Phase 3 Efficacy and Safety of Switch From Complex Regimen to Single-Tablet BIC/LEN in ARTISTRY-1

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33rd Conference on Retroviruses and Opportunistic Infections (CROI); February 22–25, 2026; Denver, CO, USA

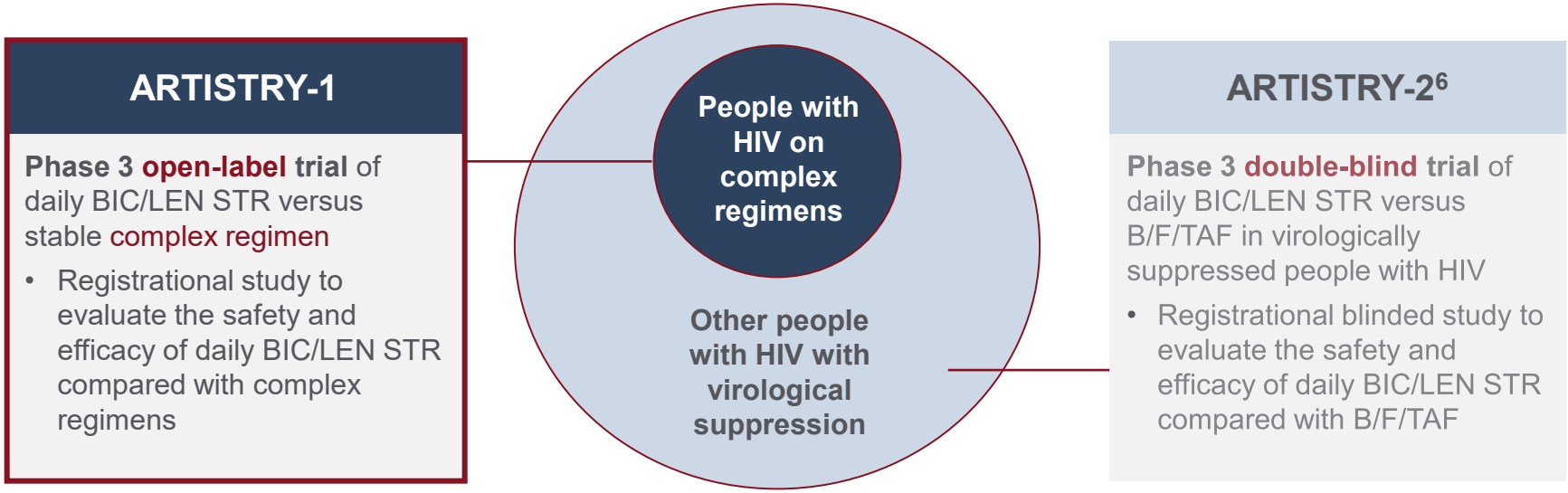
Disclosures

Chloe Orkin received grants (paid to her institution) from Gilead Sciences, Inc., MSD, and ViiV Healthcare; consulting fees for advisory boards and payment or honoraria for lectures, presentations, speakers' bureaus, manuscript writing, or educational events from Bavarian Nordic, Gilead Sciences, Inc., GSK, MSD, and ViiV Healthcare; support for attending meetings and/or travel from Bavarian Nordic, Gilead Sciences, Inc., and ViiV Healthcare; and is a governing council member of the International AIDS Society (unpaid)

BIC/LEN Phase 3 Development Program

- BIC/LEN is being developed as a daily oral STR for HIV treatment
  - BIC is a guideline-recommended INSTI with a high barrier to resistance[1-4]
  - LEN is a first-in-class capsid inhibitor with no documented de novo resistance in the absence of prior exposure[5]

Population with HIV with Virological Suppression



B/F/TAF, bictegravir/emtricitabine/tenofovir alafenamide; **BIC**, bictegravir; **INSTI**, integrase strand transfer inhibitor; **LEN**, lenacapavir; **STR**, single-tablet regimen.

1. Department of Health and Human Services. https://clinicalinfo.hiv.gov/sites/default/files/guidelines/documents/adult-adolescent-arv/guidelines-adult-adolescent-arv.pdf (accessed Nov. 13, 2025).
2. European AIDS Clinical Society. https://eacs.sanfordguide.com/en/eacs-hiv/art/eacs-initial-regimens-arv-naive-adults (accessed Nov. 13, 2025). 3. Acosta RK, et al. *Antimicrob Agents Chemother*. 2019;63:e02533-18.
4. Gandhi RT, et al. *JAMA*. 2025;333:609-28. 5. Dvory-Sobol H, et al. *Curr Opin HIV AIDS*. 2022;17:15-21. 6. Meissner EG, et al. Poster 513 presented at: CROI 2026; Feb. 22-25, 2026; Denver, CO, USA.

Background

ARTISTRY-1 Population

Many people with HIV still take complex multi-tablet regimens, often due to viral resistance, intolerance, contraindications, or drug-drug interactions[1-4]

- These individuals may experience high pill burden and challenges with adherence and long-term HIV management[1,3]; especially older people with multiple comorbidities and concomitant medications[5,6]

A novel BIC/LEN STR could optimize treatment for people with virologic suppression on complex regimens who are unable to use available STRs

ARTISTRY-1 (NCT05502341) is a Phase 2/3, seamless, randomized, open-label, multicenter trial of BIC/LEN STR[7-9]

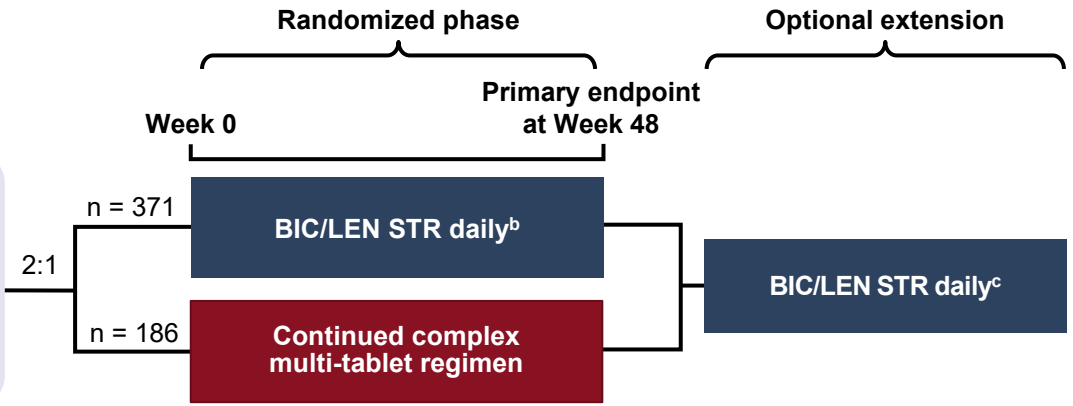
In the Phase 2 portion of ARTISTRY-1, BIC + LEN maintained virologic suppression through Week 96 in people switching from a complex regimen[7-9]

We evaluated the efficacy and safety of a once-daily oral BIC/LEN STR in people with virologic suppression switching from complex regimens in the Phase 3 ARTISTRY-1 study

1. US Department of Health and Human Services. https://clinicalinfo.hiv.gov/sites/default/files/guidelines/documents/adult-adolescent-arv/guidelines-adult-adolescent-arv.pdf (accessed Nov. 27, 2025).
2. Chang HM, et al. *BMC Infect Dis.* 2022;22:2. 3. Rolle C-P, et al. *J Virus Erad*. 2020;6:100021. 4. Dubé K, et al. *AIDS Res Hum Retroviruses*. 2020;36:324-48. 5. Taiwo BO, et al. *J Drug Assess*. 2022;12:1-11.
6. DerSarkissian M, et al. *Curr Med Res Opin*. 2020;36:781-8. 7. Mounzer K, et al. *Clin Infect Dis*. 2025;80:881-8. 8. Mounzer K, et al. *Open Forum Infect Dis*. 2025;12:ofaf615. 9. Hedgcock M, et al. Poster 518 presented at: CROI 2026; Feb. 22-25, 2026; Denver, CO, USA.

Study Design

Adults on a stable complex multi-tablet regimen[a]
- HIV-1 RNA < 50 c/mL
- No prior exposure to LEN or resistance to BIC
- No HBV infection
- eGFR ≥ 15 mL/min



A **complex multi-tablet regimen** was defined as a regimen which contained any of the following:
- A boosted PI or NNRTI plus ≥ 1 other third agent from a class other than NRTI, or
- ≥ 2 pills/day, or requiring dosing more than daily, or
- Parenteral agent(s) (excluding a complete long-acting injectable regimen) as well as oral agents

Endpoints:
- **Primary:** HIV-1 RNA ≥ 50 c/mL (US FDA Snapshot algorithm) at Week 48
- **Secondary:** HIV-1 RNA < 50 c/mL at Week 48; and change from baseline in CD4 cell count at Week 48; safety
- **Exploratory:** treatment satisfaction

[a]Due to ARV resistance, intolerance, drug-drug interactions, or contraindication to existing STRs. [b]BIC/LEN 75/50 mg; with oral loading dose of LEN 600 mg on Days 1 and 2 of treatment. [c]BIC/LEN 75/50 mg.
ARV, antiretroviral; **c**, copies; **CD4**, cluster of differentiation 4; **eGFR**, estimated glomerular filtration rate; **FDA**, Food and Drug Administration; **HBV**, hepatitis B virus; **NNRTI**, non-nucleoside reverse transcriptase inhibitor; **NRTI**, nucleoside/nucleotide reverse transcriptase inhibitor; **PI**, protease inhibitor.

Baseline Demographics

	BIC/LEN n = 371	Complex Regimen n = 186	Total N = 557
Age, years, median (range)	**60 (22-84)**	**60 (24-75)**	**60 (22-84)**
≥ 55 years, n (%)	**288 (77.6)**	**139 (74.7)**	**427 (76.7)**
Assigned female at birth, n (%)	64 (17.3)	36 (19.4)	100 (18.0)
Race,[a] n (%)			
White	260 (70.1)	124 (66.7)	384 (68.9)
Black	64 (17.3)	33 (17.7)	97 (17.4)
Asian	16 (4.3)	9 (4.8)	25 (4.5)
Other[b]	12 (3.2)	3 (1.6)	15 (2.7)
Hispanic or Latine,[c] n (%)	80 (21.6)	42 (22.6)	122 (21.9)
Select comorbidities,[d,e] n (%)			
Dyslipidemia	244 (65.8)	133 (71.5)	377 (67.7)
Hypertension	190 (51.2)	90 (48.4)	280 (50.3)
Hyperglycemia/diabetes mellitus	91 (24.5)	42 (22.6)	133 (23.9)
Chronic kidney disease	49 (13.2)	29 (15.6)	78 (14.0)
Number of select comorbidities, n (%)			
1	**95 (25.6)**	**53 (28.5)**	**148 (26.6)**
≥ 2	**202 (54.4)**	**96 (51.6)**	**298 (53.5)**
Number of select concomitant medications,[f] n (%)			
1	62 (16.7)	50 (26.9)	112 (20.1)
≥ 2	**237 (63.9)**	**102 (54.8)**	**339 (60.9)**
CrCl by Cockcroft-Gault, mL/min, median (Q1, Q3)	82.9 (66.4, 103.2)	82.4 (65.4, 100.2)	82.8 (66.0, 102.6)
> 15 to ≤ 30 mL/min, n (%)	3 (0.8)	3 (1.6)	6 (1.1)
> 30 to < 60 mL/min, n (%)	56 (15.1)	26 (14.0)	82 (14.7)

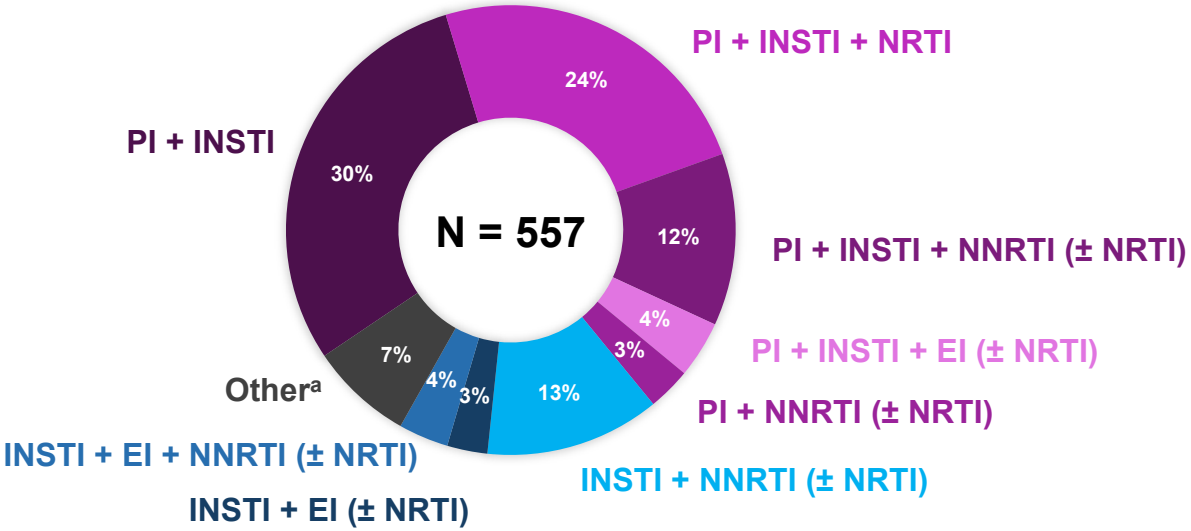
[a]Local regulators did not allow the collection of race information for 19 participants in the BIC/LEN group and 17 in the complex regimen group; percentages were calculated using total number of participants as the denominator. [b]Category includes American Indian or Alaska Native, Native Hawaiian, Pacific Islander, and other. [c]Local regulators did not allow the collection of ethnicity information for 21 participants in the BIC/LEN group and 16 in the complex regimen group; percentages were calculated using total number of participants as the denominator. [d]Categories are not mutually exclusive. [e]Grouped terms on standardized MedDRA query narrow search. [f]Includes antidiabetic, antihypertensive, and lipid-lowering agents. **CrCl**, creatinine clearance; **MedDRA**, Medical Dictionary for Regulatory Activities; **Q**, quartile.

Baseline Disease Characteristics

	BIC/LEN n = 371	Complex Regimen n = 186	Total N = 557
CD4 count, cells/μL, median (Q1, Q3)	626 (457, 836)	579 (450, 747)	612 (456, 809)
History of AIDS, n (%)	43 (11.6)	24 (12.9)	67 (12.0)
Duration of HIV treatment, years, median (Q1, Q3)	**28.3 (21.6, 32.3)**	**28.3 (21.4, 31.8)**	**28.3 (21.6, 32.1)**
Number of ARV pills/day, median (range)	**3.0 (2.0-11.0)**	**3.0 (2.0-9.0)**	**3.0 (2.0-11.0)**
2 pills/day, n (%)	152 (41.0)	74 (39.8)	226 (40.6)
3 pills/day, n (%)	96 (25.9)	48 (25.8)	144 (25.9)
4 pills/day, n (%)	40 (10.8)	23 (12.4)	63 (11.3)
≥ 5 pills/day, n (%)	83 (22.4)	41 (22.0)	124 (22.3)
Twice-daily ARV dosing, n (%)	152 (41.0)	66 (35.5)	218 (39.1)
Reasons for taking a complex regimen,[a] n (%)			
History of ARV resistance	297 (80.1)	153 (82.3)	450 (80.8)
Intolerance to components of STRs	89 (24.0)	39 (21.0)	128 (23.0)
Contraindication to components of STRs	23 (6.2)	10 (5.4)	33 (5.9)
Historical drug class resistance,[a,b] n (%)			
NRTI	**247 (66.6)**	**128 (68.8)**	**375 (67.3)**
NNRTI	**203 (54.7)**	**104 (55.9)**	**307 (55.1)**
PI	**151 (40.7)**	**77 (41.4)**	**228 (40.9)**
INSTI[c]	**16 (4.3)**	**10 (5.4)**	**26 (4.7)**

[a]Categories are not mutually exclusive. [b]NRTI, NNRTI, PI, and INSTI data were not available for 75, 79, 78, and 197 participants in the BIC/LEN group, respectively, and 44, 46, 50, and 100 participants in the complex regimen group, respectively; percentages were calculated using the total number of participants as the denominator. [c]Inclusion of participants with non-BIC mutations in the trial was allowed; three participants had mutations potentially related to BIC resistance (Y143H and Q148H [n = 1]; T66I [n = 1]; and Q148K [n = 1]), which constituted a protocol deviation. All three were inadvertently enrolled with INSTI mutations in historical genotypes not available at screening.

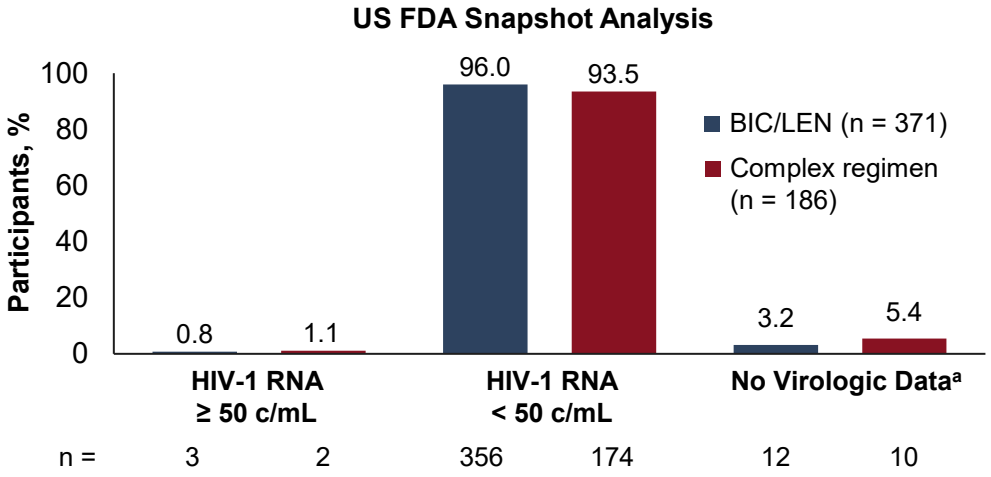
Diversity of Complex ART Regimens at Baseline

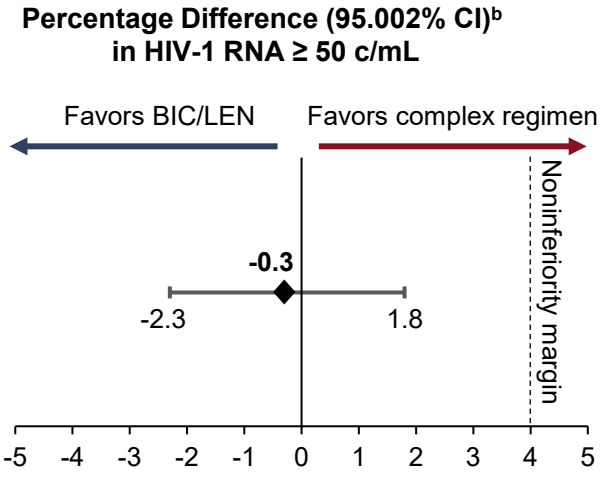


At baseline, 77% (n = 427) of participants were on a PI-containing regimen, including 75% (n = 419) on a boosted PI regimen. The most common regimen was PI plus INSTI, either alone (30%) or with an NRTI (24%)

Shades of purple represent PI+INSTI-containing regimens; shades of blue represent INSTI+Other containing regimens.
[a]May contain a PI.
ART, antiretroviral therapy; **EI**, entry inhibitor; **INSTI**, integrase strand transfer inhibitor; **NNRTI**, non-nucleoside reverse transcriptase inhibitor; **NRTI**, nucleoside/nucleotide reverse transcriptase inhibitor; **PI**, protease inhibitor.

Virologic Outcomes at Week 48





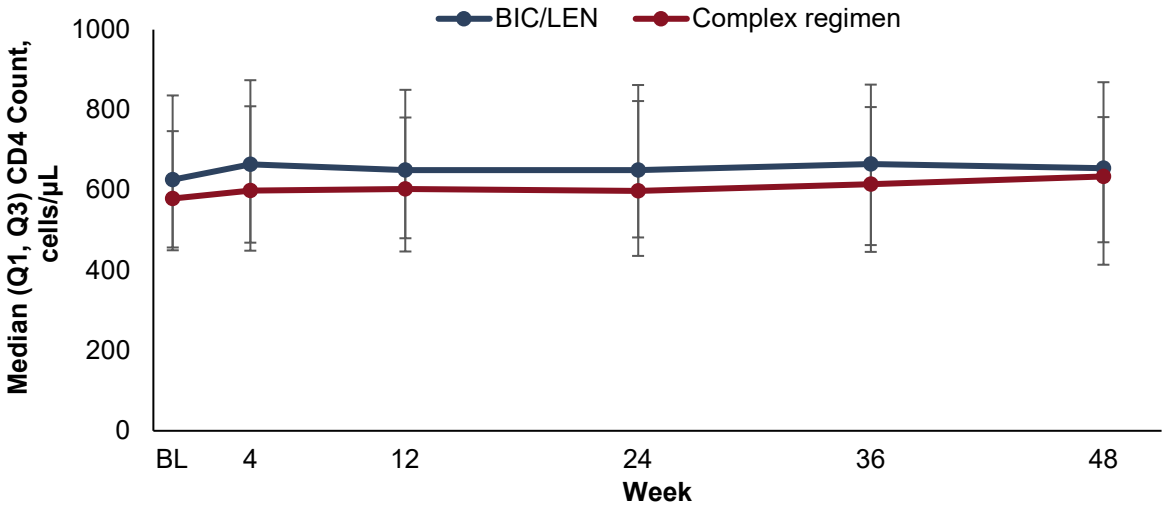
All three participants with HIV-1 RNA ≥ 50 c/mL in the BIC/LEN group resuppressed or had low-level viremia without change in the assigned treatment

No treatment-emergent resistance to study drugs was detected through Week 48

BIC/LEN STR was noninferior to complex multi-tablet regimens in maintaining virologic suppression at 48 weeks

[a]Discontinued due to AE or death: BIC/LEN n = 7, complex regimen n = 1; discontinued study due to other reasons and last available HIV-1 RNA was < 50 c/mL: BIC/LEN n = 5, complex regimen n = 8; missing data during analysis window but still on study drug: complex regimen n = 1. [b]Differences in percentages of participants between treatment groups (BIC/LEN minus complex regimen) and two-sided CIs were constructed based on Mantel-Haenszel stratum weights and Koch variance estimator and adjusted by geographic region (US vs non-US).
AE, adverse event.

CD4 Count Over Time



BIC/LEN, n =	366	360	362	357	358	358
Complex regimen, n =	185	177	179	178	177	170

CD4 cell count remained stable in both treatment groups through 48 weeks

BL, baseline.

Summary of Adverse Events

Participants, n (%)	BIC/LEN n = 371	Complex Regimen n = 186
AE	305 (**82.2**)	157 (**84.4**)
AE of Grade 3 or higher[a]	51 (**13.7**)	26 (**14.0**)
Serious AE	52 (**14.0**)	22 (**11.8**)
Drug-related AE	53 (**14.3**)	3 (**1.6**)
Drug-related AE of Grade 3 or higher	2 (**0.5**)[b]	0
Serious drug-related AE	1 (**0.3**)[c]	0
AE leading to premature treatment discontinuation	6 (**1.6**)	1 (**0.5**)
Death	5 (**1.3**)[d]	0
Grade 3 or higher laboratory abnormality	124 (**33.4**)	64 (**35.0**) [n = 183]

BIC/LEN was generally well tolerated, with a similar incidence of AEs and serious AEs in both groups, and low rates of discontinuation due to AEs

[a]Grade 5 AEs are AEs resulting in death. [b]Diabetes mellitus and maculopapular rash. [c]Diabetes mellitus. [d]Unknown cause (n = 2), metastatic neoplasm (n = 1), cardiac arrest (n = 1), respiratory failure (n = 1) – all deemed unrelated to study treatment.

Discontinuations Due to Adverse Events

AEs leading to premature discontinuation of study treatment

		BIC/LEN n = 371	Complex Regimen n = 186
Participants, n (%)		6 (**1.6**)	1 (**0.5**)
AEs leading to discontinuation	Cerebrovascular accident		Pulmonary embolism
	Diabetes mellitus		
	Erectile dysfunction, hypertension		
	Headache, hypoesthesia		
	Hepatitis B viremia		
	Alopecia, dizziness, fatigue, headache, nausea		

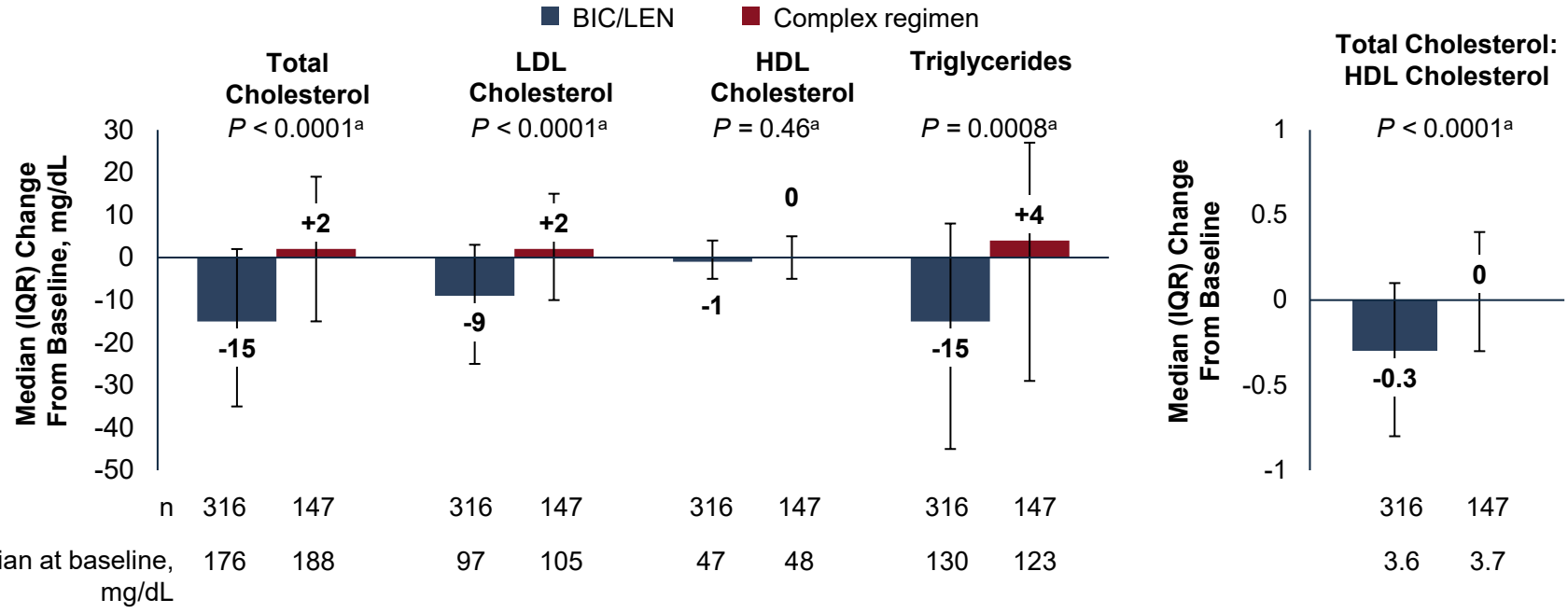
AEs leading to discontinuation were infrequent

Most Common Adverse Events

Participants, n (%)	BIC/LEN n = 371	Complex Regimen n = 186
AE with ≥ 5% in BIC/LEN group		
Upper respiratory tract infection	34 (**9.2**)	24 (**12.9**)
Headache	28 (**7.5**)	4 (**2.2**)
Nasopharyngitis	26 (**7.0**)	17 (**9.1**)
Diarrhea	22 (**5.9**)	11 (**5.9**)
Hypertension	21 (**5.7**)	6 (**3.2**)
COVID-19	20 (**5.4**)	6 (**3.2**)
Arthralgia	19 (**5.1**)	8 (**4.3**)

Median (Q1, Q3) exposure was 65.9 (56.6, 74.0) weeks for the BIC/LEN group and 65.9 (55.6, 73.9) weeks for the complex regimen group.

Changes in Fasting Lipids at Week 48



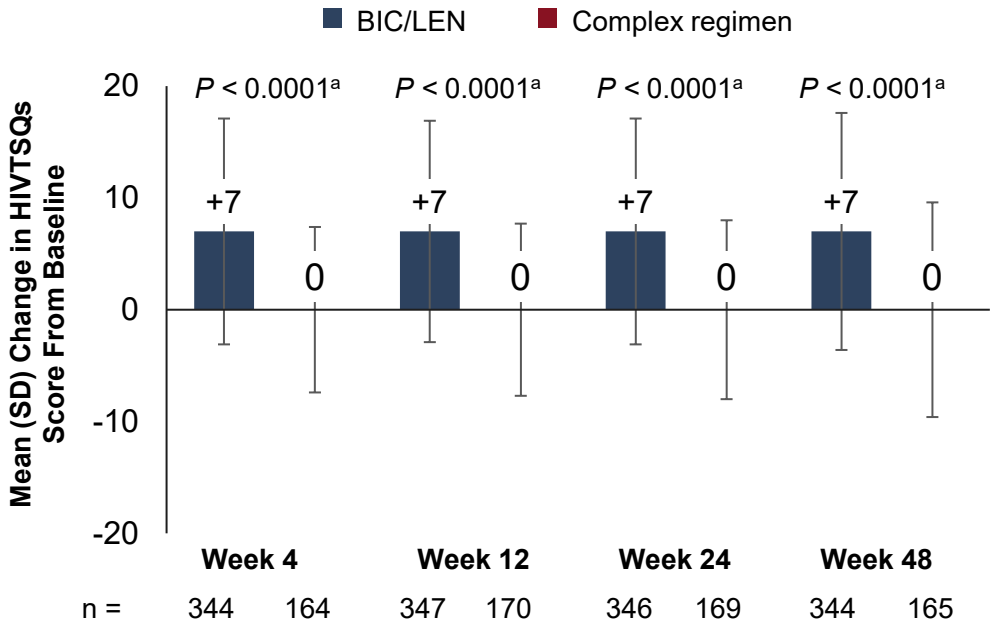
Total cholesterol and LDL cholesterol, triglycerides, and total cholesterol:HDL cholesterol ratio improved from baseline after switching to BIC/LEN

[a]Nominal *P* value. Difference in change from baseline in fasting lipids at Week 48 between BIC/LEN and complex regimens was estimated using the mixed model with repeated measures in change from baseline with treatment, visit, treatment by visit, baseline value, and geographic region (US vs ex-US) as fixed effects, and participant as random effect.
HDL, high-density lipoprotein; **IQR**, interquartile range; **LDL**, low-density lipoprotein.

Patient-Reported Treatment Satisfaction Through Week 48

Mean (SD) HIVTSQs scores were similar between groups at baseline

- **BIC/LEN (n = 359):** 55 (10.4)
- **Complex regimen (n = 178):** 55 (9.4)



Treatment satisfaction increased from Week 4 and remained high through Week 48 after switching to BIC/LEN STR from complex regimen

HIVTSQs total score was calculated as the sum of responses ranging from 0 to 66. Higher scores indicate higher satisfaction. [a]*P* value for the difference in mean change in HIVTSQs total score BIC/LEN vs complex regimen; nominal *P* value was calculated from the MMRM in change from baseline with baseline value, region, treatment, visit, and treatment by visit interaction as fixed effect and participants as random effect.
HIVTSQs, HIV Treatment Satisfaction Questionnaire: status version; **SD**, standard deviation.

Conclusions

- The ARTISTRY-1 trial population was older versus other registrational HIV programs,[1-4] with a high prevalence of comorbidities, polypharmacy, and prior ART resistance
- BIC/LEN STR maintained high levels of virologic suppression and was noninferior to complex regimens at Week 48
- There was no emergent resistance to BIC/LEN detected
- BIC/LEN was generally well tolerated, with low rates of discontinuations due to AEs
- Fasting lipid parameters generally improved following switch to BIC/LEN
- Treatment satisfaction increased after switch to BIC/LEN from complex regimens

These data suggest that BIC/LEN STR is an important option enabling treatment to be tailored for people with virological suppression on complex regimens

Poster 513 – A double-blind, active-controlled, Phase 3 trial, ARTISTRY-2 – is evaluating the efficacy and safety of BIC/LEN in people with HIV with virologic suppression switching from B/F/TAF. Similar to ARTISTRY-1, at Week 48, BIC/LEN was well tolerated and maintained high levels of virologic suppression that were noninferior to standard-of-care B/F/TAF[5]

1. Molina J-M, et al. *Lancet HIV* 2018;5:e357-65. 2. Ramgopal MN, et al. *Lancet HIV* 2023;10:e566-77. 3. Rolle CP, et al. *Open Forum Infect Dis* 2024;11:ofae560. 4. Sax PE, et al. *Clin Infect Dis* 2021;73:e485-93.
5. Meissner EG, et al. Poster 513 presented at: CROI 2026; Feb. 22-25, 2026; Denver, CO, USA.

Acknowledgments

- We extend our thanks to the participants, their families, and all participating investigators
- We thank Jared Baeten, Hal Martin, and Nicolas Margot of Gilead Sciences, Inc. for their contributions to the study
- This study was funded by Gilead Sciences, Inc.
- All authors contributed to and approved the presentation; medical writing support was provided by Aimee Sherlock, MSc (Aspire Scientific Ltd, UK) and was funded by Gilead Sciences, Inc.

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ARTISTRY-1 Study Team

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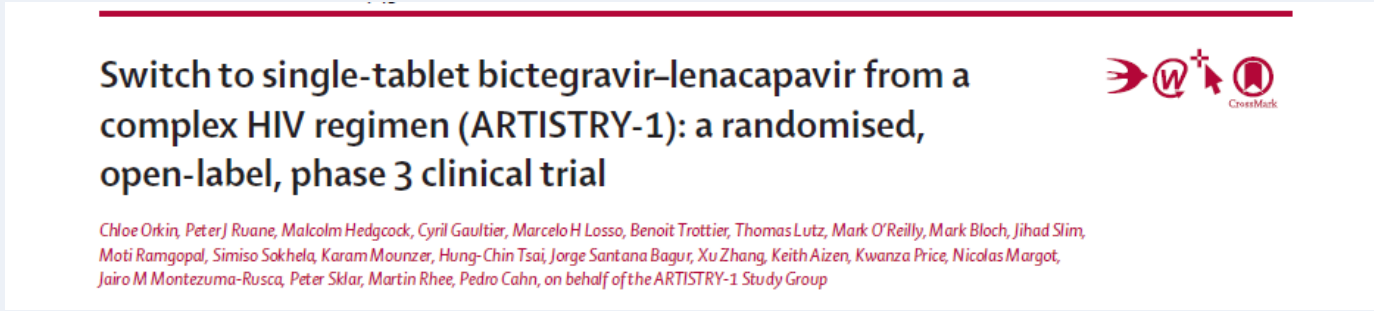
Additional Resources for BIC/LEN

Additional BIC/LEN Posters at CROI

Poster (518): Switch to BIC + LEN in Virologically Suppressed People With HIV on Complex Regimens: Week 96 Outcomes (Malcolm Hedgcock)
Time: 02:30 p.m. - 04:00 p.m. (MT), 24 Feb
Session: (G-03) Novel Antiretroviral Agents and Combinations: The Long Game

Poster (513): Phase 3 Efficacy and Safety of Switch From B/F/TAF to Single-Tablet BIC/LEN in ARTISTRY-2 (Eric G Meissner)
Time: 02:30 p.m. - 04:00 p.m. (MT), 24 Feb
Session: (G-03) Novel Antiretroviral Agents and Combinations: The Long Game

Lancet Publication


Switch to single-tablet bictegravir–lenacapavir from a complex HIV regimen (ARTISTRY-1): a randomised, open-label, phase 3 clinical trial

Chloe Orkin, Peter J Ruane, Malcolm Hedgcock, Cyril Gaultier, Marcelo H Losso, Benoit Trottier, Thomas Lutz, Mark O'Reilly, Mark Bloch, Jihad Slim, Moti Ramgopal, Simiso Sokhela, Karam Mounzer, Hung-Chin Tsai, Jorge Santana Bagur, Xu Zhang, Keith Aizen, Kwanza Price, Nicolas Margot, Jairo M Montezuma-Rusca, Peter Sklar, Martin Rhee, Pedro Cahn, on behalf of the ARTISTRY-1 Study Group