gain in Persons with Human Immunodeficiency Virus (PWH)

Yesha Patel, MD¹; Anjali Doshi, BS¹; Anna Levesque, BS¹; Shelsie Lindor, BS¹; Robert Moranville, BS¹; Sheila Okere, BS²; Danielle Robinson, BS¹; Lauren Taylor, BS¹; Mark Lustberg, MD, PhD²; Carlos Malvestutto, M.D.¹; ¹The Ohio State University Wexner Medical Center, Columbus, Ohio; ²The Ohio State University College of Medicine, Columbus, Ohio; ³The Ohio State University, Columbus, Ohio

Session: P-46. HIV: Complications and Co-infections

Background. Weight gain among PWH on ART is a growing clinical concern. We explore factors associated with weight gain at The Ohio State University Wexner Medical Center Infectious Diseases Clinic.

Methods. This was a single-center, retrospective, cohort study of adult PWH on ART for at least 3 months seen at our clinic from 1/1/2015 to 1/1/2019. Patients with CD4+ T cell count < 200 cells/mm³, viral load >200 copies/mL, history of malignancy, or pregnancy were excluded. 870 patients met criteria. Patient demographics, lifestyle factors, medical co-morbidities, concurrent medications, and ART regimens were documented during the study period. The primary outcome was percent weight change over the follow up period. Secondary outcome was the odds of > 5kg weight gain over the study period. The effects of concurrent medications, medical comorbidities, ART combinations, and self-reported lifestyle behaviors on these outcomes were modeled using mixed effect linear and logistic regression analysis.

Results. At baseline, 83.6% were male, 29.2% were African American, and 65.6% had a body mass index ≥ 25 kg/m. Over a mean follow up of 1.86 years, the study population gained a mean percent weight of 2.12 ± 0.21% (p < 0.001) with an odds of weight gain >5kg of 0.293 (p < 0.001). Male sex and increasing age were significantly associated with a decrease in percent weight over the study period as reflected in the table below. Diet was also significantly associated with a decrease in percent weight change over the study period of -1.99 ± 0.47 %, p < 0.001 and a lower odds of > 5kg of weight gain (OR = 0.70, 95% CI = 0.50 – 0.97, p = 0.03). In regression models, combination therapy with tenofovir alafenamide (TAF) and integrase strand transfer inhibitor (INSTI) containing regimens were significantly associated with an increase in percent weight over the study period. Other significant factors including demographics and ART regimens are noted in Table 1.