A PHASE 3 RANDOMIZED CONTROLLED CLINICAL TRIAL OF BICTEGRAVIR IN A FIXED-DOSE COMBINATION, B/F/TAF, VS ABC/DTG/3TC IN TREATMENT-NAÏVE ADULTS AT WEEK 48

Gallant J[1], Lazzarin A[2], Mills A[3], Orkin C[4], Podzamczer D[5], Tebas P[6], Girard P-M[7], Brar I[8], Daar E[9], Wohl D[10], Rockstroh J[11], Newman J [12], Wei X[13], White K[13], Martin H[13], Quirk E[13], Cheng A[13]

[1]Southwest CARE Center, Santa Fe, United States, [2]IRCCS Ospedale San Raffaele SrL, Milan, Italy, [3]Mills Clinical Research, Los Angeles, United States, [4]Barts Health NHS Trust, Royal London Hospital, Ambrose King Centre, London, United Kingdom, [5]Hospital Universitari de Bellvitge, Barcelona, Spain, [6]University of Pennsylvania, Philadelphia, United States, [7]Hopital Saint Antoine, Paris, France, [8]Henry Ford Hospital, Detroit, United States, [9]Los Angeles Biomedical Research Institute at Harbor-UCLA Medical Center, Torrance, United States, [10]University of North Carolina at Chapel Hill, Chapel Hill, United States, [11]University Hospital Bonn, Bonn, Germany, [12]Gilead Sciences Inc, Melbourne, Australia, [13]Gilead Sciences Inc., Foster City, United States

Background: Bictegravir (B), a novel, potent INSTI with a high in vitro barrier to resistance and low potential for drug interactions, has been coformulated with emtricitabine (F) and tenofovir alafenamide (TAF) as fixed-dose combination (B/F/TAF). We report results from a phase 3 study comparing B/F/TAF to coformulated abacavir, dolutegravir, and lamivudine (ABC/DTG/3TC).

Methods: HIV-infected, treatment-naïve, HLA-B*5701-negative, HBV-uninfected adults with an eGFR ≥50 mL/min were randomized 1:1 to receive blinded treatment with B/F/TAF (50/200/25 mg) or ABC/DTG/3TC (600/50/300 mg) with matching placebos once daily. The primary endpoint was proportion of participants with HIV-1 RNA (VL) < 50 c/mL at W48 (FDA snapshot). Noninferiority was assessed through 95.002% confidence intervals (CI) (12% margin).

Results: 629 participants were randomized and treated (314 B/F/TAF, 315 ABC/DTG/3TC): 10% women, 36% Black, 16% VL >100,000 c/mL, 11% CD4 < 200 cells/mL. Median baseline characteristics: age 32 yrs, CD4 count 444 cells/μL, and VL 4.47 log10 c/mL. At W48, B/F/TAF was noninferior to ABC/DTG/3TC, with 92.4% on B/F/TAF and 93.0% on ABC/DTG/3TC achieving HIV-1 RNA < 50 c/mL (difference -0.6%; 95.002%CI -4.8% to 3.6%, p=0.78). No resistance mutations emerged in either group. Comparing B/F/TAF to ABC/DTG/3TC throughout, the most common AEs were diarrhea (13%, 13%), headache (11%, 14%), and nausea (10%, 23%). Few participants (0 vs 4 [1%]) had any AEs leading to premature study drug discontinuation. At W48, mean % changes from baseline in BMD were -0.83% vs. -0.60% (p=0.39) [lumbar spine] and -0.78% vs. -1.02% (p=0.23) [total hip]. No differences between treatments were noted in changes from baseline for eGFR and proteinuria at W48.

Conclusion: At W48, B/F/TAF achieved virologic suppression in 92.4% of treatment-naïve adults and was noninferior to ABC/DTG/3TC, with no emergent resistance. B/F/TAF was safe and well tolerated with less nausea than ABC/DTG/3TC. Bone and renal safety profiles were similar between groups.

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