

Women and HIV Cure Research

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RIGHT TO HEALTH



MY HEALTH, MY RIGHT.

Saturday, March 8, 2025
San Francisco AIDS Foundation
940 Howard Street
San Francisco, CA 94103

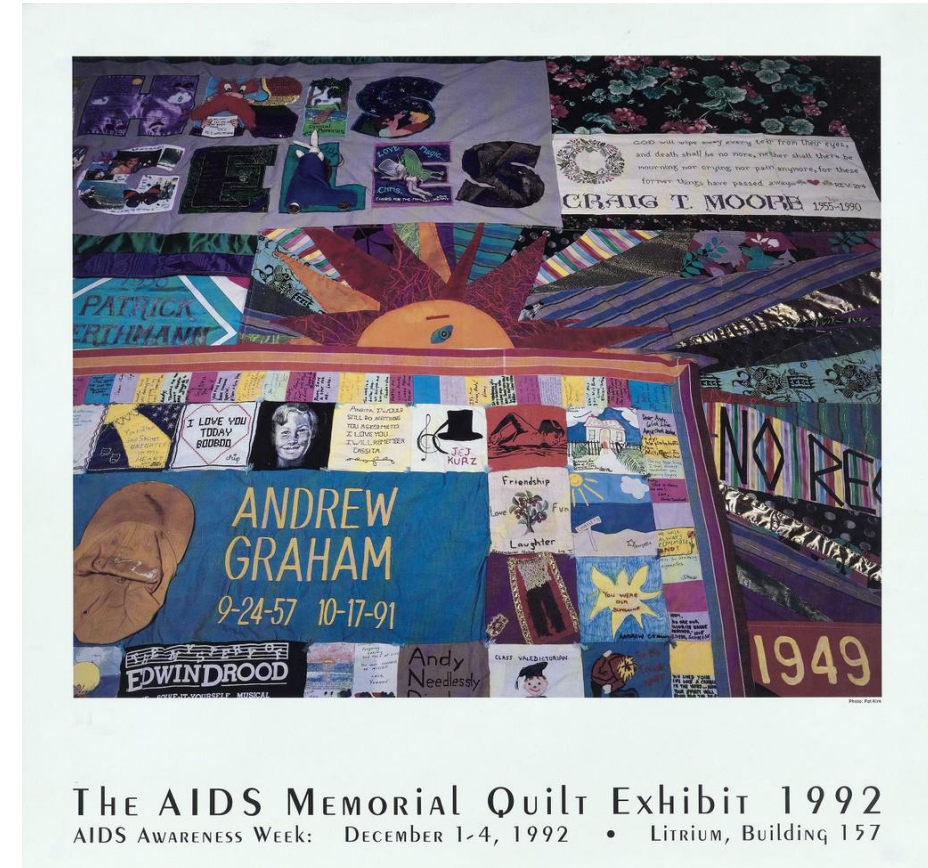
TAG

Treatment Action Group



Objectives of talk

- HIV epidemic in women
- Women and men are not the same
- Under-representation of women in trials including cure
- How to address



THE AIDS MEMORIAL QUILT EXHIBIT 1992
AIDS AWARENESS WEEK: DECEMBER 1-4, 1992 • LITRIUM, BUILDING 157



What percentage of the HIV infections worldwide are in women?

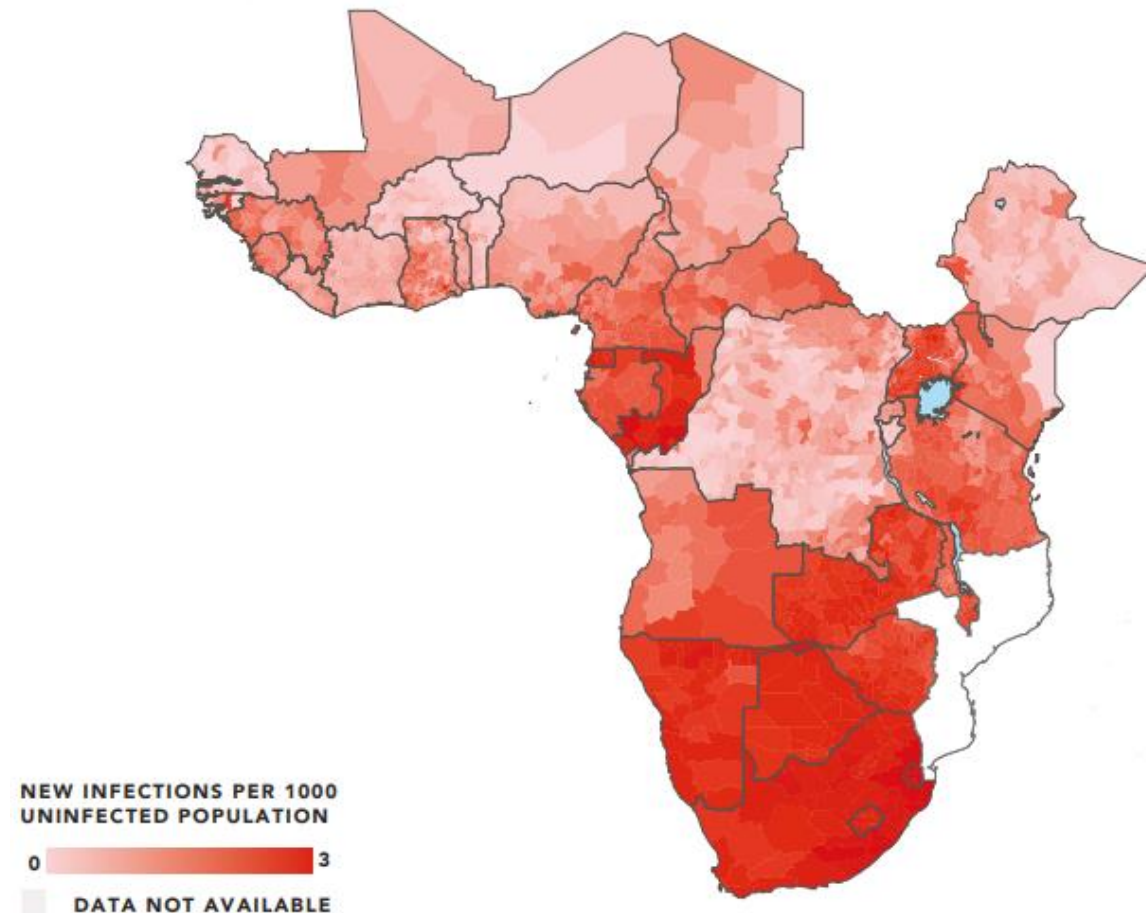
1. 25%
2. 35%
3. 40%
4. 53%
5. 60%

Adults and children estimated to be living with HIV | 2023



Every three minutes in 2023, an adolescent girl or young woman was newly infected with HIV

FIGURE 0.7 HIV incidence among adolescent girls and young women (aged 15–24 years), subnational levels, sub-Saharan Africa, 2021



THE URGENCY OF NOW



AIDS AT A CROSSROADS

Is HIV epidemic control by 2030 realistic?

THE LANCET
HIV

Chris Beyrer, Georgia D Tomaras, Huub C Gelderblom, Glenda E Gray, Holly E Janes, Linda-Gail Bekker, Gregorio Millett, Giuseppe Panico, Susan Buchbinder, Lawrence Corey

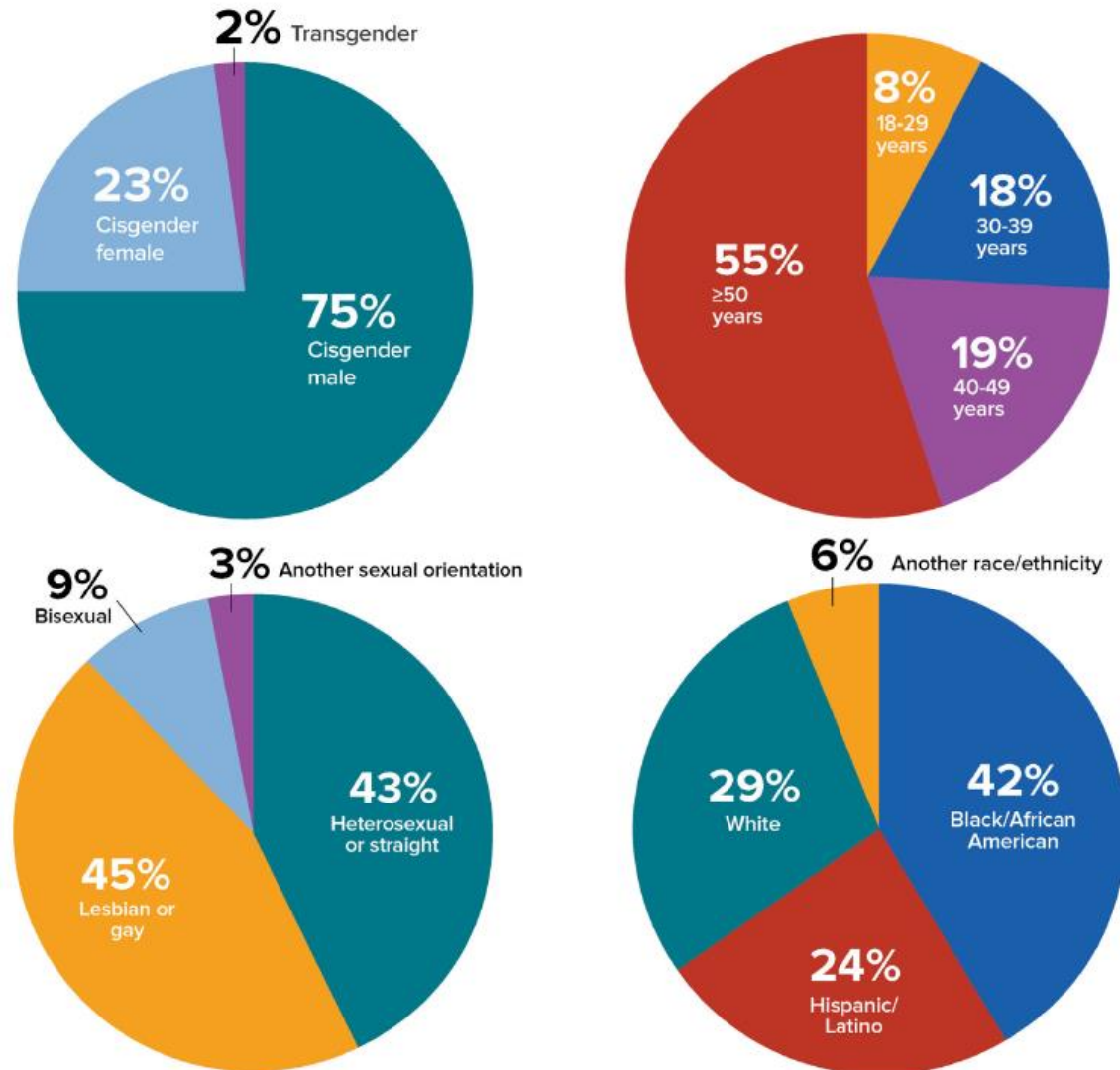
"HIV doesn't cause AIDS (it is poppers)" has been resurfacing but major threat to control...so is cutting off funding

UNAIDS update 2024 (AIDS at a Crossroads):

- 39.9 million people with HIV (highest) not counting Russia so probably >40 million
- 1.3 million new infections last year unchanged from 2022 update
- 630K deaths last year unchanged from 2022 update
- 43.3 million deaths total from beginning of epidemic and 88.4 HIV infections
- Only 77% on ART (72% suppressed)
- Stigma, rise of anti-LGBTQ sentiment, 8% loss of funding from 2020-23 playing roles

Women remain at around one-quarter of cases in the U.S.

Figure 2. Distribution of gender, age, sexual orientation, and race/ethnicity among adults with diagnosed Medical Monitoring Project, United States, 2020

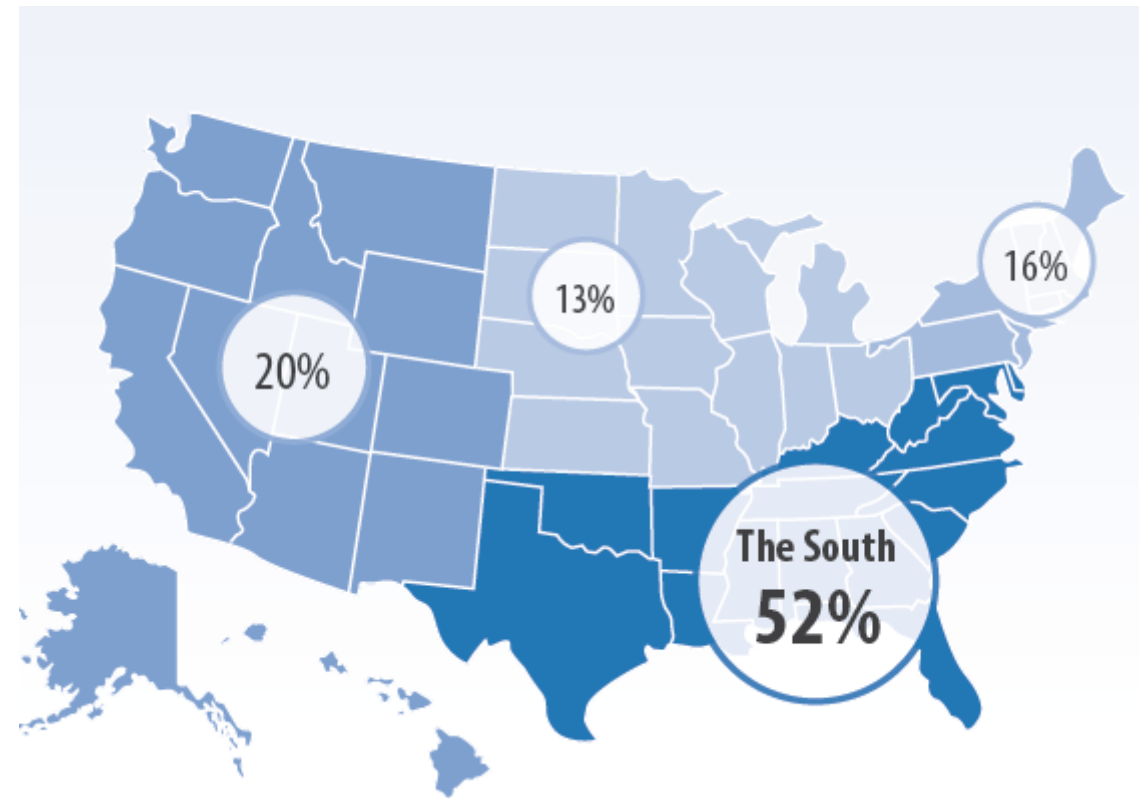
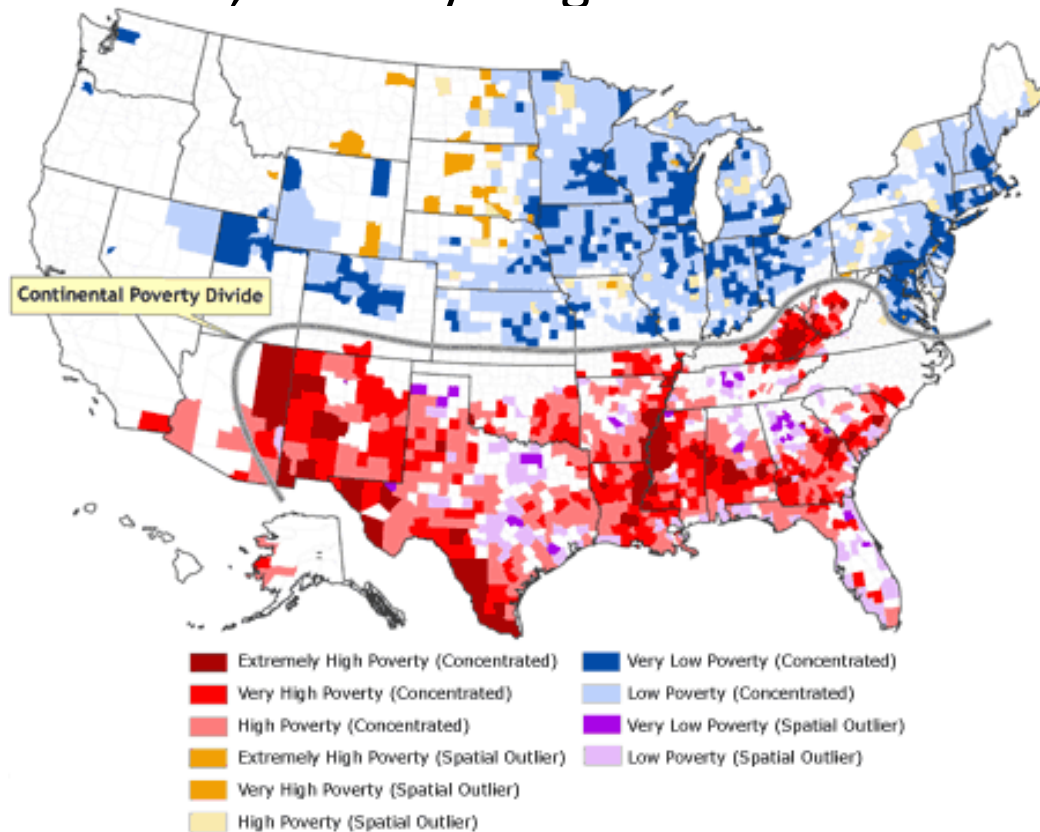


Behavioral and Clinical Characteristics of Persons with Diagnosed HIV Infection — Medical Monitoring Project, United States 2021 Cycle (June 2021–May 2022).



Risks in U.S. women cluster with poverty, disempowerment

- HIV in women clusters with poverty^{1,2}; interpersonal violence³; incarceration⁴⁻⁷; self-esteem, alcohol/drugs⁸



¹Amidora. STDs 2006; ²CDC Surveillance 2011; ³Wyatt. Am J Public Health 2002; ⁴Doherty. JAIDS 2009; ⁵Doherty. Am J Public Health 2007; ⁶Adimora. Am J Public Health 2007; ⁷Khan. J Urban Health 2009; ⁸Forna. J Natl Med Assoc. 2006

Women are different than men – different prevention modalities for instance

WHO recommends the dapivirine vaginal ring as a new choice for HIV prevention for women at substantial risk of HIV infection

26 January 2021 | Departmental news | Reading time: 2 min (644 words)

Notably, intermittent PrEP (2:1:1, on demand) with TDF/FTC and daily TAF/FTC to date only approved for men

nam aidsmap
HIV & AIDS - sharing knowledge, changing lives

News

About HIV

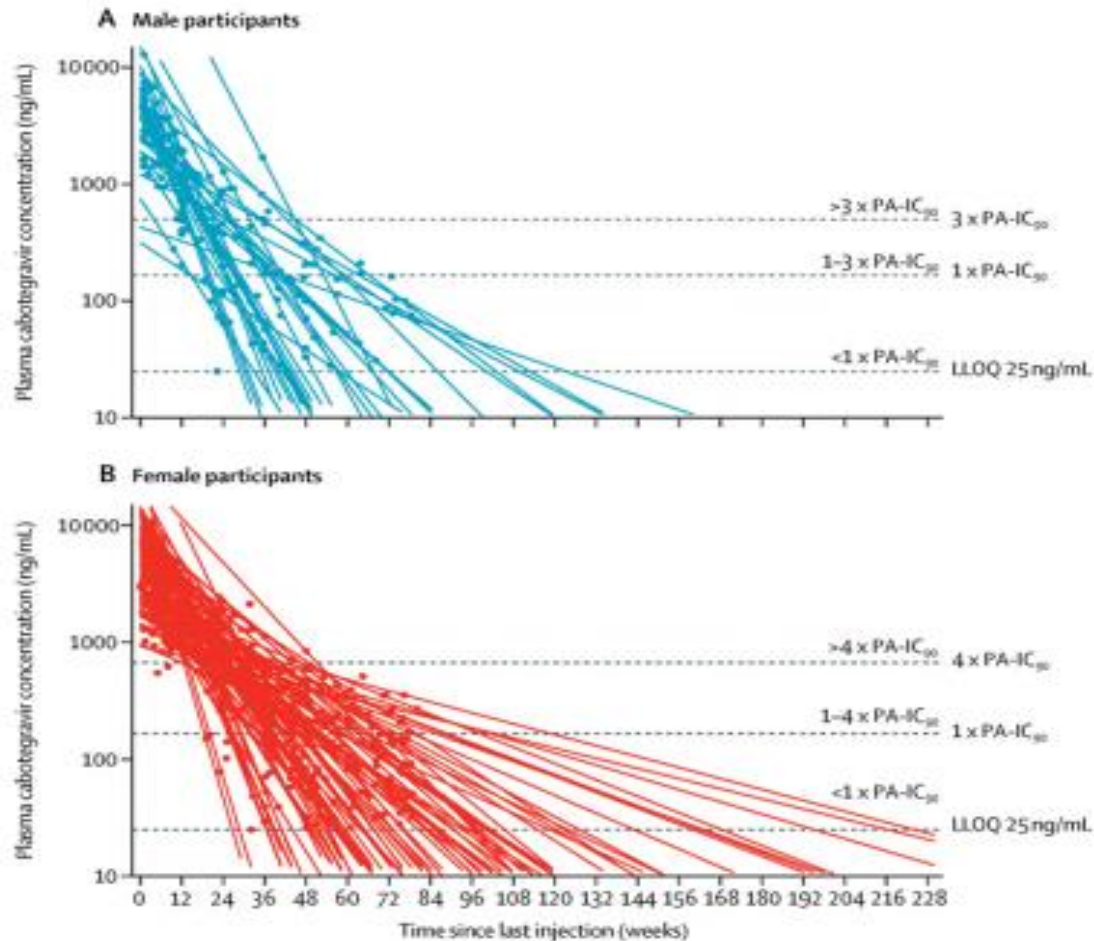
Vaginal rings & topical PrEP

US regulator's decision on vaginal ring denies choice to women who need HIV prevention

Roger Pebody | 6 September 2022 | Estimated reading time 5 minutes



CABOTEGRAVIR LA TAIL IS LONGER IN WOMEN THAN MEN- DIFFERENCE IN PHARMACOKINETICS



- Median time to undetectable cabotegravir is longer in women at 66.3 weeks (range 17.7 to 182) when compared to 42.7 weeks (range 20.4 to 134) in men



HPTN 077

Landovitz R. Lancet HIV. June 2020



PURPOSE

Prevention with PURPOSE

ORIGINAL ARTICLE

Twice-Yearly Lenacapavir or Daily F/TAF for HIV Prevention in Cisgender Women

L-G. Bekker, M. Das, Q. Abdool Karim, K. Ahmed, J. Bating, W. Brumskine, K. Gill, I. Harkoo, M. Jaggernath, G. Kigozi, N. Kiwanuka, P. Kotze, L. Lebina, C.E. Louw, M. Malahleha, M. Manentsa, L.E. Mansoor, D. Moodley, V. Naicker, L. Naidoo, M. Naidoo, G. Nair, N. Ndlovu, T. Palanee-Phillips, R. Panchia, S. Pillay, D. Potloane, P. Selepe, N. Singh, Y. Singh, E. Spooner, A.M. Ward, Z. Zwane, R. Ebrahimi, Y. Zhao, A. Kintu, C. Deaton, C.C. Carter, J.M. Baeten, and F. Matovu Kiweewa, for the PURPOSE 1 Study Team*

ABSTRACT

BACKGROUND

Twice-Yearly Lenacapavir or Daily Oral Emtricitabine/Tenofovir Alafenamide for HIV Prevention in Cisgender Women: Interim Analysis Results from the PURPOSE 1 Study

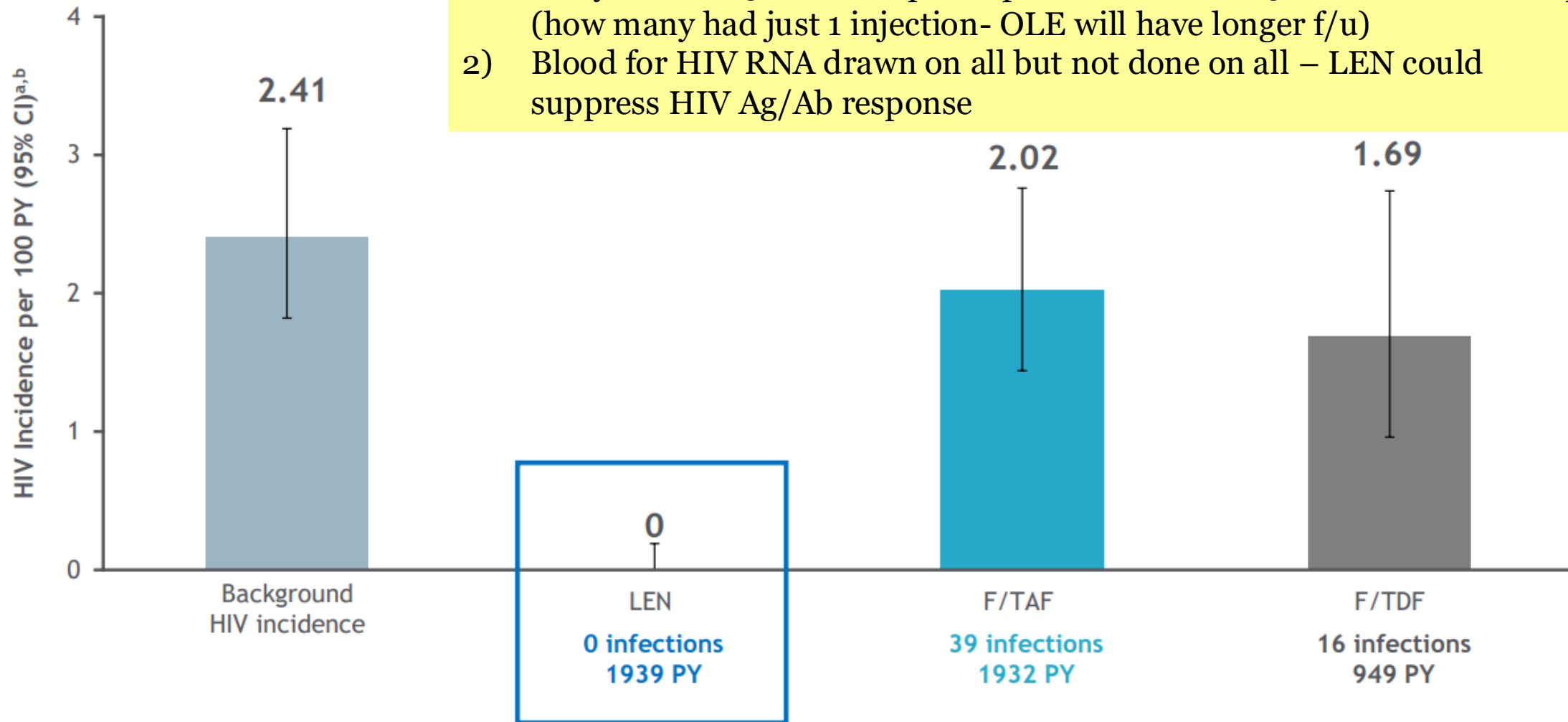
Linda-Gail Bekker, MBChB, PhD, on behalf of the PURPOSE 1 Study Team

The Desmond Tutu HIV Centre, University of Cape Town, Cape Town, South Africa

Zero HIV Infections in Cisgender Women receiving LEN

Two caveats:

- 1) Range of follow-up time not provided – this was a planned interim analysis when 50% of the participants had at least 52 weeks of follow-up (how many had just 1 injection- OLE will have longer f/u)
- 2) Blood for HIV RNA drawn on all but not done on all – LEN could suppress HIV Ag/Ab response



Gilead's Twice-Yearly Lenacapavir for HIV Prevention Reduced HIV Infections by 96% and Demonstrated Superiority to Daily Truvada[®] in Second Pivotal Phase 3 Trial

- *99.9% of Participants Did Not Acquire HIV Infection in the Lenacapavir Group, with 2 Incident Cases Among 2,180 Participants –*
- *PURPOSE 2 Trial Results for Cisgender Men and Gender-Diverse People Add to the Body of Evidence for the Investigational Use of Lenacapavir for HIV Prevention –*
- *Gilead Stopped the Blinded Phase of the Trial at Interim Analysis and Will Offer Open-Label Lenacapavir to All Participants –*

February 18, 2025

U.S. FDA Accepts Gilead's New Drug Applications for Twice-Yearly Lenacapavir for HIV Prevention Under Priority Review

THE NEW ENGLAND JOURNAL OF MEDICINE

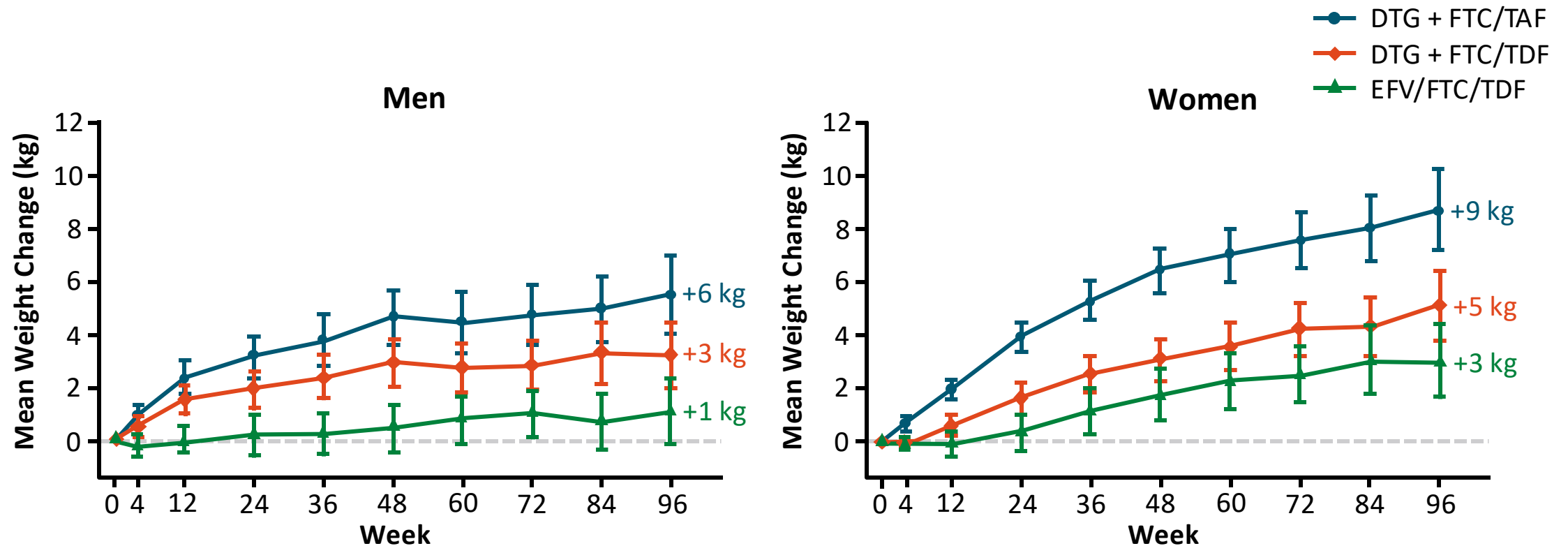
ORIGINAL ARTICLE

Twice-Yearly Lenacapavir for HIV Prevention in Men and Gender-Diverse Persons

C.F. Kelley, M. Acevedo-Quiñones, A.L. Agwu, A. Avihingsanon, P. Benson, J. Blumenthal, C. Brinson, C. Brites, P. Cahn, V.D. Cantos, J. Clark, M. Clement, C. Creticos, G. Crofoot, R.S. Diaz, S. Doblecki-Lewis, J.A. Gallardo-Cartagena, A. Gaur, B. Grinshtein, S. Haseler, J.C. Hinojosa, T. Hodge, R. Kaplan

Women are different than men in terms of weight changes on INSTIs (ADVANCE study: Mean Weight Change by Sex up to 96 weeks)

- Greater weight increase with DTG vs EFV, with TAF vs TDF; plateau in weight gain after Week 48 observed in men but not in women





Price point Gilead puts on LEN will determine a lot for Medicaid formulary in US

The Guardian

HIV drug could be made for just \$40 a year for every patient

Generic version of a drug already on the market, which can suppress and prevent HIV, would still yield 30% profit if the current price was slashed, researchers say

Half of all HIV infections globally are in women yet...



- Women still underrepresented in clinical trials of new HIV medications
 - Elvitegravir¹ and Bictegravir² (latter published 2017) both with <15% women in pivotal start studies
- Only 8.3% of participants enrolled in cure studies are women³
- When women are at the table to plan trials (e.g. important GRACE study⁴), women are enrolled

¹Sax PE. *Lancet* 2012; ²Sax PE. *Lancet* 2017; ³Johnston RE. *ARHR* 2015; ⁴Currier J. *Ann Intern Med* 2010

U.S. Department of Health and Human Services
Food and Drug Administration
Center for Drug Evaluation and Research (CDER)
Center for Biologics Evaluation and Research (CBER)

Designing Drug Trials: Considerations for Pregnant Women

April 2018
Clinical/Medical
Revision 1

Jeanne S. Sheffield,¹ David Siegel,² Mark Mirochnick,³ R. Phillips Heine,⁴ Christine Nguyen,⁵ Kimberly L. Bergman,⁶
Rada M. Savic,⁷ Jill Long,⁸ Kelly E. Dooley,⁹ and Mirjana Nesin⁸

Pregnant Women: Scientific and Ethical Considerations for Inclusion in Clinical Trials Guidance for Industry



Clinical
Infectious
Diseases

201
4



Women are different than men

- Immune systems actually different – clear virus (Hepatitis C) better and before ART, lower HIV viral loads
- Mount stronger immune responses to measles, Hepatitis A, Hepatitis B, and COVID-19 vaccinations
- Sex steroids can influence susceptibility to a range of pathogens (like Chlamydia in the genital tract after progesterone)= implications for transgender women as well and also throughout the menstrual cycle and life cycle

Clinical Infectious Diseases

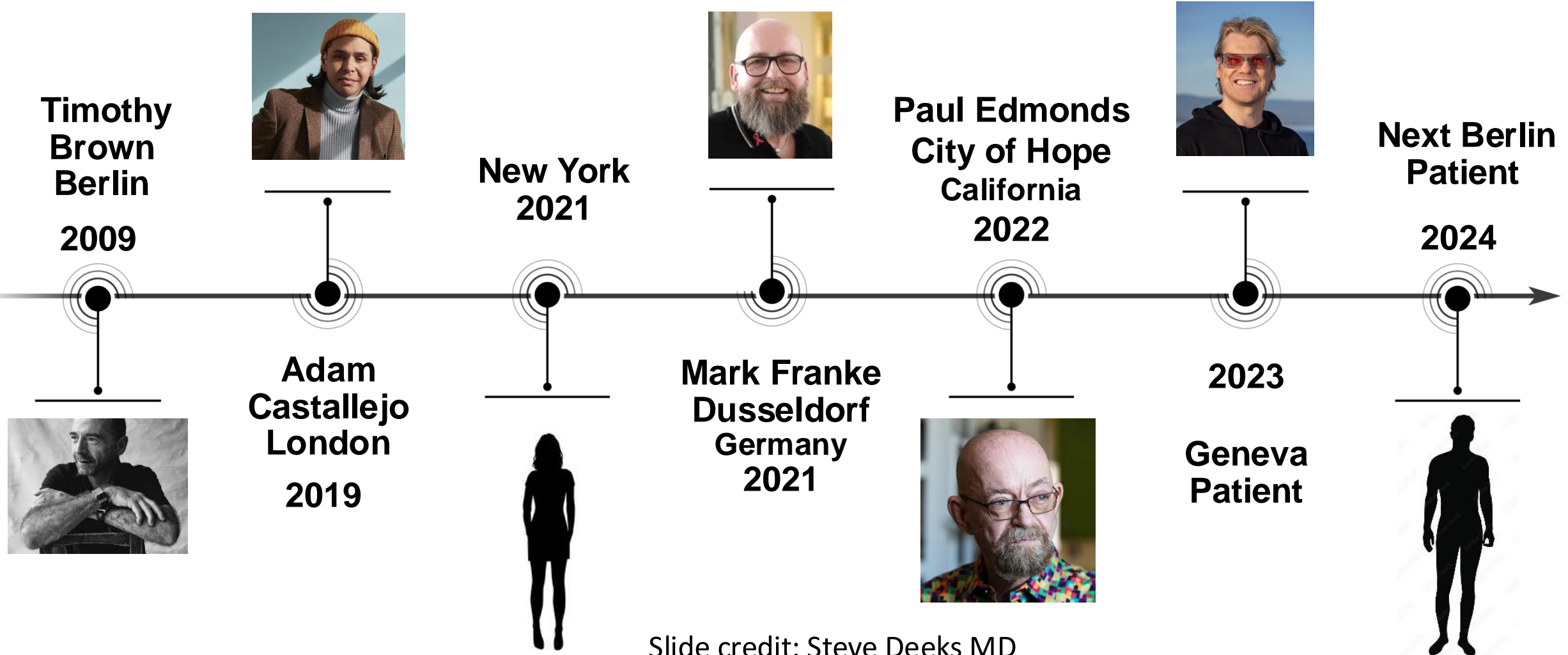
MAJOR ARTICLE



Impact of Tamoxifen on Vorinostat-Induced Human Immunodeficiency Virus Expression in Women on Antiretroviral Therapy: AIDS Clinical Trials Group A5366, The MOXIE Trial

Eileen P. Scully,¹ Evgenia Aga,² Athe Tsisbris,³ Nancie Archin,⁴ Kate Starr,⁵ Qing Ma,⁶ Gene D. Morse,⁶ Kathleen E. Squires,⁷ Bonnie J. Howell,⁸ Guoxin Wu,⁸ Lara Hosey,⁹ Scott F. Sieg,¹⁰ Lynsay Ehui,¹¹ Francoise Gigue,³ Kendyll Coxen,³ Curtis Dobrowolski,¹⁰ Monica Gandhi,¹² Steve Deeks,¹² Nicolas Chomont,¹³

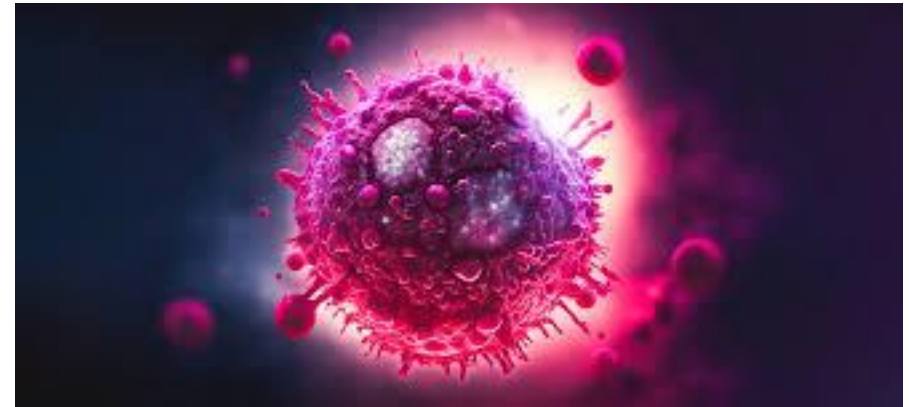
We have cured at least seven people with allogeneic stem cell transplants, providing some inspiration that this is at least feasible- maybe more in women but still only one



Slide credit: Steve Deeks MD

Why do we need a cure in an era of effective ART?

- Human costs
 - Stigma/discrimination
 - Long-term health: Co-morbidities, polypharmacy
 - Multi-drug resistance
 - Life-long adherence to therapy
- Public health costs
 - ART is lifelong and expensive: Total spent on HIV/AIDS: ~ \$50 billion/year
 - Social disruptions affect access (COVID, PEPFAR)
 - Despite massive investments, many not on effective ART (~23% adults, ~43% children)



Slide credit: Steve Deeks MD

The New York Times

These Words Are Disappearing in the New Trump Administration

assigned at birth	diversify	inequity	racial identity
assigned female at birth	diversifying	injustice	racial inequality
assigned male at birth	diversity	institutional	racial justice
at risk	enhance the diversity	intersectional	racially
barrier	enhancing diversity	intersectionality	racism
barriers	environmental quality	key groups	segregation
belong	equal opportunity	key people	sense of belonging
bias	equality	key populations	sex
biased	equitable	Latinx	sexual preferences
biased toward	equitableness	LGBT	sexuality
biases	equity	LGBTQ	social justice
biases towards	ethnicity	marginalize	sociocultural
biologically female	excluded	marginalized	socioeconomic
biologically male	exclusion	men who have sex with men	status
BIPOC	expression	mental health	stereotype
Black	female	minorities	stereotypes
breastfeed + people	females	minority	systemic
breastfeed + person	feminism	most risk	systemically
chestfeed + people	fostering inclusivity	MSM	they/them
chestfeed + person	GBV	multicultural	trans
clean energy	gender	Mx	transgender
climate crisis	gender based	Native American	transsexual
climate science	gender based violence	non-binary	trauma
commercial sex worker	gender diversity	nonbinary	traumatic
community diversity	gender identity	oppression	tribal
community equity	gender ideology	oppressive	unconscious bias
confirmation bias	gender-affirming care	orientation	underappreciated
cultural competence	genders	people + uterus	underprivileged
cultural differences	Gulf of Mexico	people-centered care	underrepresentation
cultural heritage	hate speech	person-centered	underrepresented
cultural sensitivity	health disparity	person-centered care	underserved
culturally appropriate	health equity	polarization	undervalued
culturally responsive	hispanic minority	political	victim
DEI	historically	pollution	victims
DEIA	identity	pregnant people	vulnerable populations
DEIAB	immigrants	pregnant person	women
DEIJ	implicit bias	pregnant persons	women and
disabilities	implicit biases		underrepresented

Conclusion

- HIV is still a major worldwide epidemic
- Horrible changes in global health funding, threats to NIH funding, language and stigmatizing attacks are threatening progress
- We need a cure
- Women are different than men
- With more than half of all people with HIV being women, we need to enroll women in clinical trials