AETC AIDS Education & Training Center Program Mountain West

November 2021 AIDS Clinical Conference: ART Update: New Guidelines & Medications

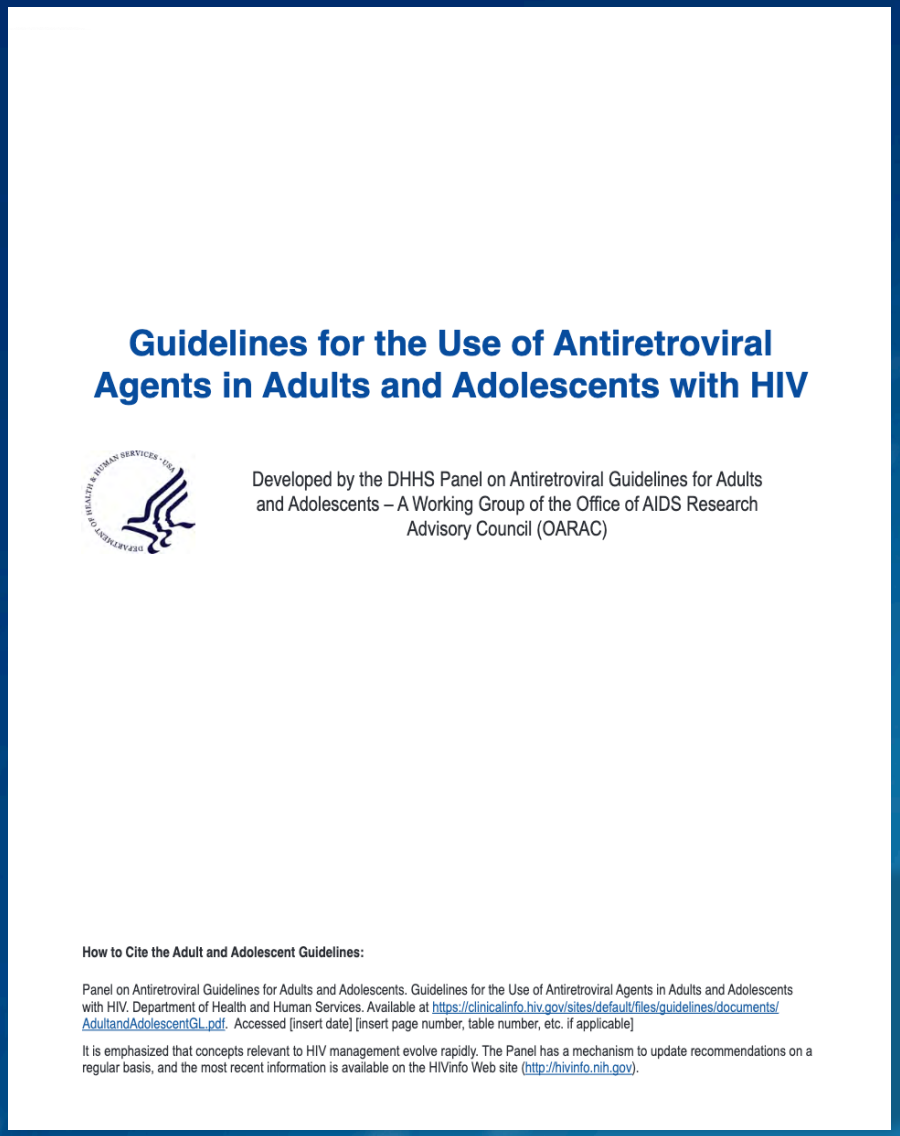
Brian R. Wood, MD
Associate Professor of Medicine
University of Washington
Mountain West AIDS Education & Training Center

November 16, 2021

Disclosures

No conflicts of interest or relationships to disclose.

HHS Adult and Adolescent HIV Treatment Guidelines
Updated June 3rd, 2021



Guidelines for the Use of Antiretroviral Agents in Adults and Adolescents with HIV

Developed by the DHHS Panel on Antiretroviral Guidelines for Adults and Adolescents – A Working Group of the Office of AIDS Research Advisory Council (OARAC)

How to Cite the Adult and Adolescent Guidelines:

Panel on Antiretroviral Guidelines for Adults and Adolescents. Guidelines for the Use of Antiretroviral Agents in Adults and Adolescents with HIV. Department of Health and Human Services. Available at https://clinicalinfo.hiv.gov/sites/default/files/guidelines/documents/AdultandAdolescentGL.pdf. Accessed [insert date] [insert page number, table number, etc. if applicable]

It is emphasized that concepts relevant to HIV management evolve rapidly. The Panel has a mechanism to update recommendations on a regular basis, and the most recent information is available on the HIVinfo Web site (http://hivinfo.nih.gov).

https://clinicalinfo.hiv.gov/en/guidelines

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Poll

In your opinion, which is the best option for initial ART for most individuals with HIV?

A) Bictegravir/FTC/TAF

B) Dolutegravir + FTC/TAF

C) Dolutegravir + FTC/TDF

D) Dolutegravir/ABC/3TC

E) Dolutegravir/3TC

F) Something else

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What to Start
Recommended Initial ART Options

HHS (June 2021)[1*] Recommended for Most PWH	IAS-USA (October 2020)[2] Recommended for Most PWH
BIC/FTC/TAF	BIC/FTC/TAF
DTG + FTC/TAF or FTC/TDF DTG/ABC/3TC (if B*5701 neg and no HBV)	DTG + FTC/TAF or FTC/TDF
DTG/3TC (if VL <500k, no HBV, have baseline genotype results)	DTG/3TC (if VL <500k, no HBV, no active OI, not rapid start, can closely monitor adherence and VL, possibly only if CD4 >200)

**Change: moved RAL to recommended in certain clinical situations*

Question: would some individuals benefit from a non-INSTI option at initiation?

Abbreviations:
BIC – bictegravir, DTG – dolutegravir, RAL – raltegravir, ABC – abacavir, 3TC – lamivudine, FTC – emtricitabine, TDF – tenofovir disoproxil fumarate, TAF – tenofovir alafenamide, HBV - hepatitis B virus, PWH – persons with HIV

Sources:
1. HHS: clinicalinfo.hiv.gov 2. IAS-USA: ias-usa.org

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What to Start
Raltegravir Removed from "Recommended for Most PWH"

- Updated data show low overall prevalence of neural tube defects (NTD) with dolutegravir (DTG)
  - DTG back to "Preferred" category for conception & pregnancy
  - No longer an indication to choose raltegravir (RAL) over DTG
- RAL has a lower barrier to resistance than DTG and BIC
- RAL regimens have higher pill burden than other options

Tsepamo Study Outcomes	Conception	
	DTG	Non-DTG
Results as of April 2020	n = 3,591	n = 19,361
NTD prevalence (95% CI)	**0.19** (0.09-0.40)	**0.11** (0.07-0.17)

clinicalinfo.hiv.gov; Zash R et al. IAS 2020.

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Case #1

- 55-year-old Black cisgender man; HIV diagnosis in 2010
- Took EFV/TDF/FTC until 2016; viral loads routinely suppressed except one lapse for 6 months or so
- Switched to DTG/ABC/3TC due to depression; viral loads suppressed since
- No resistance on any historical genotypes
- Comorbidities: HTN, HLD, DM2 (A1C's range 8.0 to 10.0), osteopenia, osteoarthritis, chronic pain; no HBV
- Meds: atorvastatin, metformin, glipizide, lisinopril

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Poll

How much do you worry about abacavir raising the risk of ischemic cardiovascular events?

A) Not much
B) A little
C) A moderate amount
D) A lot

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Abacavir (ABC) and Cardiovascular Disease (CVD) Risk
A Brief Summary…

- No signal for CVD events in most randomized trials, but carefully selected patients with limited follow-up
- Many observational studies & systematic reviews find an association (current use, cumulative use, or recent use)
  - Concern for channeling/selection bias
- Credible mechanism? Yes: ABC causes platelet reactivity & activation; inflammatory, prothrombotic phenotype
  - Endothelial dysfunction, atherosclerotic plaque instability

Review:
Alvarez et al. AIDS 2017.
Systematic Reviews:
Dorjee K et al. Int J Animicrob Agents 2018.
Young J et al. JAIDS 2015.
Bavinger C et al. PLoS One 2013.

Mechanism:
van der Heijdan WA et al. JAIDS May 2021.
O'Halloran JA et al. AIDS 2018.
Satchell CS et al. JID 2011.
Khawaja AA et al. Circ Res 2020.
Hsue P et al. AIDS 2009.

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Poll

What would you recommend (ideally) for the patient?

A) Continue DTG/ABC/3TC
B) Switch to BIC/FTC/TAF
C) Switch to DTG/RPV
D) Switch to DTG/3TC
E) Switch to IM CAB/RPV
F) Switch to something else

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DHHS Guidelines
2-Drug Maintenance ART

- Growing evidence that some 2-drug regimens are effective in maintaining virologic control in patients who initiated ART and achieved suppression with a 3-drug regimen, provided their **HIV is susceptible to both drugs** in the new regimen and they **do not have chronic hepatitis B virus (HBV)**
- *June 2021 update*: focuses long-acting injectable (LAI) intramuscular (IM) cabotegravir (CAB)/rilpivirine (RPV)

DHHS Adult and Adolescent ARV Guidelines. "Optimizing Antiretroviral Therapy in the Setting of Virologic Suppression."

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DHHS Guidelines
2-Drug Maintenance ART Options

- Dolutegravir/rilpivirine (DTG/RPV)
  - SWORD 1&2: n = 1,024, compared to TDF 3-drug regimens
  - Criteria: HIV RNA <50 for ≥6 months, no more than one HIV RNA 50-200 for >12 months, taking 1st or 2nd ART regimen, no history of VF, no major drug-resistance mutations, no HBV
- Dolutegravir/lamivudine (DTG/3TC)
  - TANGO: n=741, compared to TAF 3-drug regimens
  - Criteria: HIV RNA <50 for ≥6 months, no history of VF, no resistance to DTG or 3TC, no HBV
- Boosted PI + 3TC, boosted darunavir + DTG

DHHS Adult and Adolescent ARV Guidelines. "Optimizing Antiretroviral Therapy in the Setting of Virologic Suppression."

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POLL

How many of your patients or clients are currently receiving long-acting IM cabotegravir/rilpivirine (CAB/RPV)?

A) 0

B) 1-5

C) 6-10

D) >10

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Summary of Key Studies
Cabotegravir (CAB)/Rilpivirine (RPV) Long-Acting Injectable

- Phase 2 Trials in Treatment-Naïve
  - LATTE: oral CAB/RPV daily vs. EFV plus 2 NRTI's
  - LATTE-2: IM CAB/RPV q1 or 2 months vs. oral CAB + ABC/3TC
- Phase 3 Trials in Treatment-Naïve
  - FLAIR: IM monthly CAB/RPV vs. oral DTG/ABC/3TC
- Phase 3 Trials in Treatment-Experienced
  - ATLAS: switch to monthly IM CAB/RPV vs. continue 3-drug ART
  - ATLAS-2M: switch to IM CAB/RPV every 4 vs. 8 weeks

See the National HIV Curriculum for details and slides on these trials: hiv.uw.edu

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IM Cabotegravir/Rilpivirine (CAB/RPV)
FDA Indication

- **Indication**
  - Replace ARV regimen in persons with HIV RNA <50
  - Taking stable ARV regimen
  - No history of treatment failure
  - No known or suspected resistance to CAB or RPV
  - No hepatitis B

Source: Cabenuva Prescribing Information

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IM Cabotegravir/Rilpivirine (CAB/RPV)
Dosing Schedule

Oral Lead-In x 1 month (≥28 days)

Cabotegravir 30 mg daily +
Rilpivirine 25 mg daily

***Initiation Injections (x 1)**

Cabotegravir (600 mg): 3 mL IM +
Rilpivirine (900 mg): 3 mL IM

***Continuation Injections (<u>Monthly</u>)**

Cabotegravir (400 mg): 2 mL IM +
Rilpivirine (600 mg): 2 mL IM

*Administer injections at opposite gluteal sites (or at least 2 cm apart) and give both during the same visit.

Source: Cabenuva Prescribing Information

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IM Cabotegravir/Rilpivirine (CAB/RPV)
Oral Therapy for Missed Injections

Oral Bridge Therapy for Planned and Unplanned Missed Injections	
Time Since Last Injection	**Recommendation for Oral Bridging***
Planned Missed Injection • Time from last injections is greater than 1 month + 7 days	• Take daily oral therapy to replace up to 2 consecutive monthly injection visits. • Start oral therapy approximately 1 month after the last injection doses. • Continue oral therapy until the day injection dosing is restarted.
Unplanned Missed Injection • Time from last injections is greater than 1 month + 7 days	• If oral therapy has not been taken, reassess patients clinically to ensure resumption of injections remains appropriate.**

*Oral therapy = cabotegravir 50 mg plus rilpivirine 25 mg, both taken once daily with food
**If >2 months since last injection and resuming LAI CAB/RPV, repeat loading dose
Note: if stopping LAI CAB/RPV, levels may remain in systemic circulation for up to 12 months; essential to start suppressive oral ART at 1 month after the last injection (missed doses may lead to resistance)

Source: Cabenuva Prescribing Information

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IM Cabotegravir/Rilpivirine (CAB/RPV)
Outstanding Clinical Questions

FDA to rule on q8-week dosing by 12/21/21

- Need to know HIV subtype or order archive genotype?
  - Predictors of virologic failure (n = 13/1,039 at 48 weeks):*
    1) Subtype A1/A6 virus
    2) ≥2 RPV resistance mutations
    3) BMI ≥30
    4) Lower RPV trough concentrations
  - 9/13 participants with VF had 2 or more risk factors
- Role for every 8-week dosing?
- Oral lead-in phase necessary?
- Risks of missed doses? Or stoppage?

***Predictors of IM CAB/RPV virologic failure: Cutrell AG et al. AIDS 2021. Elliot E et al. EACS 2021. (Elevated BMI alone not a predictor of VF)**

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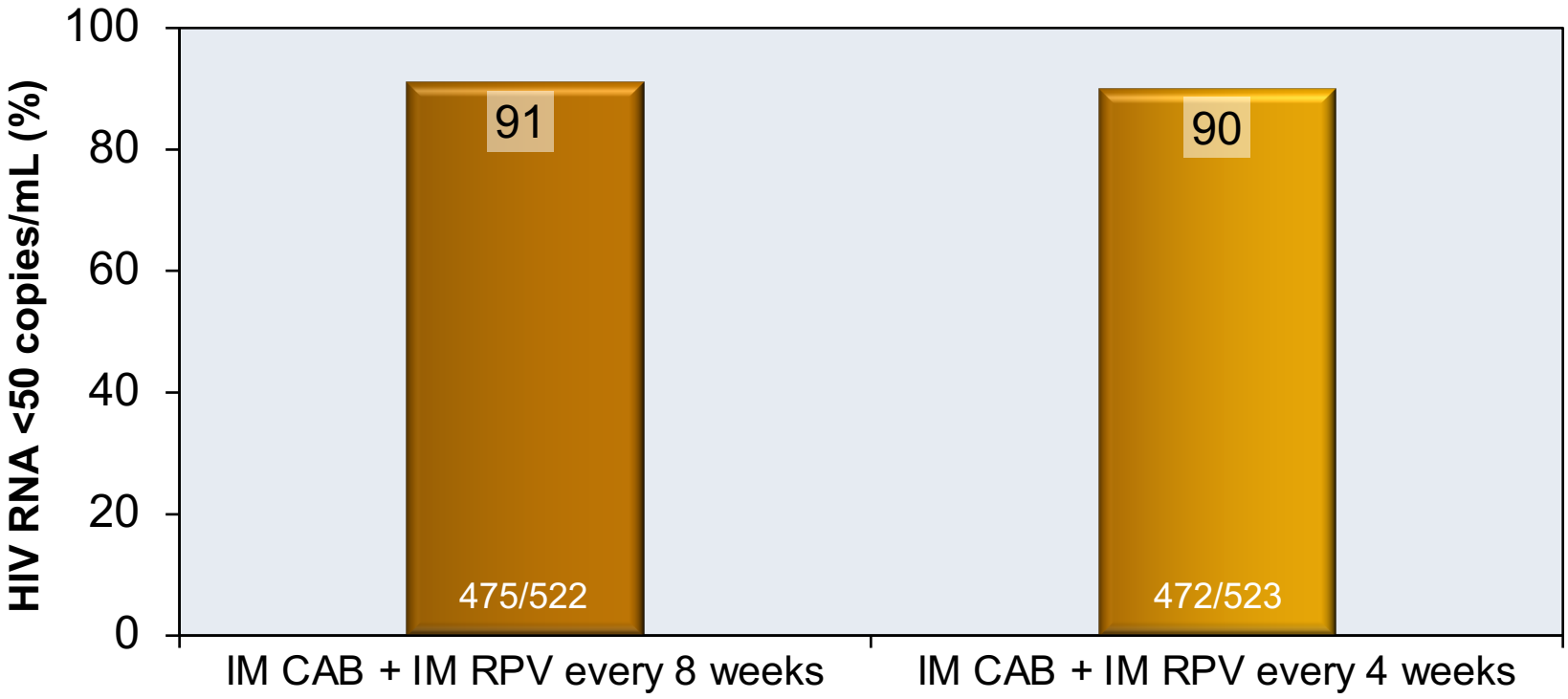
IM Cabotegravir/Rilpivirine Every 2 Months vs Every 1 Month
ATLAS-2M Study: Results

Weeks 96: Virologic Response by FDA Snapshot Analysis



Confirmed virologic failure (CVF): 9/522 (2%) q8-week arm & 2/523 (0.4%) q4-week arm
55% of CVF cases had ≥2 of the predictors of VF previously described
91% of CVF cases re-suppressed on oral ART (most included boosted PI)

Source: Jaegger H et al. Lancet HIV. Oct 2021.

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IM Cabotegravir/Rilpivirine "Direct-To-Inject"
Open-Label Phase of FLAIR Study: Oral Lead-In Optional

- At week 100, participants in oral ART arm could choose to switch to IM CAB/RPV or withdraw (232 chose IM ART)
  - Participants could choose oral lead-in or direct-to-inject
  - 121 opted for oral lead-in (OLI), 111 direct-to-inject (DTI)
  - Comparisons made to those who continued IM CAB/RPV
- 24 weeks later, the groups had similar safety and tolerability; similar efficacy to long-term IM CAB/RPV

Orkin C et al. Lancet HIV, Oct. 2021.
Editorial: Llibre J, Sax P. Lancet HIV, Oct 2021.

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Case #2

- A 40-year-old African-born cisgender woman presents for follow-up in clinic
- Diagnosed with HIV in 2015; took NVP + 3TC/TDF then EFV/3TC/TDF
- Moved to US in 2019; ART switched to DTG + FTC/TAF
- Since that time, viral load routinely suppressed but has gained ≈ 30 lbs.
- Comorbidities: HTN, osteoarthritis, depression

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Poll

- What would you recommend for ART?
  - A) Continue dolutegravir + FTC/TAF
  - B) Switch to doravirine + FTC/TAF
  - C) Switch to dolutegravir + FTC/TDF
  - D) Switch to doravirine/3TC/TDF
  - E) Switch to dolutegravir/3TC
  - F) Switch to dolutegravir/rilpivirine
  - G) Switch to something else

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Cisgender Women with HIV
HHS June 2021 Update

- New review of literature on ART-associated weight gain:
  - Clinicians should consider the possibility of weight gain in women when initiating or changing ART
  - Underlying mechanisms and impact on CVD, DM, pregnancy, and age-related comorbidities *unknown*
  - *Unclear whether switching* to a non-INSTI-based regimen results in reversal of weight gain
  - *Significant uncertainty* whether INSTIs cause weight gain vs comparator drugs suppress weight gain

CROI 2021
Weight Gain Studies: Consequences

- REPRIEVE: n=4,500, INSTI >6 months vs non-INSTI
  - INSTI: greater BMI, waist circumference, likelihood of obesity
  - *No association* with abnormal fasting glucose or LDL, metabolic syndrome, HTN

Difference in Mean	All	Female	Male
BMI (kg/m^2)	**1.45 (1.03, 1.88)**	**2.47 (1.44, 3.49)**	**1.13 (0.77, 1.49)**
Waist circumference (cm)	**3.62 (2.51, 4.64)**	**5.04 (2.76, 7.32)**	**2.82 (1.84, 3.80)**
Fasting glucose (mg/dL)	-0.019 (-0.96, 0.92)	0.47 (-1.49, 2.42)	-0.17 (-1.18, 0.83)
Fasting LDL (mg/dL)	-0.88 (-3.01, 1.25)	0.25 (-4.12, 4.51)	-0.72 (-2.93, 1.49)
Odds Ratio	**All**	**Female**	**Male**
Obesity	**1.63 (1.39, 1.91)**	**1.74 (1.32, 2.29)**	**1.58 (1.32, 1.89)**
Metabolic syndrome	0.92 (0.79, 1.07)	1.23 (0.92, 1.54)	0.91 (0.77, 1.07)
Hypertension	1.14 (0.99, 1.32)	1.08 (0.82, 1.42)	1.10 (0.94, 1.28)

Lo et al. CROI 2021.

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CROI 2021
Weight Gain Studies: Mechanisms

- Atlanta Women's Interagency HIV Study: "Metabolomics"[1]
  - 18 women with >5% body weight increase after INSTI + 15 without
  - Switch affected bioenergetic pathways that lead to insulin resistance
  - Altered mitochondrial utilization of fuels → "metabolic inflexibility," dysregulation of insulin signaling, storage of excess fat
- Mouse model: DTG, BIC, or DOR given to female mice[2]
  - *In vitro*:
    - DTG/BIC induce white adipocyte differentiation, lipid accumulation
    - DTG/BIC strongly affect mitochondria in brown/beige adipocytes
      - Suppress thermogenesis (estrogen-mediated pathways)
  - *In vivo*:
    - DTG inhibits oxygen consumption & energy expenditure by 15%

1. Lahiri CD et al. CROI 2021. 2. Jung I et al. CROI 2021.

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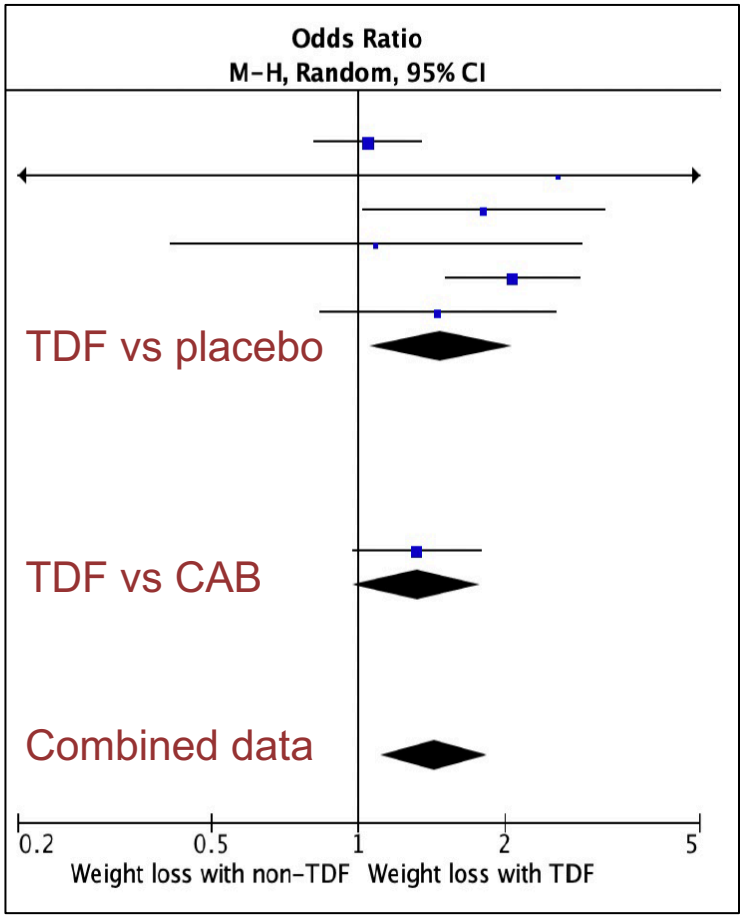
ID Week 2021
Systematic Review of TDF-Associated Weight Loss

- 7 PrEP trials included (total n = 19,359)
- TDF: associated with >5% weight loss when compared to placebo or CAB in persons without HIV (OR 1.44, 95% CI 1.12–1.85, p=0.005)
- TDF: greater odds of vomiting (OR 1.81, 95% CI 1.20-2.73, p <0.005); no increased odds of nausea, diarrhea, appetite loss



Shah S et al. ID Week 2021.

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Weight Gain with ART
My Interpretation & Strategy

Remember ACTG 5391!

- *Consider:*
  - GEMINI: DTG/3TC vs DTG + FTC/TDF → less weight gain w/TDF[1]
  - TANGO: DTG/3TC vs DTG + FTC/TAF → no difference in weight gain[2]
- *My interpretation*:[3]
  - Convincing data that TDF and EFV suppress weight
  - INSTI's, esp. DTG/BIC, can cause excess weight, insulin resistance, higher likelihood of metabolic syndrome for some individuals (not all)
  - Credible mechanisms for INSTI effects & sex differences described
  - For many, changes stabilize by 9-12 months
  - Data for reversability limited to case reports
- *My strategy*:
  - Case-by-case discussion and shared decision-making

1. Cahn P et al. JAIDS 2019. 2. Osiyemi O et al. ID Week 2021.
3. Wood BR, Huhn GD. OFID 2021.

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Case #4

- 52-year-old cisgender man with longstanding HIV
- Viral load suppressed on RPV/FTC/TAF for several years
- Only prior ART: EFV/FTC/TDF
- Lapse in adherence following onset of COVID-19 pandemic
- Viral load rebound to 1,250 copies/mL
- Genotype: E138K, M184V

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Poll

- Which regimen would you recommend (ideally)?
  - A) Bictegravir/FTC/TAF
  - B) Bictegravir/FTC/TAF + doravirine
  - C) Bictegravir/FTC/TAF + darunavir/cobicistat
  - D) Darunavir/cobicistat/FTC/TAF
  - E) Something else

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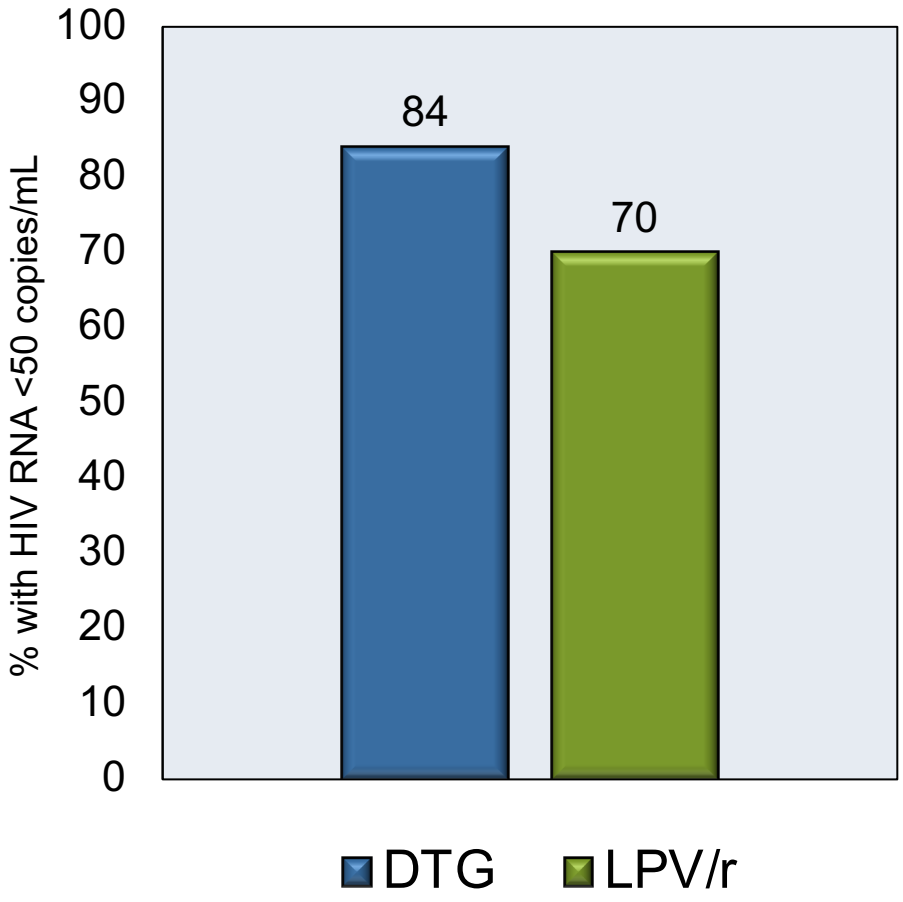
Virologic Failure (VF)
HHS June 2021 Update

- Old language: “A new regimen should include at least two, and preferably three, fully active agents (AI)”
- **New language: “A new regimen can include two fully active drugs if at least one with a high resistance barrier is included (e.g. DTG or boosted darunavir) (AI)”**
  - Why? Accumulating clinical trial data showing that a regimen with two fully active ARV’s effectively achieves viral suppression, provided one drug has high resistance barrier
- Also added data on fostemsavir as part of salvage ART

DAWNING Study
DTG vs LPV/r after Virologic Failure on NNRTI Regimen

Overall Virologic Suppression Rate at 48 Weeks

- DTG vs LPV/r, each w/ 2 NRTI's, after VF on NNRTI regimen
- M184V/I +/- other NRTI mutations in 82% of 624 participants
- N=627; trial stopped because DTG did so well
- Regardless of M184V/I, FTC/3TC use (DTG + 1 active NRTI sufficient)
- Zero cases of VF with new resistance if baseline only M184V/I



Aboud M et al. Lancet Infect Dis 2019;19:253-64.

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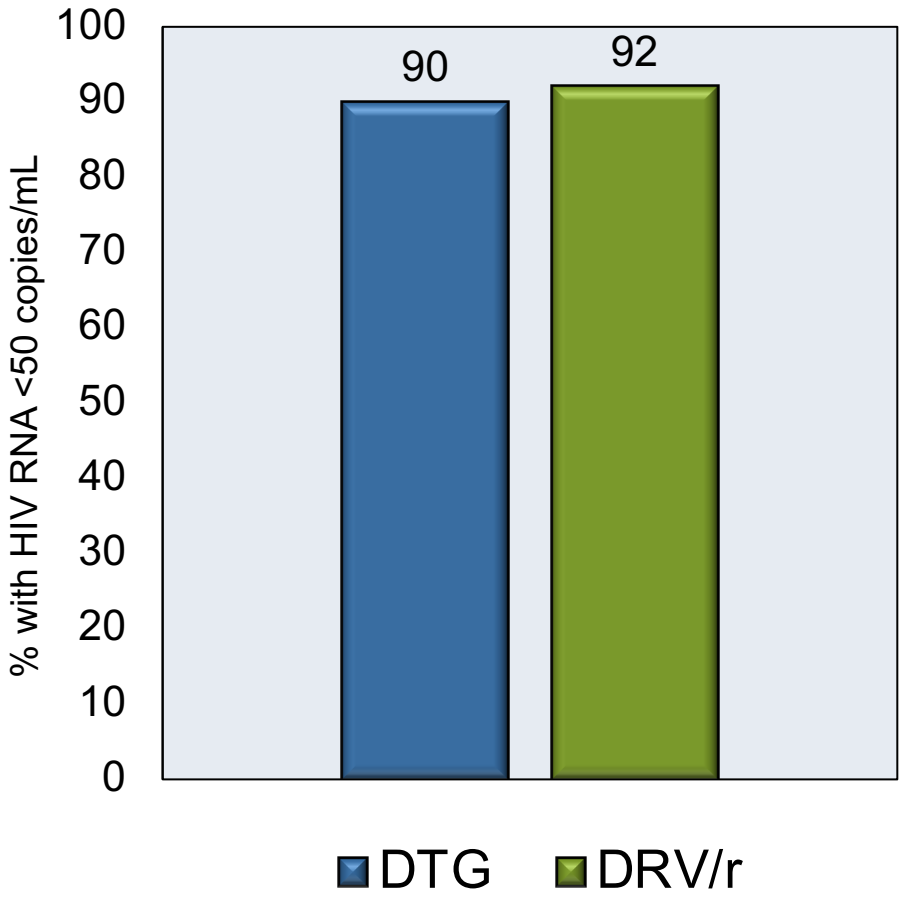
NADIA Study
DTG vs DRV/r after Virologic Failure on NNRTI Regimen

Overall Virologic Suppression Rate at 48 Weeks

- DTG vs DRV/r, each with TDF/3TC or AZT/3TC, after VF on NNRTI regimen
- N=464; 87% M184V, 50% K65R
- Similar results if: VL >100k, TDF or AZT, no predicted NRTI activity (NRTI's with zero activity added to DTG or DRV/r)
- 4 cases new INSTI RAM's w/DTG
- Supports TLD as first- and second-line ART in resource-limited settings



Paton N et al. CROI 2021 & NEJM July 2021.

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Additional Data for 1 High-Barrier to Resistance ARV (DTG, BIC, or boosted PI) + 1 Active ARV

- With detectable viral load:
  - GEMINI: DTG + 3TC as baseline ART
  - ANDES: DRV/rtv + 3TC as baseline ART
  - PREZENT: DRV/cobi + RPV as baseline ART
- With suppressed viral load:
  - BRAAVE 2020: switch 2:1 BIC/FTC/TAF vs cont. 3-drug ART
    - Resistance allowed, except K65R, ≥3 TAM's, primary INSTI
    - Baseline M184V/I in 11% (51/471), TAM's in 7% (34/471)
    - VL suppression at week 48: 95-97%

GEMINI: Cahn P et al. Lancet 2019.
ANDES: Figueroa MI et al. CROI 2018.
PREZENT: Gathe Jr J et al. IAS 2018.
BRAAVE 2020: Hagins D et al. OFID 2020.

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Virologic Failure
Translating Data & Guidelines to Practical Strategy

- High-barrier agent (DTG, BIC, or boosted DRV) fully active:
  - High-barrier agent + ≥1 active agent sufficient
    - If high viral load, consider adding 2 active agents to DTG, BIC, or boosted DRV then drop one once suppressed
  - Examples:
    - M184V: BIC/FTC/TAF generally sufficient
    - NRTI + NNRTI resistance: DTG + DRV/cobi
- No fully active high-barrier agent:
  - Aim for 3 active drugs
  - Example:
    - NRTI, NNRTI, PI, + INSTI resistance: combine agents like fostemsavir, ibalizumab, maraviroc if R5, OBR

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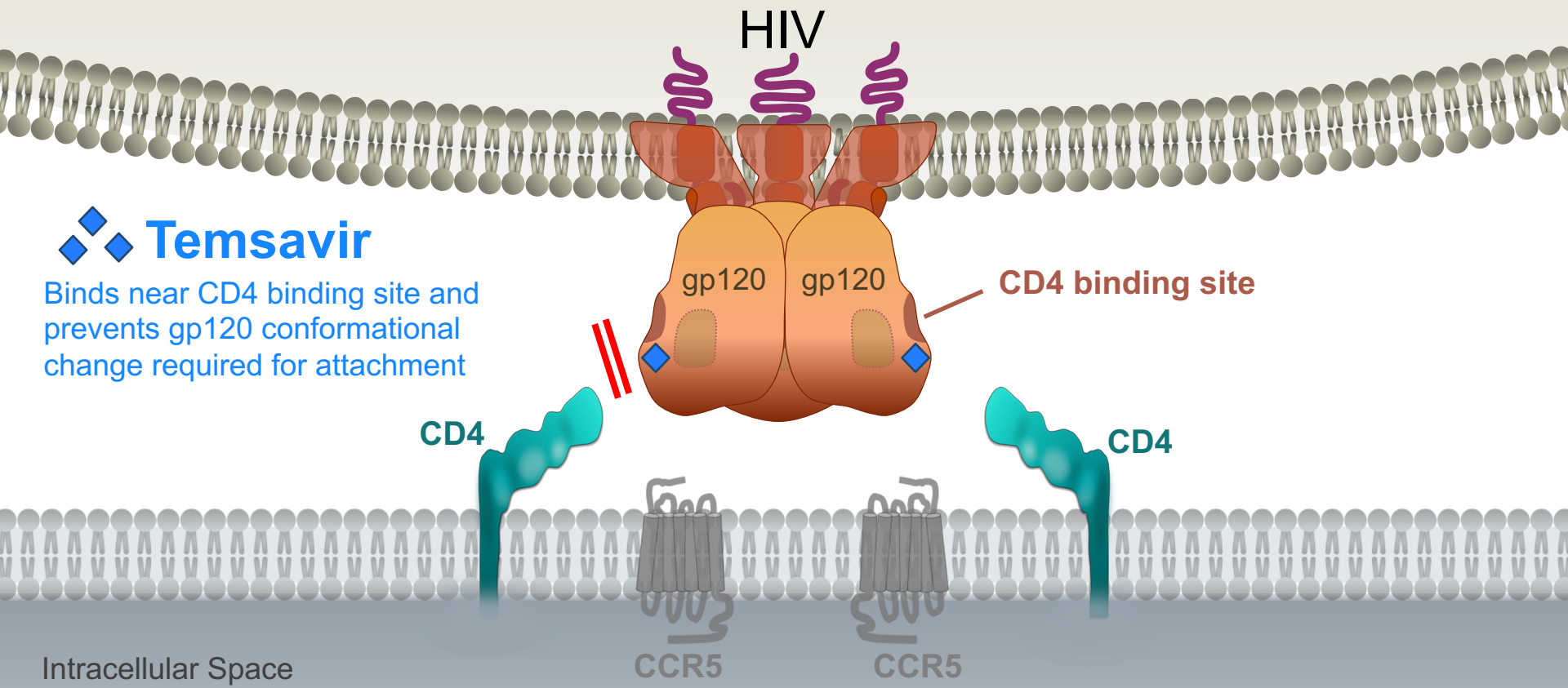
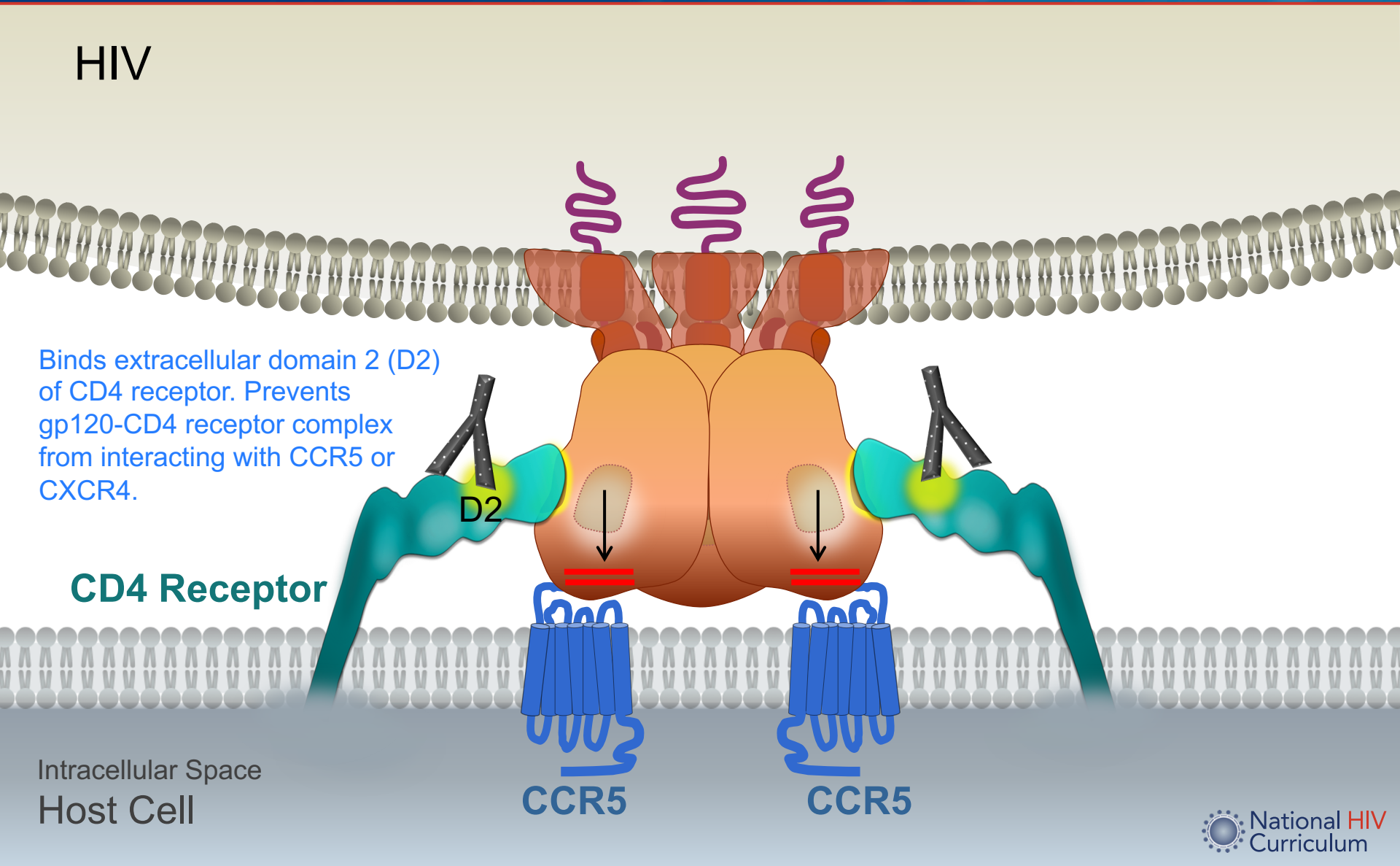
HIV Entry Inhibitors
Fostemsavir: Attachment Inhibitor (Oral, BID)

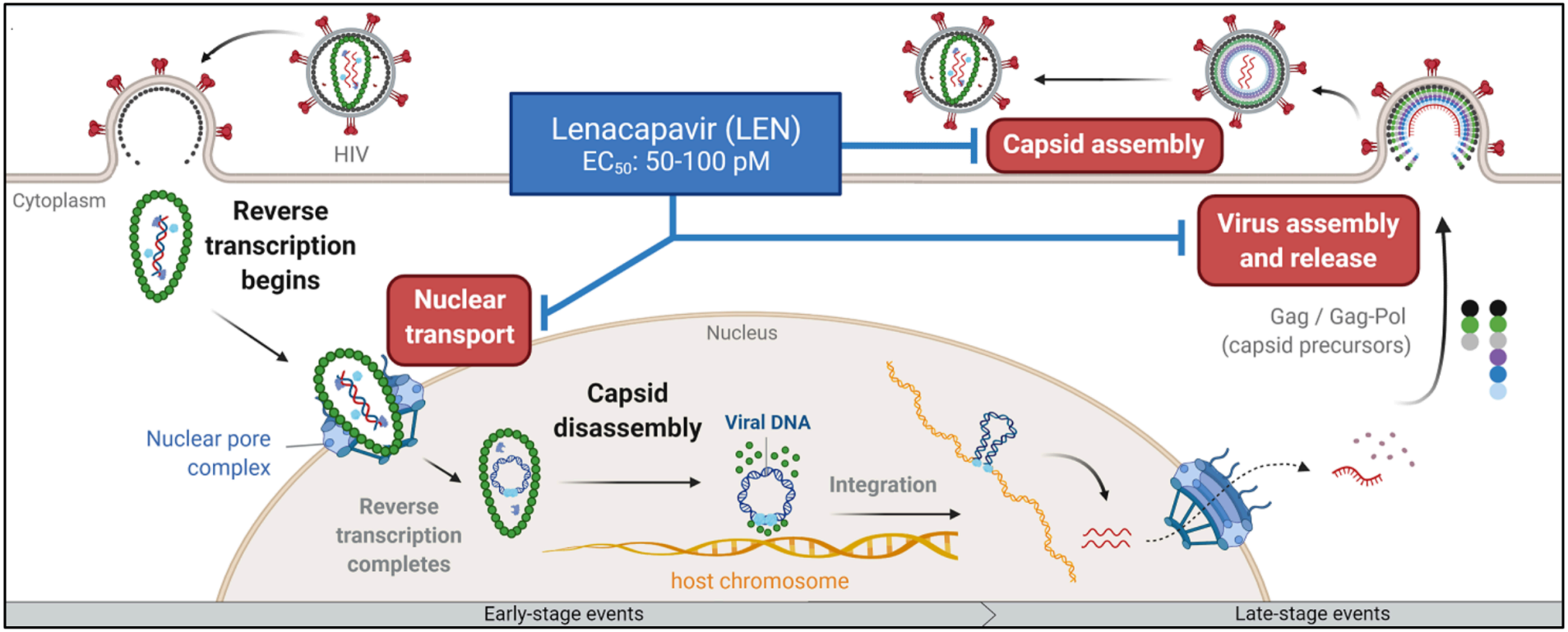
HIV



HIV Entry Inhibitors
Ibalizumab: Post-Attachment Inhibitor (IV, q2 weeks)



Lenacapavir (LEN)
Capsid Inhibitor: Mechanism of Action



LEN binds to the HIV capsid, interferes with transport via nuclear pores, stabilizes shell and inhibits disassembly, plus distorts the capsid lattice resulting in abnormal structure that prevents viral maturation (assembly and release).

Molina JM et al. IAS 2021. clinicalinfo.hiv.gov

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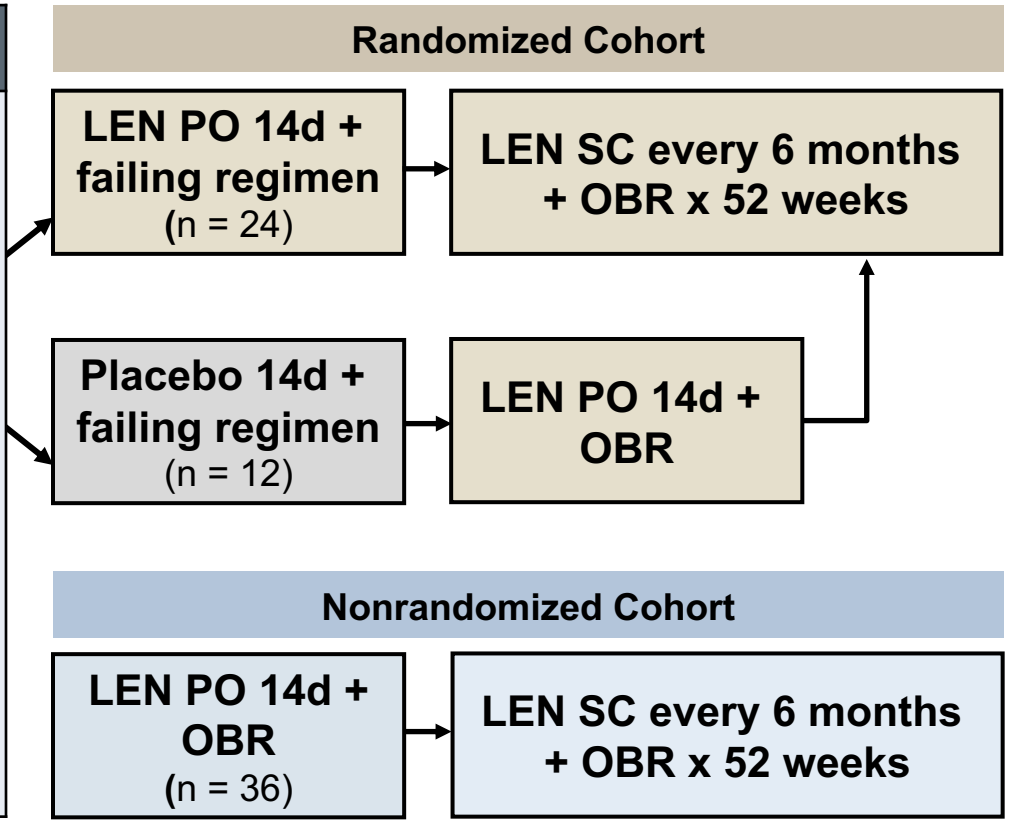
Lenacapavir (LEN)
CAPELLA Study: Background

Study Design: CAPELLA

- **Background**:
  - Phase 2/3, randomized controlled trial of lenacapavir for heavily treatment-experienced individuals
- **Enrollment Criteria:**
  - Highly ART-experienced adults
  - Virologic failure on current ART
  - HIV RNA >400 copies/mL
  - Resistance to ≥2 agents from ≥3 of 4 main ARV classes
  - ≤2 predicted active agents

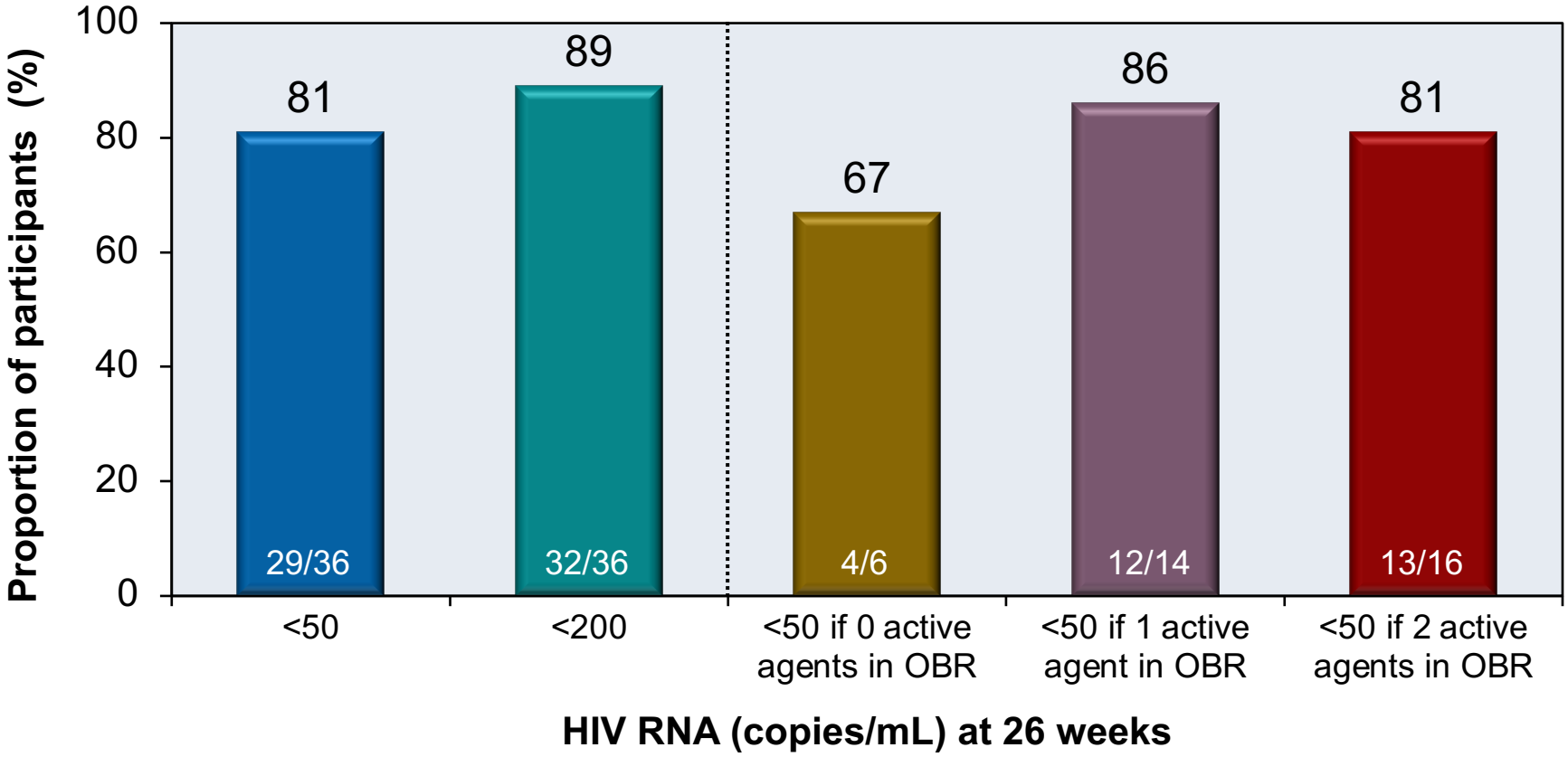


*Oral LEN for 14d = 600 mg day 1 & day 2 then 300 mg day 8; LEN SC = 927 mg (2 x 1.5 mL in abdomen)
*SC = subcutaneous; OBR = optimized background regimen

Source: Molina JM et al. IAS 2021.

Lenacapavir (LEN)
CAPELLA Study: Results

Virologic efficacy results at 26 weeks (randomized cohort only)



*4/36 (11%) developed VF with emergent capsid resistance (all functional LEN monotherapy)

Source: Molina JM et al. IAS 2021. Margot N et al. EACS 2021.

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Lenacapavir (LEN)
CALIBRATE: Treatment-Naïve Trial, 28-Week Data

28-Week Results	LEN SC + FTC/TAF → LEN SC/TAF	LEN SC + FTC/TAF → LEN SC/BIC	LEN PO + FTC/TAF	BIC/FTC/TAF
N	52	53	52	25
HIV RNA <50	94	92	94	100

- Resistance developed in 1/157 (0.6%) who received LEN
  - Participant in LEN SC + FTC/TAF → LEN/BIC arm
  - Never suppressed on LEN SC + FTC/TAF; VL rise week 10
  - LEN plasma concentrations in target range
  - Plasma FTC and TFV concentrations c/w expected PK
  - M184I/V first (M184I/V week 2, capsid mutations week 4)

VanderVeen et al. ID Week 2021.

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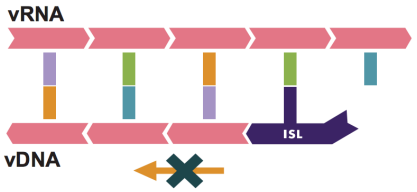
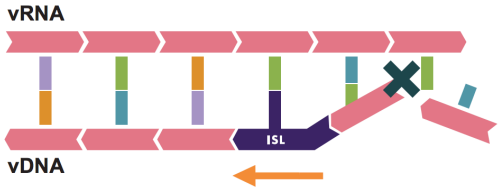
Islatravir (ISL)
NRTTI: Mechanism of Action & Potential Advantages

Translocation Inhibition



- Translocation inhibition prevents opening of the RT nucleotide binding site
- Nucleotides cannot be incorporated into vDNA
- **Viral replication is inhibited**

Delayed Chain Termination



- ISL changes vDNA structure such that nucleotide incorporation is prevented
- As ISL is not in the RT active site, it is not susceptible to resistance-conferring mutations
- **Viral replication is inhibited**

- Active against isolates with pre-existing NRTI resistance
- Potent viral load reduction plus high barrier to resistance
- Inhibitory quotient achieved with low doses & long half-life
- Per early trial data, appears metabolically neutral

McComsey G. CROI 2020.

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Summary of Key Treatment Studies
Islatravir (ISL) & Islatravir/Doravirine (ISL/DOR) Phase 2/3 Trials

- Treatment-Naïve
  - DRIVE2SIMPLIFY: ISL/DOR/3TC → ISL/DOR vs DOR/3TC/TDF

- Treatment-Experienced
  - ILLUMINATE A: switch to ISL/DOR vs cont. 3-drug ART
  - ILLUMINATE B: switch to ISL/DOR vs cont. BIC/FTC/TAF
  - MK-8591A-019: ISL/DOR for heavily treatment-experienced
  - GS-6041: switch to weekly oral ISL + LEN vs cont. BIC/FTC/TAF

Once-daily oral ISL/DOR: phase 3
Once-weekly oral ISL/MK-8507: phase 2
Once-weekly oral ISL/LEN: phase 2
Long-acting injectable ISL/LEN: phase 1

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POLL

- A 53-year-old man who takes BIC/FTC/TAF and has well-controlled HIV is diagnosed with latent tuberculosis (TB). What would you recommend for ART and for latent TB treatment, respectively?

A) BIC/FTC/TAF; 9 months INH with pyridoxine

B) DTG daily + FTC/TDF daily; 3 months INH + rifapentine weekly

C) DTG BID + FTC/TDF daily; 4 months rifampin daily

D) DTG BID + FTC/TDF daily; 3 months INH + rifampin daily

E) EFV/FTC/TDF daily; 1 month INH + rifapentine daily

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TB-HIV Coinfection
HHS June 2021 Update

- Key update: dolutegravir (DTG) 50 mg **once daily** may be used with **once-weekly rifapentine**, provided the patient does not require twice-daily DTG dosing (meaning no confirmed or suspected DTG resistance)

CDC Recommendations

Treatment of LBTI

Treatment of LTBI	"AKA"
Preferred	
Isoniazid (IN**H**)* + Rifapentine (R**P**T) x **3** months (weekly)	**3HP**
Rifampin (**R**IF) x **4** months (daily)	**4R**
Isoniazid (IN**H**)* + Rifampin (**R**IF) x **3** months (daily)	**3HR**
Alternative	
Isoniazid (IN**H**)* x **6 or 9** months (daily)	**6H or 9H**

Abbreviation: "AKA" = Also Known As. *Give with pyridoxine

- Avoid TAF with rifampin or rifapentine; TDF/FTC or ABC/3TC ok
- DTG daily with weekly rifapentine ok if no resistance; must be BID with rifampin
- 1HP endorsed by WHO; only studied with EFV, NVP, or no ART

Source: Centers for Disease Control and Prevention (https://www.cdc.gov/tb/topic/treatment/ltbi.htm)

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Questions or comments?
bwood2@uw.edu

Acknowledgment

The Mountain West AIDS Education and Training (MWAETC) program is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) as part of an award totaling $2,886,754 with 0% financed with non-governmental sources.

The content in this presentation are those of the author(s) and do not necessarily represent the official views of, nor an endorsement by, HRSA, HHS, or the U.S. Government.

AETC AIDS Education & Training Center Program Mountain West