Redefining treatment success in HIV+ patients

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Disclosures

- Cal Cohen is a full-time employee of Gilead Sciences

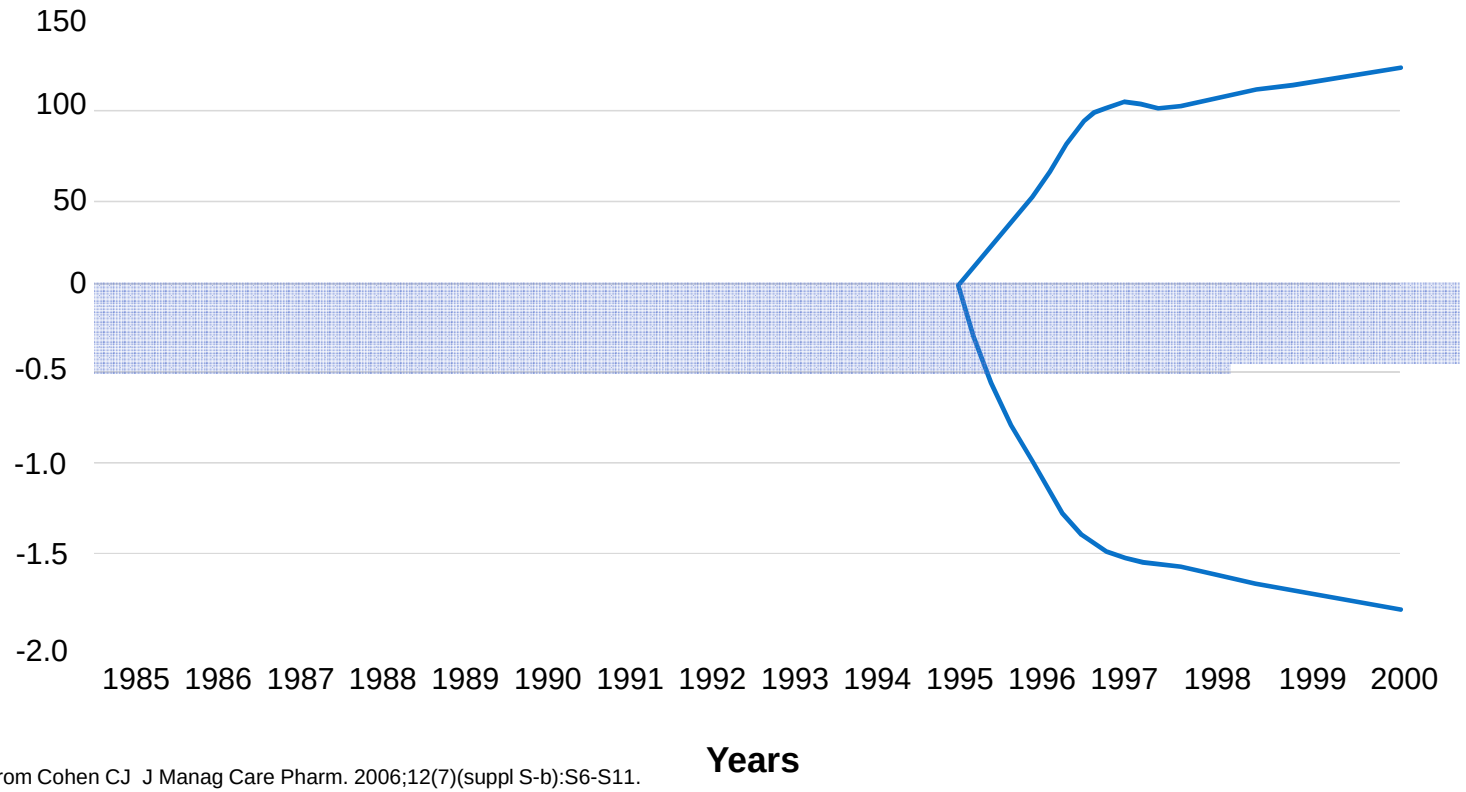
Goals of HIV Therapy

- **Indefinitely maintain suppression of plasma HIV RNA levels below the level of detection of sensitive of HIV RNA assays**
  - **– FDA Guidance[1]**
- **Maximal and durable suppression of plasma viremia delays or prevents the selection of drug-resistance mutations, preserves or improves CD4 count, and confers substantial clinical benefits**
  - **DHHS Guidelines[2]**

1. DHHS & FDA CDER. *Human Immunodeficiency Virus-1 Infection: Developing Antiretroviral Drugs for Treatment Guidance for Industry. November* 2015. Available at: https://www.fda.gov/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/UCM355128
2. DHHS. *Guidelines for the Use of Antiretroviral Agents in HIV-1-Infected Adults and Adolescents. October 2017*. Available at: *http://aidsinfo.nih.gov/guidelines*

Evolution of HIV Treatment

- Shift from monotherapy to triple therapy based on more durable suppression with prevention of resistance development



Modified from Cohen CJ J Manag Care Pharm. 2006;12(7)(suppl S-b):S6-S11.

DHHS Guidelines Dec 2019 Update

ART Initiation Recommendations for Most PLWH*†‡

- Only integrase inhibitor-based regimens are recommended as *Initial Regimens for Most People with HIV*

RECOMMENDED INITIAL REGIMENS FOR MOST PEOPLE WITH HIV	
BIC/FTC/TAF (AI)	
DTG/3TC/ABC (AI)	• **Only for HLA-B*5701 negative**
DTG + (TAF or TDF) + (FTC or 3TC)** (AI)	
RAL§ + (TAF or TDF) + (FTC or 3TC)** (BI/BII)	
DTG/3TCΩ (AI)	• **Only for 1) HIV RNA ≤ 500,000 c/mL, 2) not HBV coinfected, and 3) where HBV testing and HIV reverse transcriptase genotypic resistance testing results are available**

* eGFR cut-offs based on NRTIs: FTC/TAF 30 mL/min, FTC/TDF and 3TC/ABC 50 mL/min

† TAF and TDF are two forms of tenofovir approved by FDA. TAF has fewer bone and kidney toxicities than TDF, while TDF is associated with lower lipid levels. Safety, cost and access are among the factors to consider when choosing between these drugs

‡ Before initiating INSTI for persons of childbearing potential see DHHS Table 6b for considerations related to pregnancy testing, contraception and conception. Neural tube defect prevalence is lower than preliminary reports, but still higher than non-DTG exposures. It is not yet known whether use of other INSTIs around the time of conception also poses a risk of NTDs (i.e., a class effect). BIC has insufficient data in pregnancy to recommend in ART-naive women.

** 3TC may substitute for FTC

§ RAL can be given as 400 mg BID or 1200 mg (two 600-mg tablets) once daily

Ω DTG/3TC should be considered in certain clinical situation when ABC, TAF, and TDF cannot be used or are not optimal

DHHS. Guidelines for the Use of Antiretroviral Agents in Adults and Adolescents Living with HIV, December 2019. Available at: http://aidsinfo.nih.gov/guidelines. Accessed January 2020

EACS Guidelines (2019)

Recommended Initial Regimens

Regimen		Main Requirements	Additional Guidance (see footnotes)
RECOMMENDED REGIMENS (PREFERRED)			
INSTI + 2NRTIs	**B/F/TAF**		
	DTG + ABC/3TC[I] or DTG/ABC/3TC[I]	HLA-B*5701 negative HBsAg negative	I ABC: HLA-B*5701, cardiovascular risk
	DTG[III] + TAF/FTC[II,III] or TDF/FTC or 3TC[II,III]		II TDF: prodrug types. Renal and bone toxicity. TAF dosing III Weight increase
	RAL[IV] + TAF/FTC[II] or TDF/FTC or 3TC[II]		II TDF: prodrug types. Renal and bone toxicity. TAF dosing IV RAL: dosing

I ABC contraindicated if HLA-B*57:01 positive. Even if HLA-B*5701 negative, counselling on HSR risk still mandatory. ABC should be used with caution in persons with a high CVD risk (> 20%); **II** In certain countries, TDF is labelled as 245 mg rather than 300 mg to reflect the amount of the prodrug (tenofovir disoproxil) rather than the fumarate salt (tenofovir disoproxil fumarate). There are available generic forms of TDF, which instead of fumarate use phosphate, maleate, and succinate salts. They can be used interchangeably. When available, combinations containing TDF can be replaced by the same combinations containing TAF. TAF is used at 10 mg when coadministered with drugs that inhibit P-gp, and at 25 mg when coadministered with drugs that do not inhibit P-gp The decision whether to use TDF or TAF depends on individual characteristics as well as availability. So far, there are only limited long-term data on TAF. If the ART regimen does not include a booster, TAF and TDF have a similar shortterm risk of renal adverse events leading to discontinuation and bone fractures.TAF*** should be considered as a first choice**** over TDF in individuals with: (1) established or high risk of CKD, (2) coadministration of medicines with nephrotoxic drugs or prior TDF toxicity, (3) osteoporosis / progressive osteopenia, high FRAX score or risk factors, (4) history of fragility fracture *** There are limited data on use of TAF with eGFR < 30 mL/min **** Expert opinion pending clinical data; **III** Two randomized controlled trials (performed in South Africa and Cameroon) showed that, in comparison with EFV, treatment with DTG in naïve persons was associated with increased weight gain when combined with TAF/FTC, TDF/FTC or TDF/3TC. The effect on increased weight was more important for women under treatment containing both DTG and TAF; **IV** RAL can be given as RAL 400 mg bid or RAL 1200 mg (two, 600 mg tablets); qd. Note: RAL qd should not be given in presence of an inducer (i.e. TB drugs, antiepileptics) or divalent cations (i.e. calcium, magnesium, iron), in which case RAL should be used bid; **V** DOR is not active against HIV-2; **VI** RPV is not active against HIV-2; **VII** A single study has shown increase in CVD risk with cumulative use of DRV/r;

***** Use of an unboosted INSTI with a high genetic barrier (DTG or BIC) as preferred third agent is favored

EACS Guidelines version 10.0. November 2019. Accessed November 2019

EACS Guidelines (2019)

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RECOMMENDED REGIMENS			
INSTI + 1NRTIs	**DTG + 3TC**	HBsAg negative HIV-VL < 500.000 c/ml CD4 count > 200 cells/µl	
NNRTI + 2NRTIs	**DOR[V] + TAF/FTC[II] or TDF/FTC[II] or TDF/3TC[II]**		II TDF: prodrug types. Renal and bone toxicity. TAF dosing V DOR: HIV-2
	RPV[VI] + TAF/FTC[II] or TDF/FTC or 3TC[II] R/F/TAF or R/F/TDF[VI]	CD4 count > 200 cells/µl HIV-VL < 100.000 cps/ml Not on proton pump inhibitor With food	II TDF: prodrug types. Renal and bone toxicity. TAF dosing VI RPV: HIV-2
PI/r or PI/c + 2NRTIs	**DRV/c or r[VII] + TAF/FTC[II] DRV/c or r[VII] + TDF/FTC or 3TC[II] DRVc/TAF/FTC[VII]**	With food	II TDF: prodrug types. Renal and bone toxicity. TAF dosing VII DRV/r: cardiovascular risk

[I] ABC contraindicated if HLA-B*5701 positive. Even if HLA-B*57:01 negative, counselling on HSR risk still mandatory. ABC should be used with caution in persons with a high CVD risk (> 20%); **II** In certain countries, TDF is labelled as 245 mg rather than 300 mg to reflect the amount of the prodrug (tenofovir disoproxil) rather than the fumarate salt (tenofovir disoproxil fumarate). There are available generic forms of TDF, which instead of fumarate use phosphate, maleate, and succinate salts. They can be used interchangeably. When available, combinations containing TDF can be replaced by the same combinations containing TAF. TAF is used at 10 mg when coadministered with drugs that inhibit P-gp, and at 25 mg when coadministered with drugs that do not inhibit P-gp The decision whether to use TDF or TAF depends on individual characteristics as well as availability. So far, there are only limited long-term data on TAF. If the ART regimen does not include a booster, TAF and TDF have a similar shortterm risk of renal adverse events leading to discontinuation and bone fractures.TAF*** should be considered as a first choice**** over TDF in individuals with: (1) established or high risk of CKD, (2) coadministration of medicines with nephrotoxic drugs or prior TDF toxicity, (3) osteoporosis / progressive osteopenia, high FRAX score or risk factors, (4) history of fragility fracture *** There are limited data on use of TAF with eGFR < 30 mL/min **** Expert opinion pending clinical data; **III** Two randomized controlled trials (performed in South Africa and Cameroon) showed that, in comparison with EFV, treatment with DTG in naive persons was associated with increased weight gain when combined with TAF/FTC, TDF/FTC or TDF/3TC. The effect on increased weight was more important for women under treatment containing both DTG and TAF; **IV** RAL can be given as RAL 400 mg bid or RAL 1200 mg (two, 600 mg tablets); qd. Note: RAL qd should not be given in presence of an inducer (i.e. TB drugs, antiepileptics) or divalent cations (i.e. calcium, magnesium, iron), in which case RAL should be used bid; **V** DOR is not active against HIV-2; **VI** RPV is not active against HIV-2; **VII** A single study has shown increase in CVD risk with cumulative use of DRV/r;

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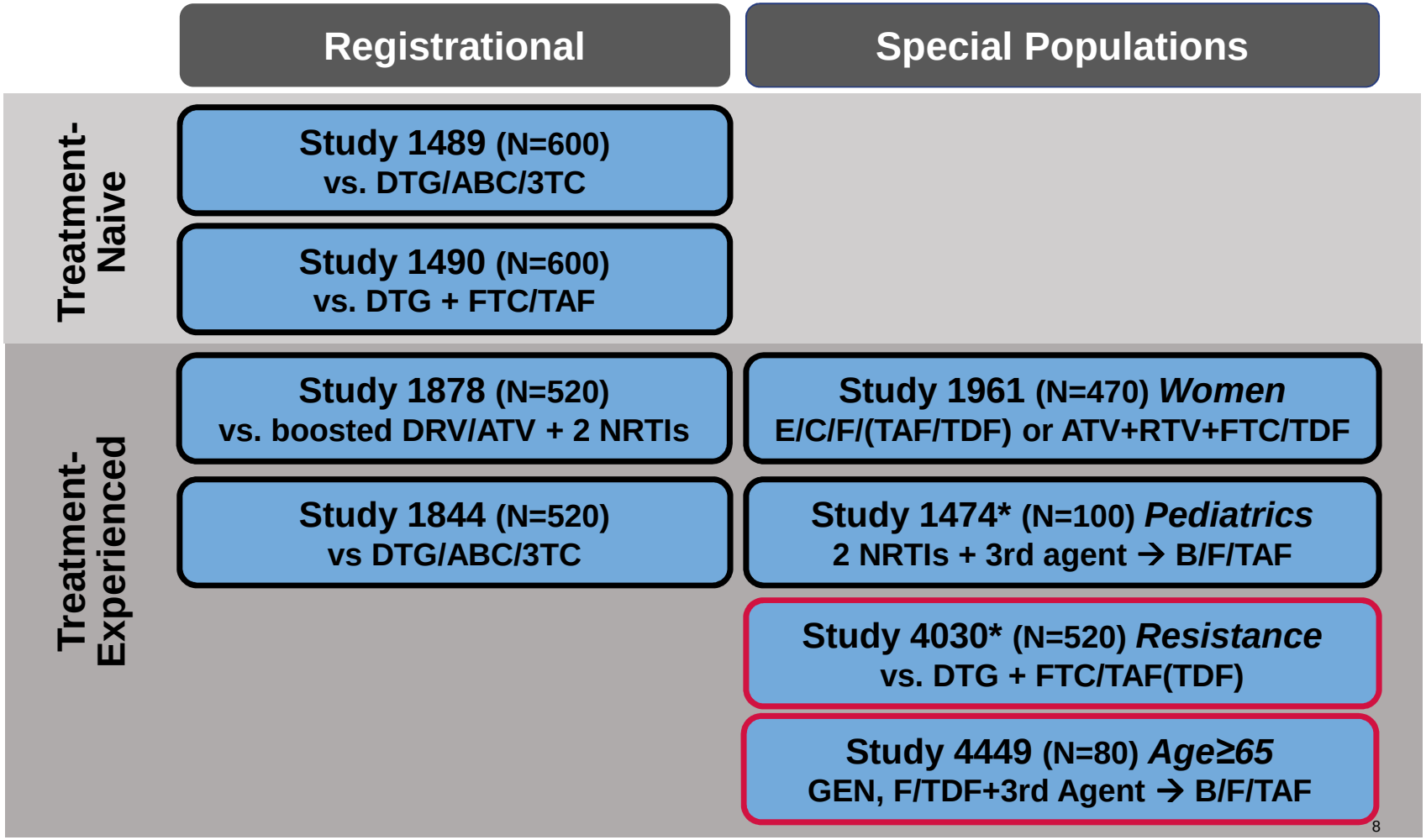
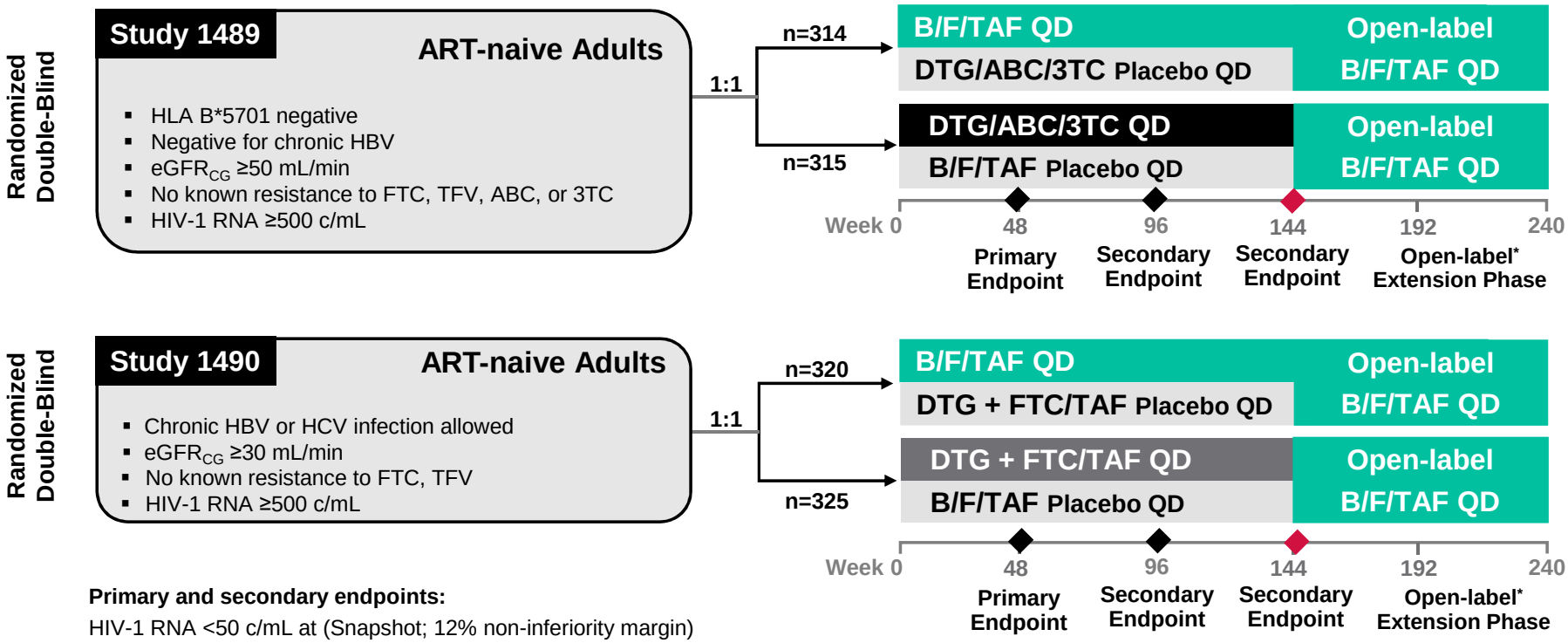
EACS Guidelines version 10.0. November 2019. Accessed November 2019

‡

B/F/TAF Phase 3 Clinical Development Program



Study Design



Primary and secondary endpoints:
HIV-1 RNA <50 c/mL at (Snapshot; 12% non-inferiority margin)

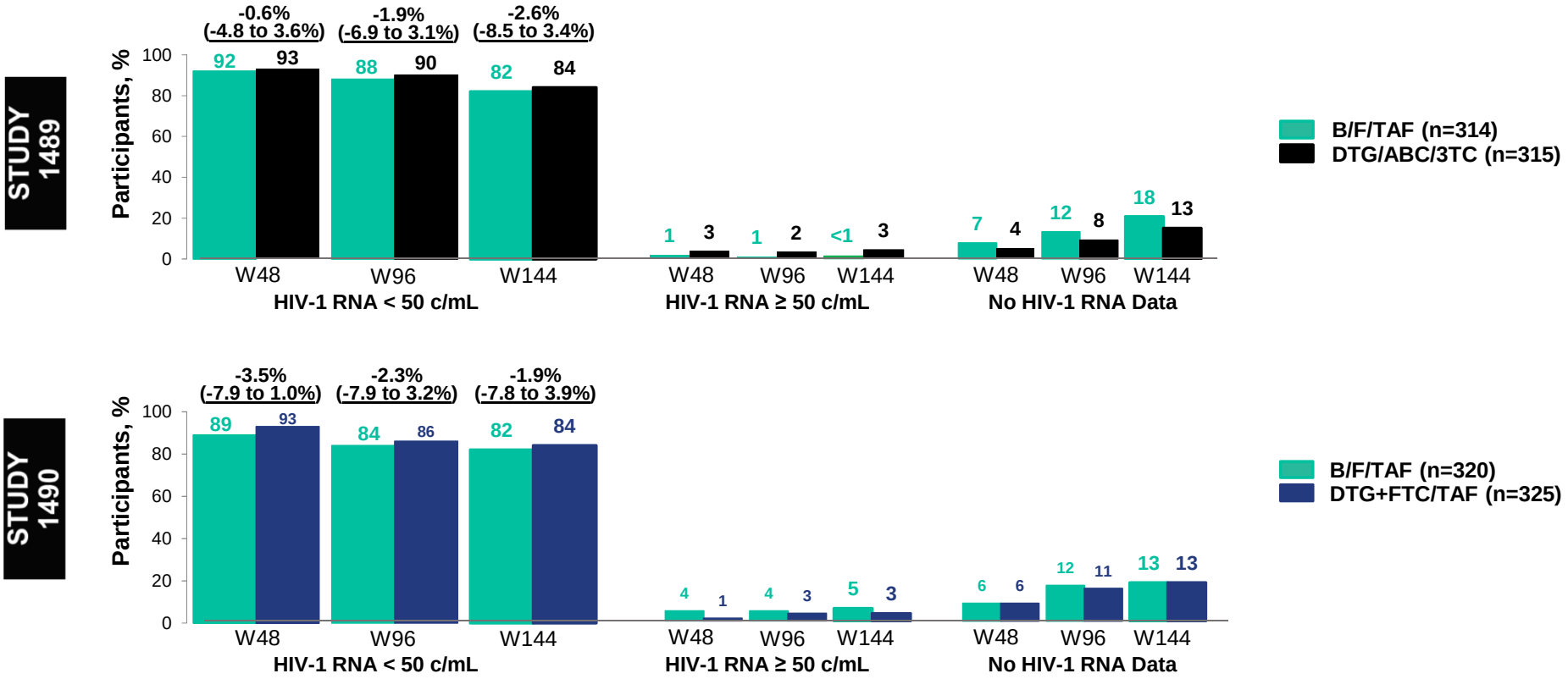
* Participants all roll over onto Open-Label Extension Phase at the same time after the last person reaches W144

$eGFR_{CG}$, estimated glomerular filtration rate by Cockcroft-Gault equation; HBV, hepatitis B virus; HCV, hepatitis C virus; HLA, human leukocyte antigen

Orkin C, et al. EACS 2019. Basel, Switzerland. PE3/14

Virologic Outcome at Weeks 48, 96 and 144

FDA Snapshot Analysis



B/F/TAF was non-inferior to triple therapy DTG regimens in ART-naïve population through W144

1. Wohl D, et al. ID Week 2018. San Francisco. Oral LB-4
2. Gallant J, et al. Lancet 2017;390:2063-72
3. Stellbrink, HJ, et al. HIV Drug Therapy 2018. Glasgow, UK. Oral
4. Sax P, et al. Lancet 2017;390:2073-82
5. Stellbrink, HJ, et al. Lancet HIV 2019; pii: S2352-3018(19)30080-3
6. Wohl D, et al. Lancet HIV 2019;6(6):e355-e363.
7. Orkin C, et al. EACS 2019. Basel, Switzerland. PE3/14

Studies 1489 & 1490: B/F/TAF vs DTG/ABC/3TC and DTG+FTC/TDF in ART-Naïve Adults

Resistance Outcomes at Week 144

Participants, n	Pooled B/F/TAF n=634	DTG/ABC/3TC n=315	DTG + F/TAF n=325
Resistance testing*	8	6	7
NRTI-R	**0**	**0**	**0**
INSTI-R	**0**	**0**	**0**

- 1 participant with baseline DTG resistance (Q148H + G140S) was randomized to B/F/TAF, suppressed <50 c/mL at Week 4, and remained suppressed at Week 144

No treatment-emergent resistance to any components of the regimens was detected in any treatment group

* Performed for participants with confirmed HIV-1 RNA ≥50 c/mL, with confirmation sample being ≥200 c/mL or ≥200 c/mL at last visit, and no resuppression of HIV-1 RNA to <50 c/mL while on study drug

Orkin C, et al. EACS 2019. Basel, Switzerland. PE3/14

Pooled 1489 & 1490: B/F/TAF in ART-Naïve Adults

Safety through Week 144

Adverse Events, %	B/F/TAF n=634	DTG/ABC/3TC n=315	DTG + F/TAF n=325
Any study drug-related AEs	26*	42*	29
Grade 3 or 4 AEs†	1	1	<1
Serious AE†	16	17	12
Study drug-related serious AE†	1	<1	1
AE leading to study drug discontinuation	1	2	2
Study drug-related AEs, All Grades ≥5% in any overall group, %			
Nausea	4*	18*	5
Headache	5	5	3
Diarrhea	5	4	3

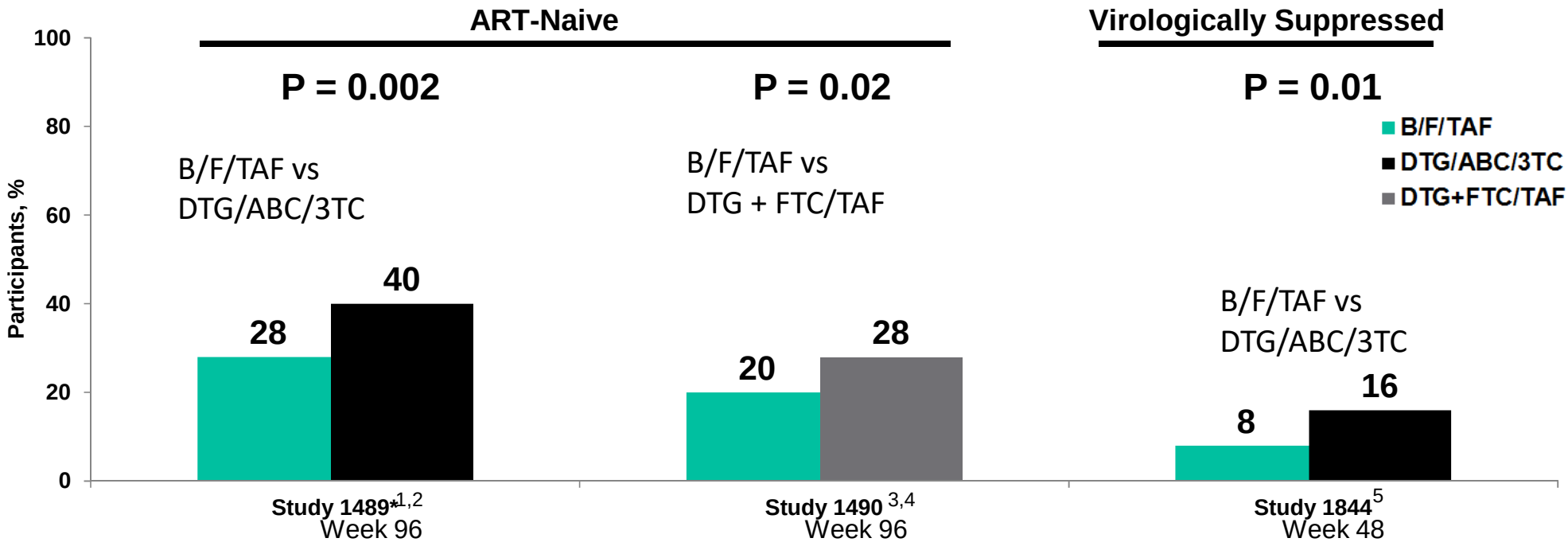
B/F/TAF was well tolerated in ART-naïve adults with statistically significantly fewer drug-related AEs than DTG/ABC/3TC

In all treatment arms the discontinuations due to AE were low

* P values ($p<0.001$) to compare change between B/F/TAF vs DTG/ABC/3TC

Orkin C, et al. EACS 2019. Basel, Switzerland. PE3/14

Drug-Related Adverse Events (AEs) in Three Double Blinded Studies



Significantly fewer drug-related AEs with B/F/TAF in all 3 randomized, double-blinded comparisons to DTG + 2 NRTIs regimens[1–3]

- In both ART-naïve studies, significant differences also favored B/F/TAF at Week 48[6,7]

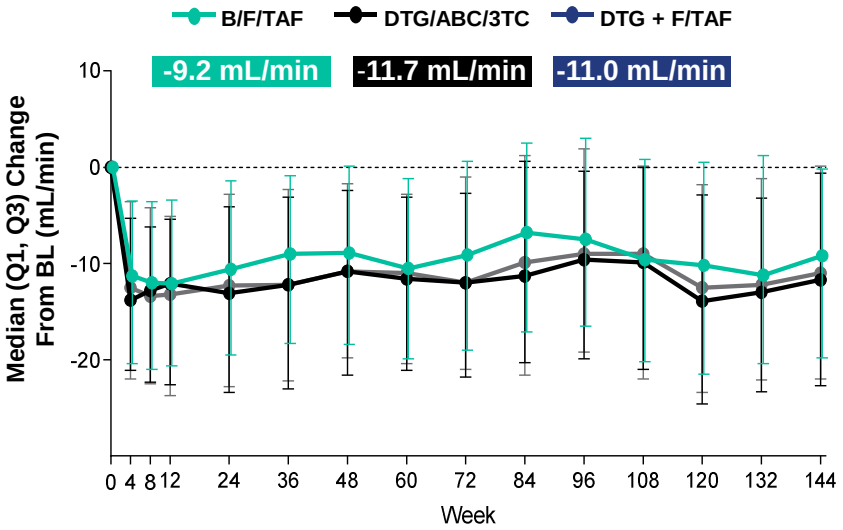
*B/F/TAF participants had significantly less drug-related nausea compared to DTG/ABC/3TC (6% vs 17%; P < 0.001)[1]

1. Wohl D, et al. ID Week 2018. San Francisco. Oral LB-4. 2. Wohl D, et al. Lancet HIV 2019;6(6):e355-e363. 3. Stellbrink, HJ, et al. HIV Drug Therapy 2018. Glasgow, UK. Oral 211. 4. Stellbrink, HJ, et al. Lancet HIV 2019; pii: S2352-3018(19)30080-3. 5. Molina JM, et al. *Lancet* HIV 2018;5:e357–65. 6. Gallant J, et al. Lancet 2017; 390: 2063–72. 7. Sax PE, et al. Lancet 2017; 390: 2073–82

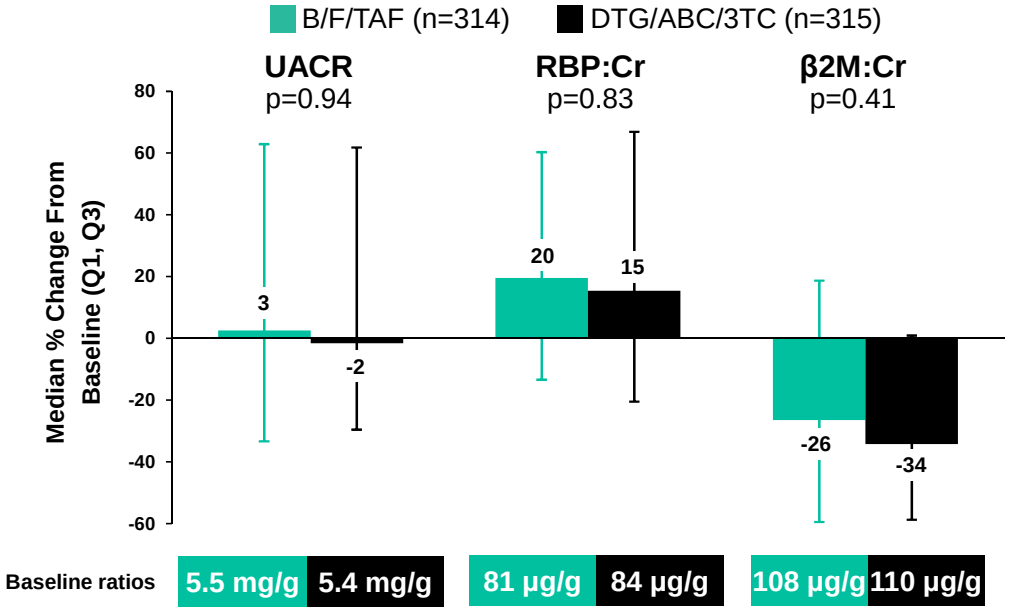
Pooled 1489 & 1490: B/F/TAF in ART-Naïve Adults

Renal Safety through Week 144

eGFR



Renal Biomarkers*



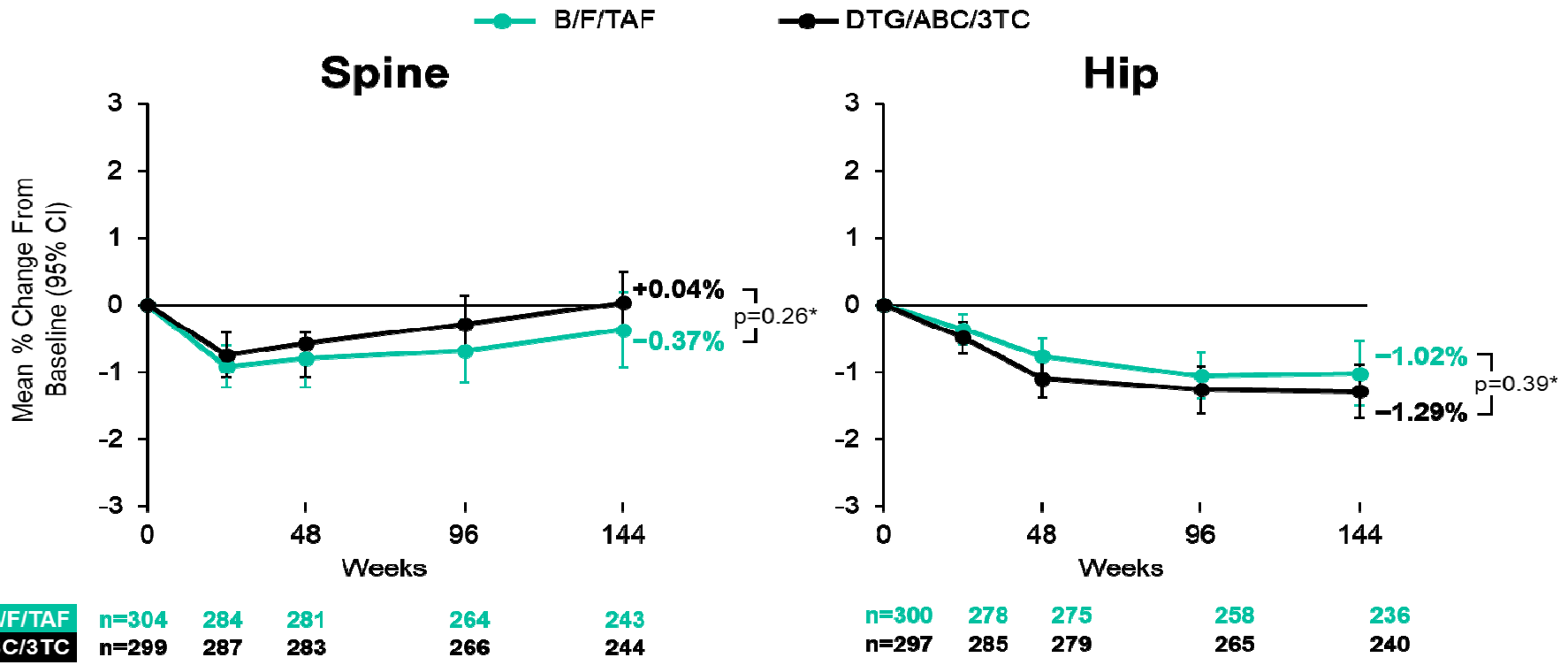
Changes from baseline in renal markers were comparable between B/F/TAF and DTG/ABC/3TC, with no cases of proximal renal tubulopathy

ß2M, beta-2 microglobulin; eGFR, estimated glomerular filtration rate; Q, quartile; RBP, retinol-binding protein; UACR, urine albumin:Cr ratio

* Results were from Study 1489 only

Study 1489: B/F/TAF vs DTG/ABC/3TC in ART-Naïve Adults

Bone Safety through Week 144



Changes from baseline in BMD were comparable between B/F/TAF vs DTG/ABC/3TC

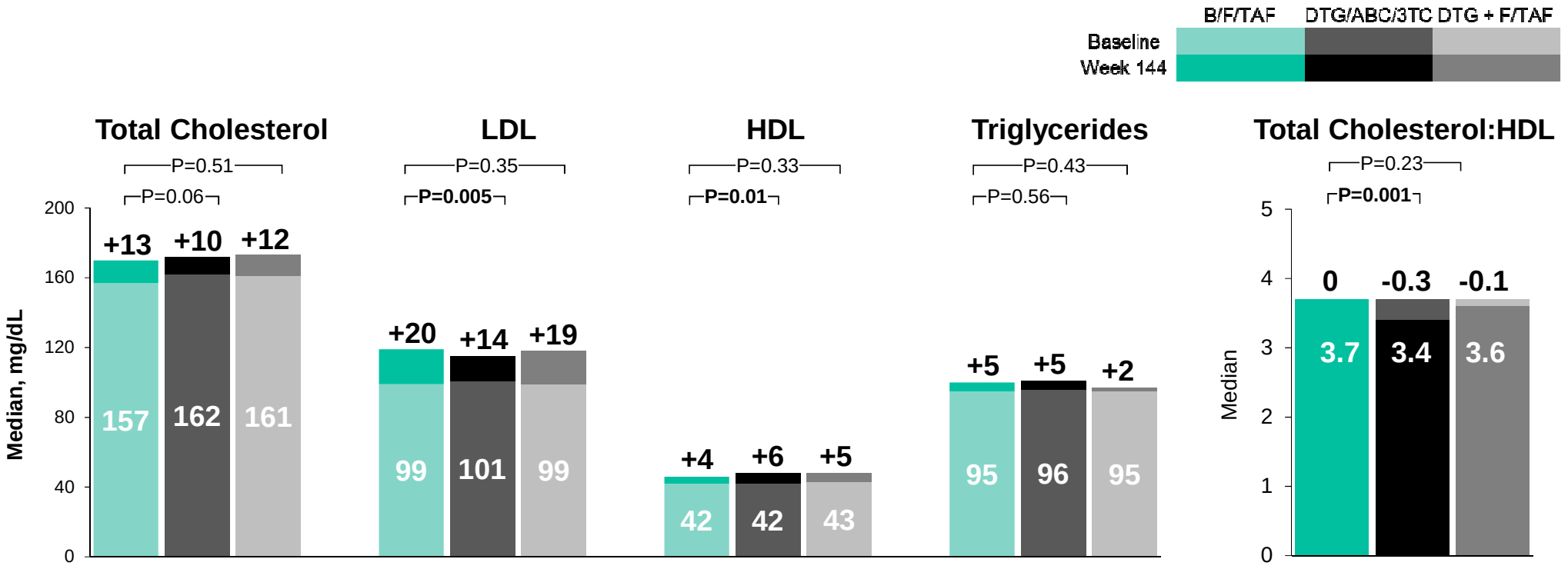
BMD, bone mineral density

* Comparison of B/F/TAF vs DTG/ABC/3TC at Week 144

Orkin C, et al. EACS 2019. Basel, Switzerland. PE3/14

Pooled 1489 & 1490: B/F/TAF in ART-Naïve Adults

Fasting Lipids Changes from Baseline at Week 144*

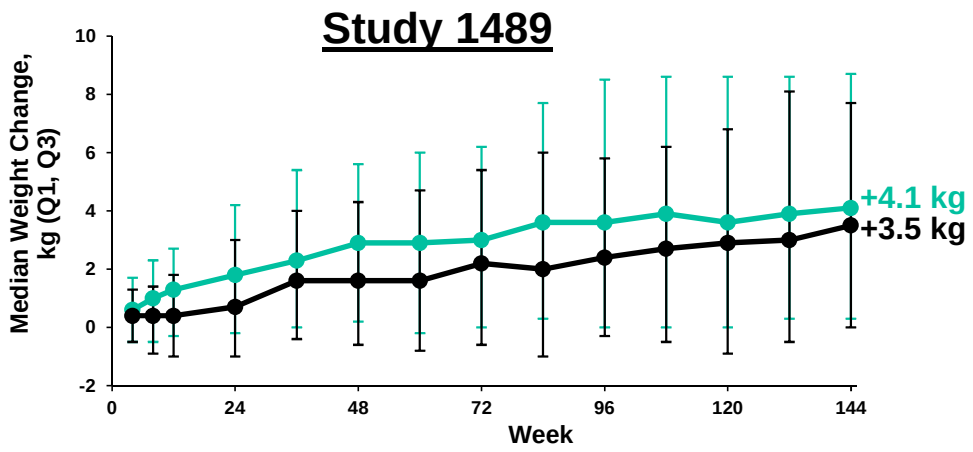


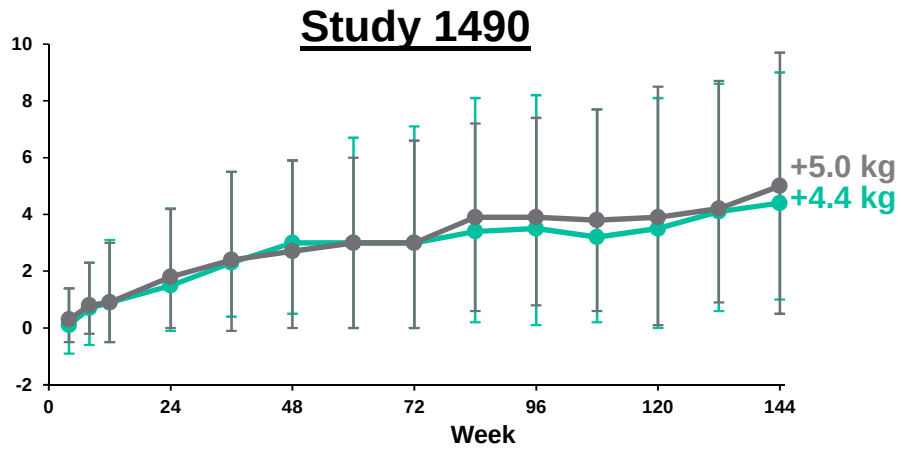
HDL, high-density lipoprotein; LDL, low-density lipoprotein
* P values to compare change from baseline between treatment groups

Orkin C, et al. EACS 2019. Basel, Switzerland. PE3/14

Pooled 1489 & 1490: B/F/TAF in ART-Naïve Adults

Weight Change through Week 144





Participants, %	Study 1489		Study 1490	
	B/F/TAF n=314	DTG/ABC/3TC n=315	B/F/TAF n=320	DTG + F/TAF n=325
≥5% weight gain	52	48	53	55
≥10% weight gain	29	25	30	32
Weight loss or no change from baseline	24	26	21	22

Weight changes from baseline were similar between B/F/TAF and DTG containing regimens

Orkin C, et al. EACS 2019. Basel, Switzerland. PE3/14

Tablet Appearance

BIC Co-formulated with FTC and TAF

B/F/TAF (721 mg)

E/C/F/TAF (1082 mg)

DTG/ABC/3TC (1722 mg)

Number in parenthesis is the total weight in mg of the tablet.
Note: Tablet size is not intended to compare clinical efficacy and safety, indications, dosing regimens, or treatment adherence.

- Smallest three-drug, INSTI-containing single-tablet regimen for both treatment-naïve and virologically-suppressed patients[2]
- Patient compliance with medication regimens may be influenced by the size and shape of a tablet or capsule, with size frequently being cited as the main reason for the difficulty in swallowing[3]

DTG/ABC/3TC, dolutegravir/abacavir/lamivudine; B/F/TAF, bictegravir/emtricitabine/tenofovir alafenamide; E/C, elvitegravir/cobicistat; INSTI, integrase strand transfer inhibitor

1. Gilead Sciences. Data on File.
2. Gilead Sciences. Biktarvy US Prescribing Information. February 2018
3. DHHS & FDA CDER. Size, Shape, and Other Physical Attributes of Generic Tablets and Capsules. June 2015

Patient-Reported Outcomes Among HIV-1–Infected Adults Randomized to B/F/TAF vs DTG/ABC/3TC in Two Phase 3 Controlled Clinical Trials Over 48 Weeks

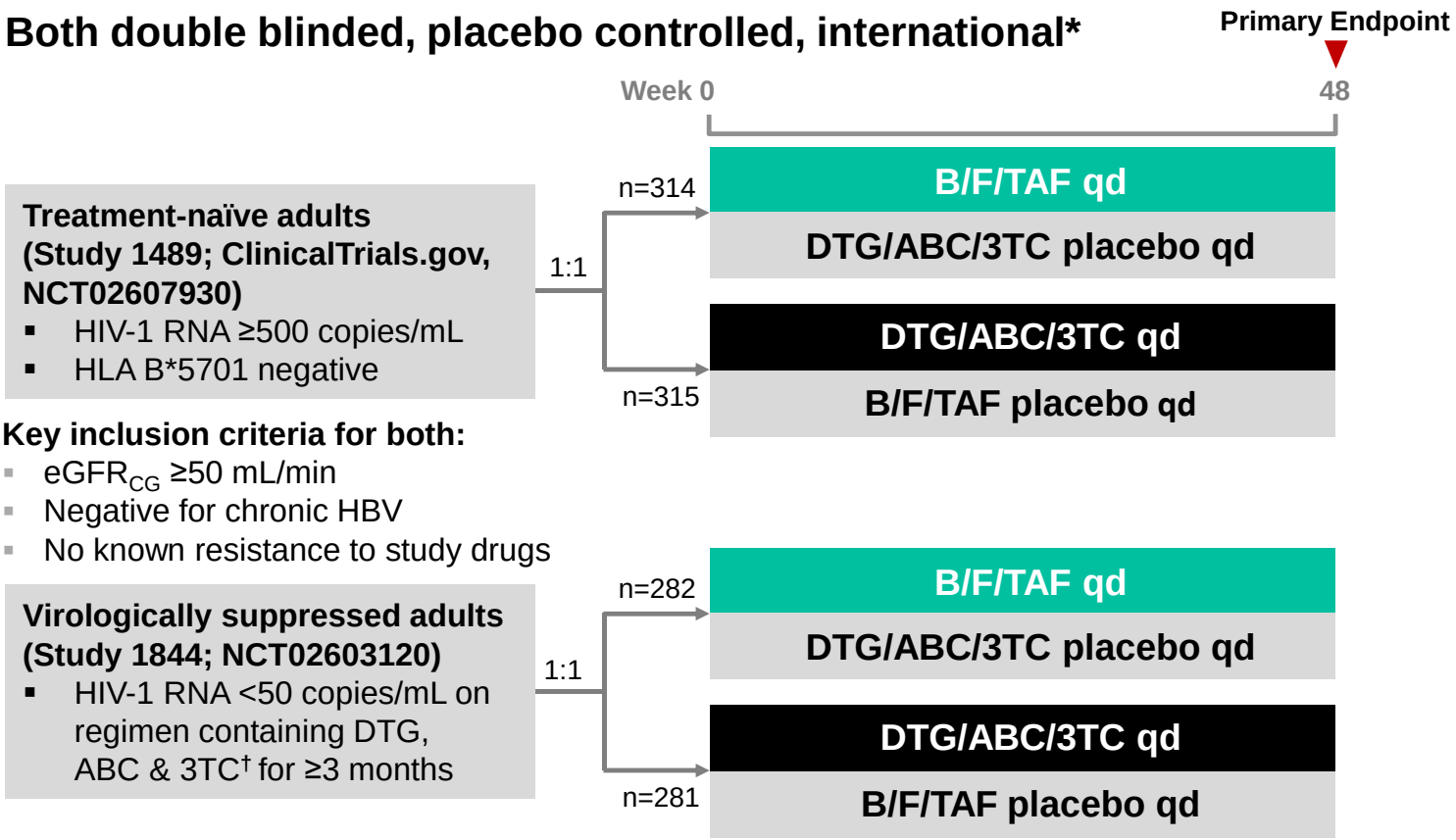
David Wohl,[1] Amanda Clarke,[2] Franco Maggiolo,[3] Will Garner,[4] Marianne Laouri, [4] Hal Martin, [4] Erin Quirk[4]

[1]The University of North Carolina at Chapel Hill, USA; [2]Royal Sussex County Hospital, Brighton, UK; [3]Azienda Ospedaliera Papa Giovanni XXIII, Bergamo, Italy; [4]Gilead Sciences, Inc., Foster City, California, USA

22nd International AIDS Conference, 23–25 July 2018, Amsterdam, Netherlands
PEB148

Study Designs

Both double blinded, placebo controlled, international*



*Australia, Europe (Belgium, France, Germany, Italy, Spain, and UK), Latin America (Dominican Republic), and North America (Canada and US, including Puerto Rico); †Could be components of STR. $eGFR_{CG}$, estimated glomerular filtration rate by Cockcroft-Gault equation; HBV, hepatitis B virus; HLA, human leukocyte antigen.

Patient Reported Outcomes: HIV Symptom Index Tool

Nausea/Vomiting			Loss of appetite			Diarrhea			Bloating		
W4	W12	W48	W4	W12	W48	W4	W12	W48	W4	W12	W48
Nervous/Anxious			**Sad/Down/Depressed**			**Fatigue**			**Dizzy/Lightheaded**		
W4	W12	W48	W4	W12	W48	W4	W12	W48	W4	W12	W48
Trouble remembering			**Headache**			**Fevers/Chills**			**Difficulty sleeping**		
W4	W12	W48	W4	W12	W48	W4	W12	W48	W4	W12	W48
Pain in hands/feet			**Skin problems**			**Cough**			**Muscle aches**		
W4	W12	W48	W4	W12	W48	W4	W12	W48	W4	W12	W48
Sex problems			**Weight gain**			**Weight loss**			**Hair loss**		
W4	W12	W48	W4	W12	W48	W4	W12	W48	W4	W12	W48

The following question ask about a symptom you might have had during the past **four weeks**.

Check one answer:	I DO NOT HAVE THIS SYMPTOM	I HAVE THIS SYMPTOM AND...			
		It doesn't bother me	It bothers me a little	It bothers me	It bothers me a lot
1. Fatigue or loss of energy?	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4

Gallant J, et al. IAS 2017. Paris, France. Oral #MOAB0105LB

Significant Differences in Bothersome Symptoms and PSQI

✓ = statistically significant (p <0.05) based on adjusted logistic regression or longitudinal model favoring the B/F/TAF group

Favors B/F/TAF	No differences between arms	Favors DTG/ABC/3TC

	Treatment Naïve: Study 1489				Virologically Suppressed: Study 1844			
	Week			Longitudinal Model	Week			Longitudinal Model
	4	12	48		4	12	48	
HIV-SI Bothersome Symptom*								
Fatigue/loss of energy	✓	✓	✓	✓	✓			
Dizzy/lightheadedness	✓		✓		✓			✓
Nausea/vomiting	✓	✓		✓		✓	✓	✓
Loss of appetite		✓		✓		✓		✓
Sad/down/depressed					✓		✓	✓
Nervous/anxious					✓	✓	✓	✓
Difficulty sleeping		✓	✓			✓		✓
PSQI								
Poor sleep quality		✓			✓	✓		✓

*Only symptoms where ≥2 time points/models showed significance in either study are presented;

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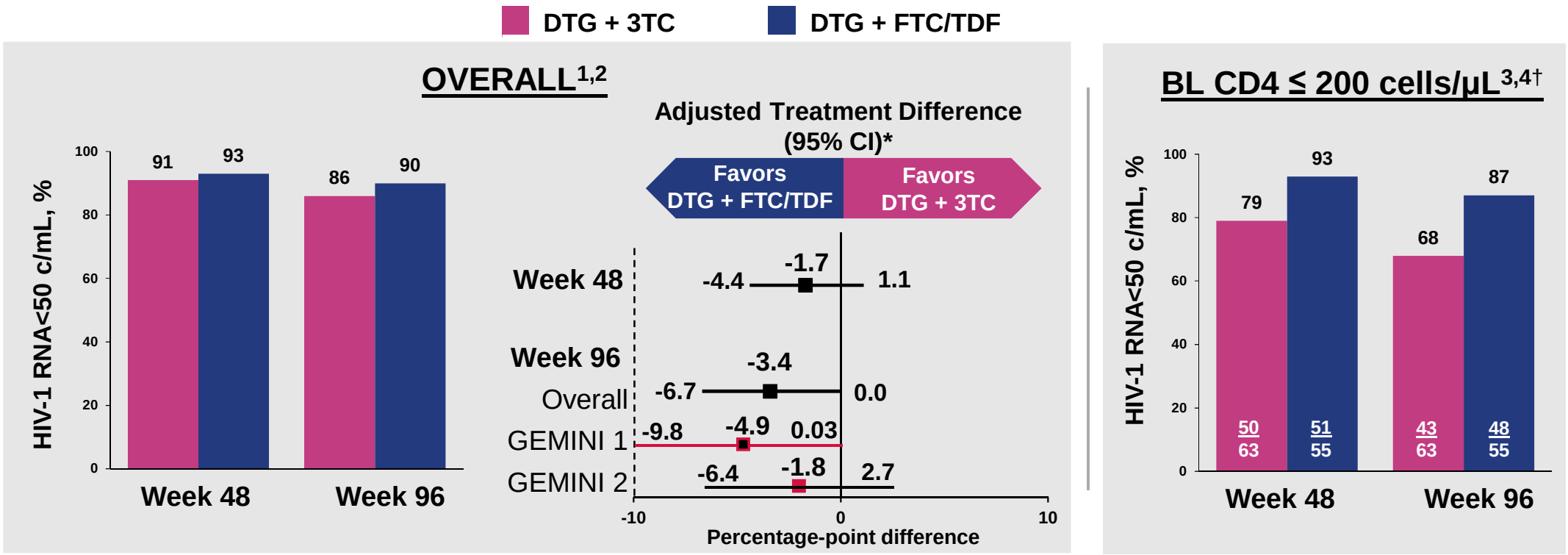
	RPV[VI] + TAF/FTC[II] or TDF/FTC or 3TC[II] R/F/TAF or R/F/TDF[VI]	CD4 count > 200 cells/µl HIV-VL < 100.000 cps/ml Not on proton pump inhibitor With food	II TDF: prodrug types. Renal and bone toxicity. TAF dosing VI RPV: HIV-2
PI/r or PI/c + 2NRTIs	**DRV/c or r[VII] + TAF/FTC[II] DRV/c or r[VII] + TDF/FTC or 3TC[II] DRVc/TAF/FTC[VII]**	With food	II TDF: prodrug types. Renal and bone toxicity. TAF dosing VII DRV/r: cardiovascular risk

I ABC contraindicated if HLA-B*5701 positive. Even if HLA-B*57:01 negative, counselling on HSR risk still mandatory. ABC should be used with caution in persons with a high CVD risk (> 20%); **II** In certain countries, TDF is labelled as 245 mg rather than 300 mg to reflect the amount of the prodrug (tenofovir disoproxil) rather than the fumarate salt (tenofovir disoproxil fumarate). There are available generic forms of TDF, which instead of fumarate use phosphate, maleate, and succinate salts. They can be used interchangeably. When available, combinations containing TDF can be replaced by the same combinations containing TAF. TAF is used at 10 mg when coadministered with drugs that inhibit P-gp, and at 25 mg when coadministered with drugs that do not inhibit P-gp The decision whether to use TDF or TAF depends on individual characteristics as well as availability. So far, there are only limited long-term data on TAF. If the ART regimen does not include a booster, TAF and TDF have a similar shortterm risk of renal adverse events leading to discontinuation and bone fractures.TAF*** should be considered as a first choice**** over TDF in individuals with: (1) established or high risk of CKD, (2) coadministration of medicines with nephrotoxic drugs or prior TDF toxicity, (3) osteoporosis / progressive osteopenia, high FRAX score or risk factors, (4) history of fragility fracture *** There are limited data on use of TAF with eGFR < 30 mL/min **** Expert opinion pending clinical data; **III** Two randomized controlled trials (performed in South Africa and Cameroon) showed that, in comparison with EFV, treatment with DTG in naïve persons was associated with increased weight gain when combined with TAF/FTC, TDF/FTC or TDF/3TC. The effect on increased weight was more important for women under treatment containing both DTG and TAF; **IV** RAL can be given as RAL 400 mg bid or RAL 1200 mg (two, 600 mg tablets); qd. Note: RAL qd should not be given in presence of an inducer (i.e. TB drugs, antiepileptics) or divalent cations (i.e. calcium, magnesium, iron), in which case RAL should be used bid; **V** DOR is not active against HIV-2; **VI** RPV is not active against HIV-2; **VII** A single study has shown increase in CVD risk with cumulative use of DRV/r;

***** Use of an unboosted INSTI with a high genetic barrier (DTG or BIC) as preferred third agent is favored

EACS Guidelines version 10.0. November 2019. Accessed November 2019

Virologic Outcomes at Week 48 & 96



At W48 & W96, DTG + 3TC was non-inferior but showed lower viral suppression rates in participants with BL CD4 < 200 cells/mm^3 compared to DTG + FTC/TDF

* Adjusted for plasma HIV-1 RNA (≤100,000 c/mL vs >100,000 c/mL), CD4+ cell count (≤200 cells/mm^3 vs >200 cells/mm^3), and study

† TRDF W48 and W96 virologic outcomes were 98 vs 98% & 98 vs 100% and 97 vs 96% and 94 vs 96% respectively (DTG+3TC vs DTG + FTC/TDF for CD4>200 & ≤200 c/mm^3)

TRDF, Treatment related discontinuation equals failure; BL, baseline

1. Cahn P, et al. IAS 2019. Mexico City, Mexico. Oral WEAB0404LB
2. Cahn P, et al. AIDS 2018. Amsterdam, NL. Oral TUAB0106LB
3. Orkin C, et al. HIV Drug Therapy 2018. Glasgow, UK. #021
4. Van Wyk J, et al. ID Week 2019. Washington, DC. Oral 2482

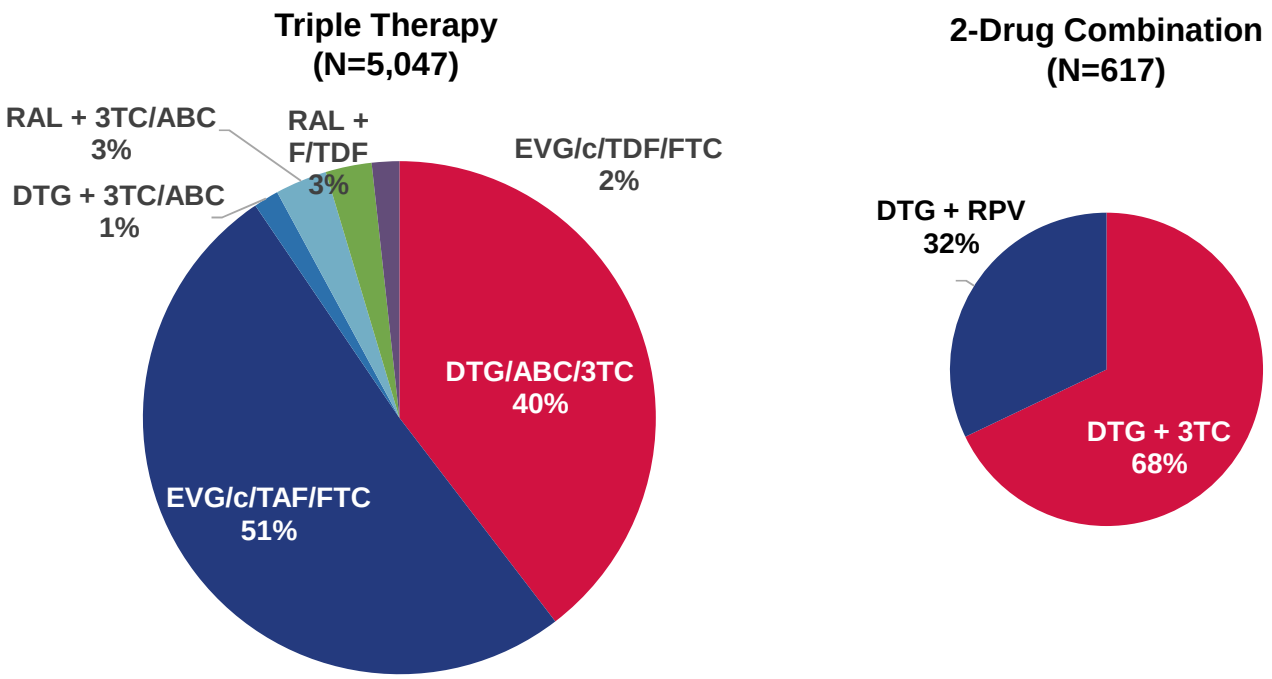
Shorter time to treatment failure in PLHIV switched to dolutegravir plus either rilpivirine or lamivudine compared to integrase inhibitor-based triple therapy in a large Spanish cohort - VACH

R. Teira, H. Diaz-Cuervo, F. Aragao, M. Castaño, A. Romero, B. Roca, M. Montero, M.J. Galindo, M.J Muñoz-Sánchez, N. Espinosa, J. Peraire, E. Martínez, B. de la Fuente, P. Domingo

Tiera R, et al. EACS 2019. Basel, Switzerland. PS 8/5

Results: Regimen distribution

5,047 TT and 617 2DC patients
8,617 person-years on TT and 756 person years on 2DC



Results: Patient demographics and clinical characteristics

- **Baseline patient-regimen characteristics differed between groups. Patients on 2DC were older and more treatment experienced but a higher proportion were virologically suppressed at switch.**

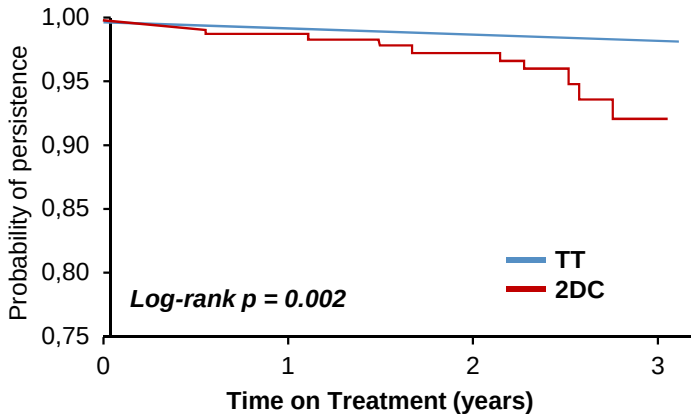
	TRIPLE THERAPY n=5047	2DC n=617	p-value
Age (years), Mean (SD)	48.1 (10.7)	52.0 (10.3)	<0.001
Gender, % Female	23.4	28.4	0.002
AIDS diagnosis, % Yes	23.2	26.7	0.026
CD4 count, % > 350 cells/microL	81.8	82.9	0.453
Viral Load, % < 50 copies/mL	81.0	90.2	<0.001
PWID, % Yes	26.6	30.3	0.029
Number of previous ART regimens, Mean (SD)	5.3 (3.6)	7.4 (4.6)	<0.001
Duration of ART regimens (years), Mean (SD)	12.0 (8.4)	14.9 (8.1)	<0.001
Number of previous virologic failures, Mean (SD)	1.1 (2.4)	1.5 (2.9)	<0.001
HCV (Ab+), % Yes	32.6	35.3	0.132
HBV, % Yes	4.1	1.8	0.004

VACH Cohort (Spain)

Triple Therapy vs 2-Drug Combinations: Risk of Discontinuation due to Treatment Failure*, Virologic Failure and AEs

A retrospective analysis using data from VACH cohort including all patients switching to INSTI-based TT (n=5,047) or to a 2DC (n=617) consisting of DTG+RPV or DTG+3TC between 02/05/2016 and 15/05/2019

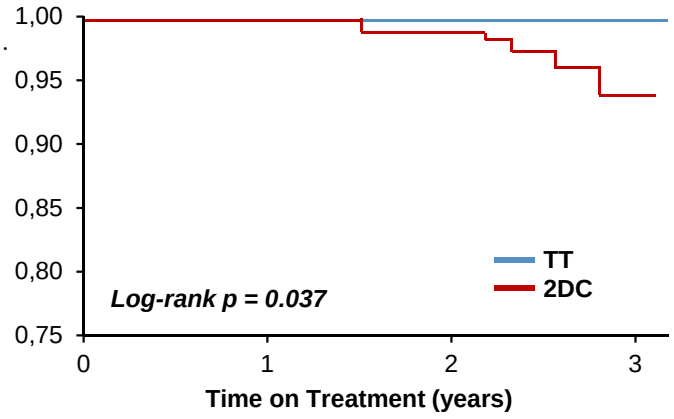
Treatment Failure*



TT	4977	4313	3620	2952	2250	1376	326
2DC	615	492	299	208	132	64	10

Cox Model	aHR [95% CI]†	P-value
2DC vs. TT	2.3 [1.3, 4.1]	**0.003**

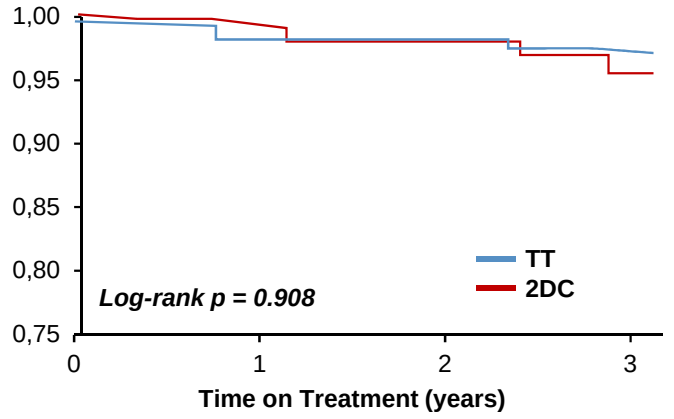
Virological Failure



	4977	4313	3620	2952	2250	1376	326
	615	492	299	208	132	64	10

Cox Model	aHR [95% CI]†	P-value
2DC vs. TT	2.2 [1.1, 4.5]	**0.024**

AEs



	4977	4313	3620	2952	2250	1376	326
	615	492	299	208	132	64	10

Cox Model	aHR [95% CI]†	P-value
2DC vs. TT	0.8 [0.4, 1.5]	**0.488**

After controlling for demographic and clinical characteristics, risk of discontinuation due to treatment failure was 2.3 times higher on 2DC vs TT (p=0.003). No difference between groups in time to and risk of discontinuation due to AEs

***** Defined as clinician report of switch due to virological failure, immunological failure or disease progression. † Adjusted for demographic and clinical characteristics

Teira R, et al. EACS 2019. Basel, Switzerland. PS 8/5

Gilead Investigator-Sponsored Study

Summary

- At present, treatment for HIV is lifelong
- Effective and well tolerated antiviral regimens have been defined, with over two decades of experience demonstrating the success of three drug regimens
- Research continues to improve the lives of people living with HIV

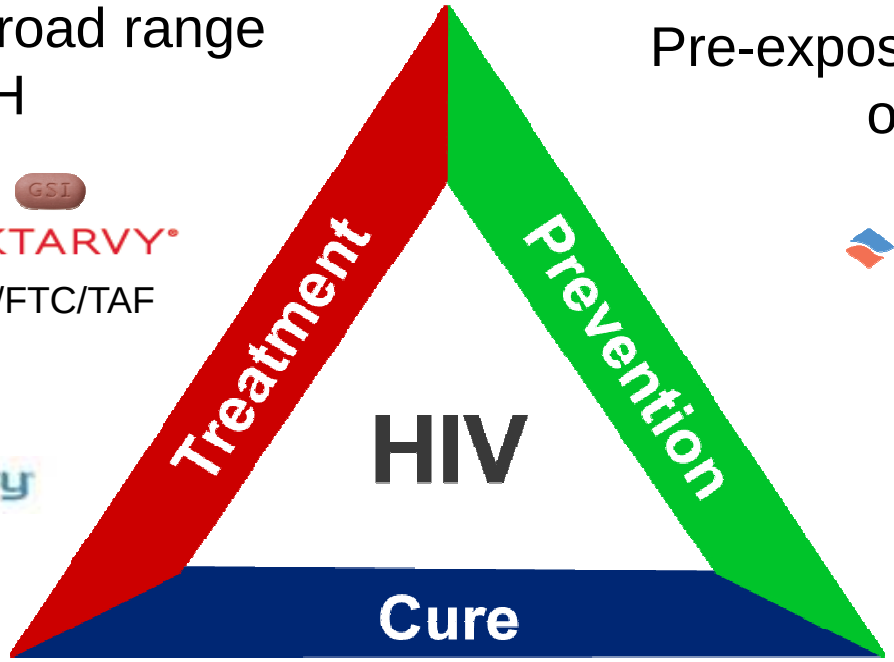
‡

Gilead's Commitment to HIV

Treatment for a broad range of PLWH

BIKTARVY®
BIC/FTC/TAF

Descovy
FTC/TAF



Pre-exposure prophylaxis of HIV-1

Truvada
FTC/TDF
FTC/TAF

Finite treatment to achieve HIV cure