Webinar

The **Quest** for an **HIV Cure** Will It Be Discovered in **Africa**?

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Webinar

The **Quest** for an **HIV Cure** Will It Be Discovered in **Africa**?

Moderator:

- **Anna Miti**,The Choice Agenda

Speakers:

- **Dr. Thumbi Ndung'u**, Africa Health Research Institute
- **Dr. Gabriela Cromhout**, University of KwaZulu-Natal
- **Adaobi Lisa Olisa**, Root to Rise, IAS HIV Vaccine & Cure Advocacy Fellow

Advances in HIV Cure Research in Africa

Please reach out to Dr. Ndung'u for questions about his slides. They are not being shared here.

Thumbi Ndung'u, BVM, PhD
Director for Basic and Translational Science, Africa Health Research Institute (AHRI)
Professor and Scientific Director, HIV Pathogenesis Programme, University of KwaZulu-Natal
Programme Director, Sub-Saharan Network for TB/HIV Research Excellence (SANTHE)
Professor of Infectious Diseases, University College London

The Choice Agenda Webinar
11 December 2025

The Quest For An HIV Cure - Will It Be Discovered in Africa? Considerations, Challenges & Opportunities

Dr Gabriela Cromhout

University of KwaZulu-Natal

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

Some NB Terms

HIV= human immunodeficiency virus

ART/cART/ARVs = antiretroviral therapy; treats HIV

ART-free remission/post-treatment control/ ART-free durable control = control of HIV in absence of ART/ARVs

ATI = analytical treatment interruption

bnAbs = broadly neutralizing (monoclonal) antibodies

PLWH = person/people living with HIV

Reservoir = Areas in the body where HIV can hide and not be found (even when on ART)

Viral rebound = When HIV viral load goes up and becomes detectable after a period of being undetectable

What is an HIV Cure?

- **True/eradicating cure (previously 'sterilizing' cure)** = complete elimination of HIV from the body
- **ART-free durable remission/control (previously 'functional cure')** = The ability to control HIV replication without ART/ARVs; i.e. HIV is still in the body, but it is 'deactivated' somehow
- **Both** of these are largely grouped under the term **'cure'**

Image credit: PATA

HIV: Where are we now?

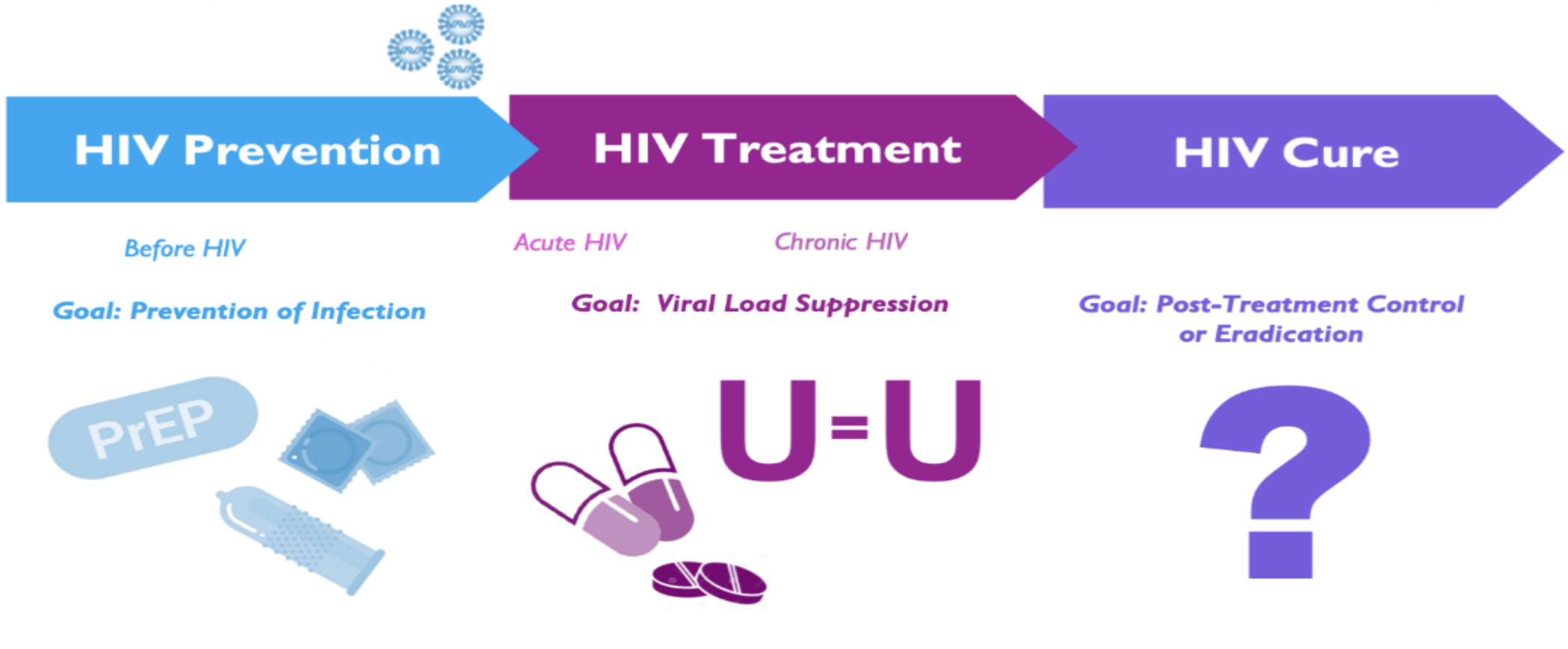
40.8million PLWH globally in 2024

SSA:

- 65% of all PLWH globally
- 85% of all adolescents & CLWH
- Mostly heterosexual relationships & vertical transmission
- Heavy reliance on foreign financial aid for funding HIV programmes (e.g. PEPFAR/USAID)
  - →become an issue in 2025

UNAIDS 2025 report

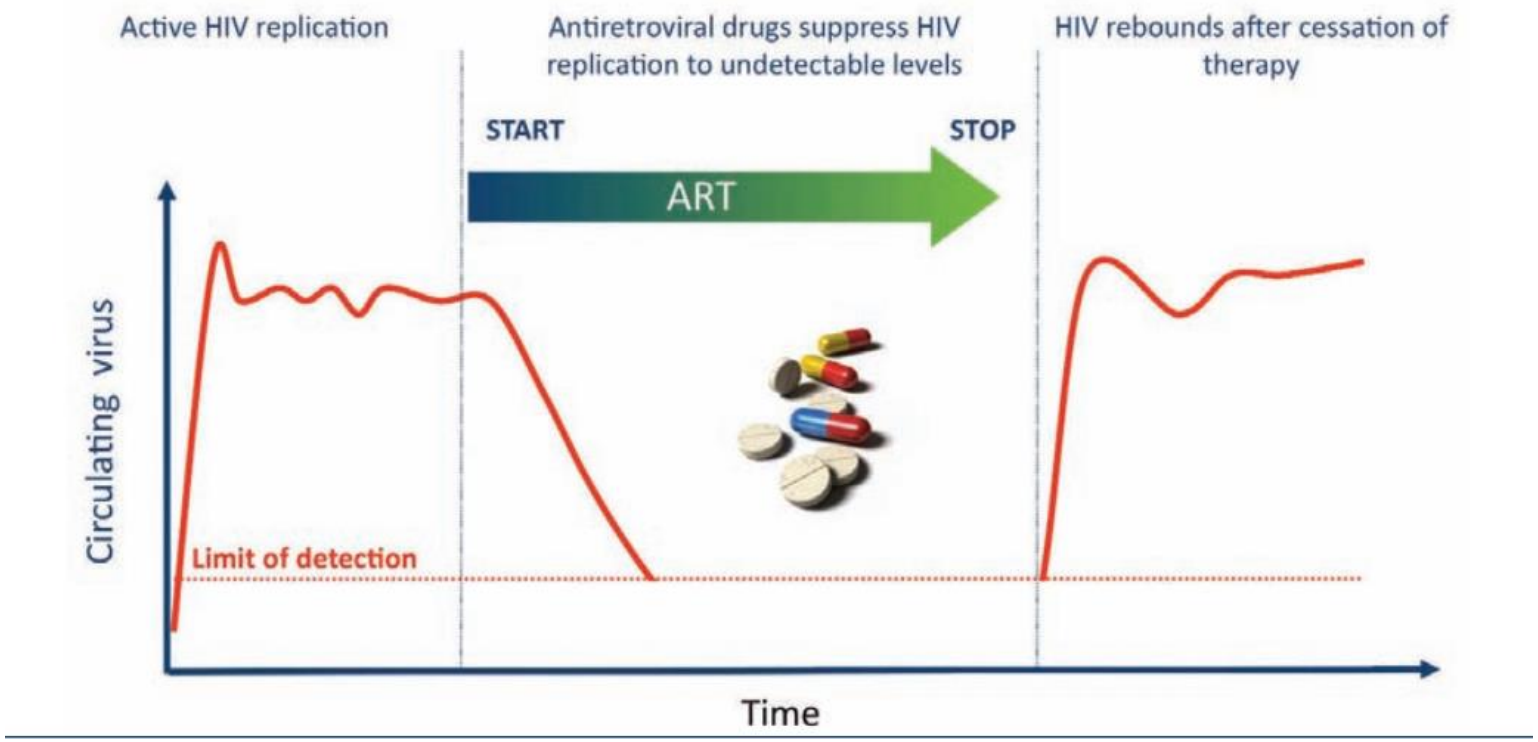
Understanding HIV Cure: a continuum



Slide credit:
CUREiculum (adapted)

Why do we need a cure?

- ART = very effective at controlling HIV **BUT**
- As soon as ART stopped, the virus rebounds
- Reasons for a cure:
  - Stigma
  - Long-term health concerns with lots of medications
  - Resistance against ART/ineffective regimens being used
  - Economic costs & poor access
  - Life-long adherence is difficult for anyone



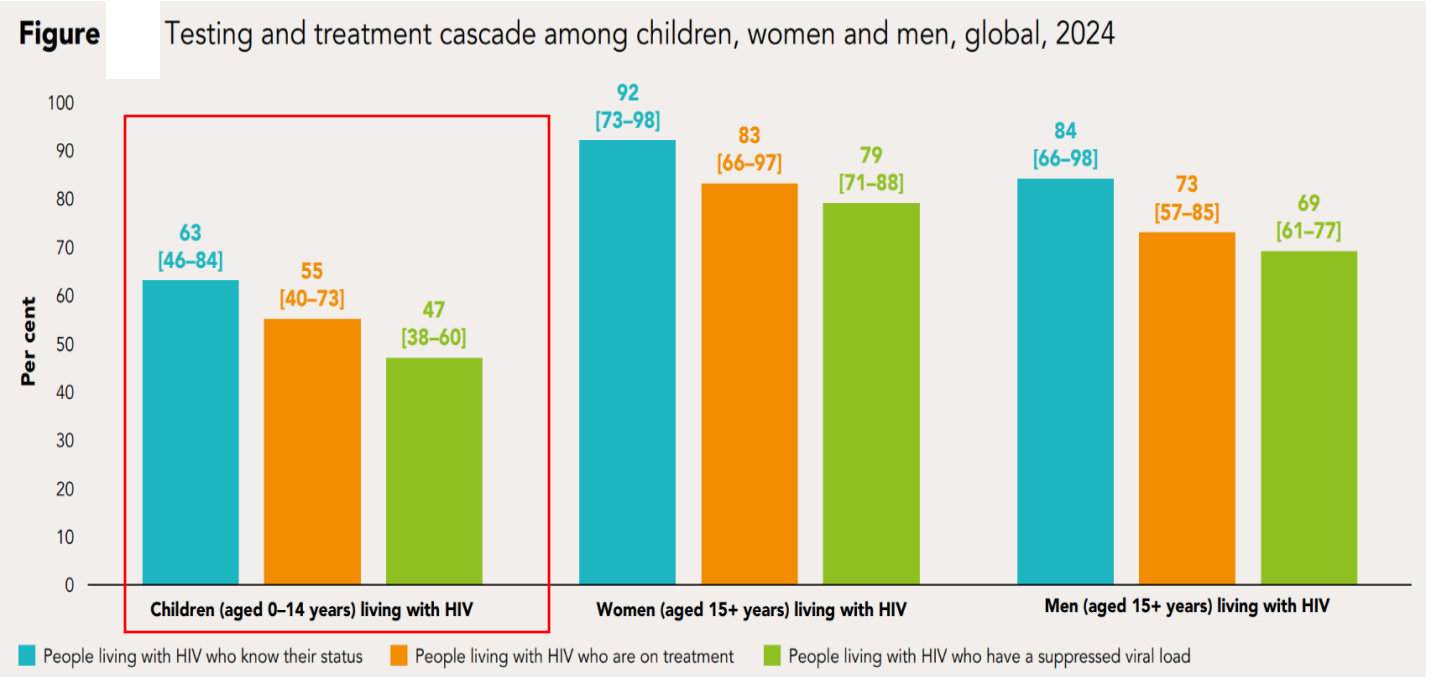
HIV in Children

- Children=not little adults
  - Bodies function differently – including immune systems
  - HIV – untreated in children usually leads to late-stage HIV/AIDS-related death by ~2 years old

- <u>Routes of acquisition</u>
  - **Vertical (**prev MTCT**)**
    - **During pregnancy/delivery/breastfeeding**
  - Early sexual debut/sexual abuse
  - IV drugs

Why HIV cure is NB in children

- Children possess the ideal immune landscape to potentially achieve cure
- Life-long ART (~80+ years)
  - Adherence & suppression = challenging
- 1.4 million [1.1 million–1.8 million] CLWH (0–14 years)
- 95-95-95 (UNAIDS 2025)
  - 63% of children with HIV know their status
  - 55% are accessing ART
  - 47% suppressed on Rx
- Disproportionate deaths in this population
  - 75 000 deaths reported in 2024
- **Therefore, equitable funding for Paediatric HIV Cure CRUCIAL**



Source: UNAIDS estimates 2025

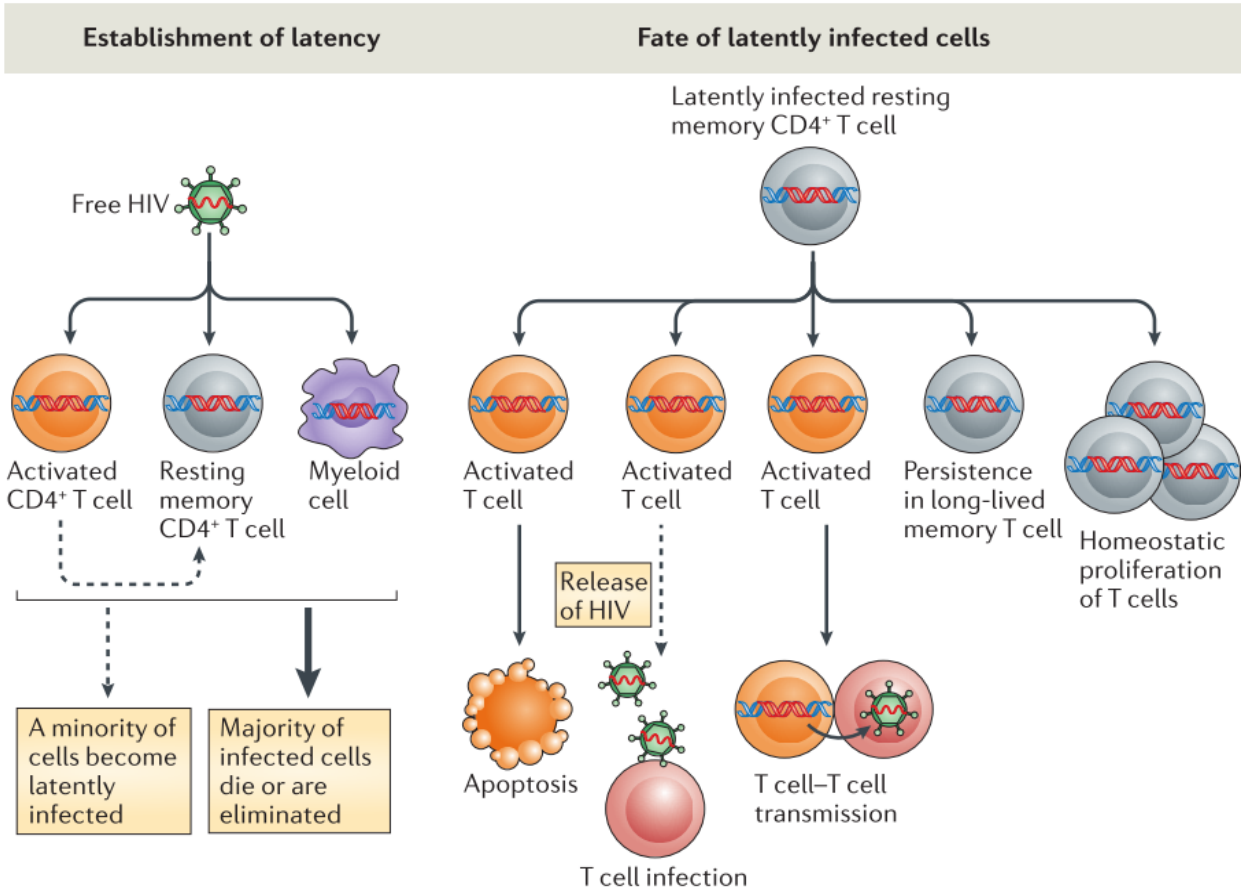
'The challenges are real. Talking about my status needs a lot of emotional preparation as stigma and discrimination are still around HIV. I still say to some of my housemates at res I am taking vitamin pills when they see my pill bottles. Taking my medication and dealing with side effects is also tough. I hate taking ARV's so much, I wish there as a way to make it easier. Sometimes, it feels like a constant reminder of my HIV status. But I've found a way to cope. My name, Khwezi, means "Star," so I remind myself every morning after taking my pills that I'm a "Stargirl." I give myself a small gesture of love and encouragement – a peck on the forehead.'

-Khwezi, young person living with HIV

There is an URGENT need to develop an HIV cure

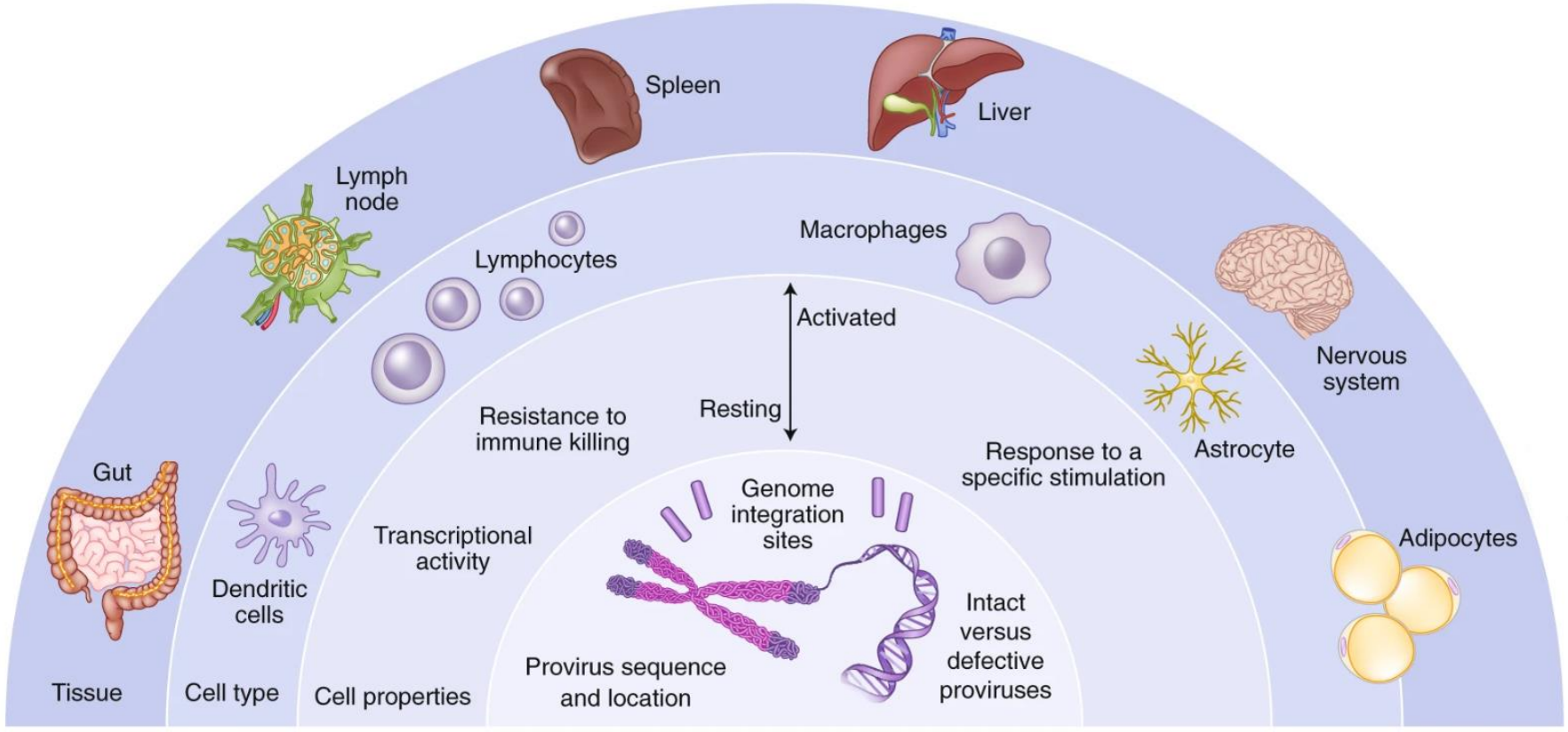
Why is cure so difficult to achieve?

- HIV lays down a reservoir
  - infects activated T cells & persists in memory T cells
  - Allows virus to replicate in absence of effective ART



Deeks *et al.* 2012 *Nature Reviews Immunology*

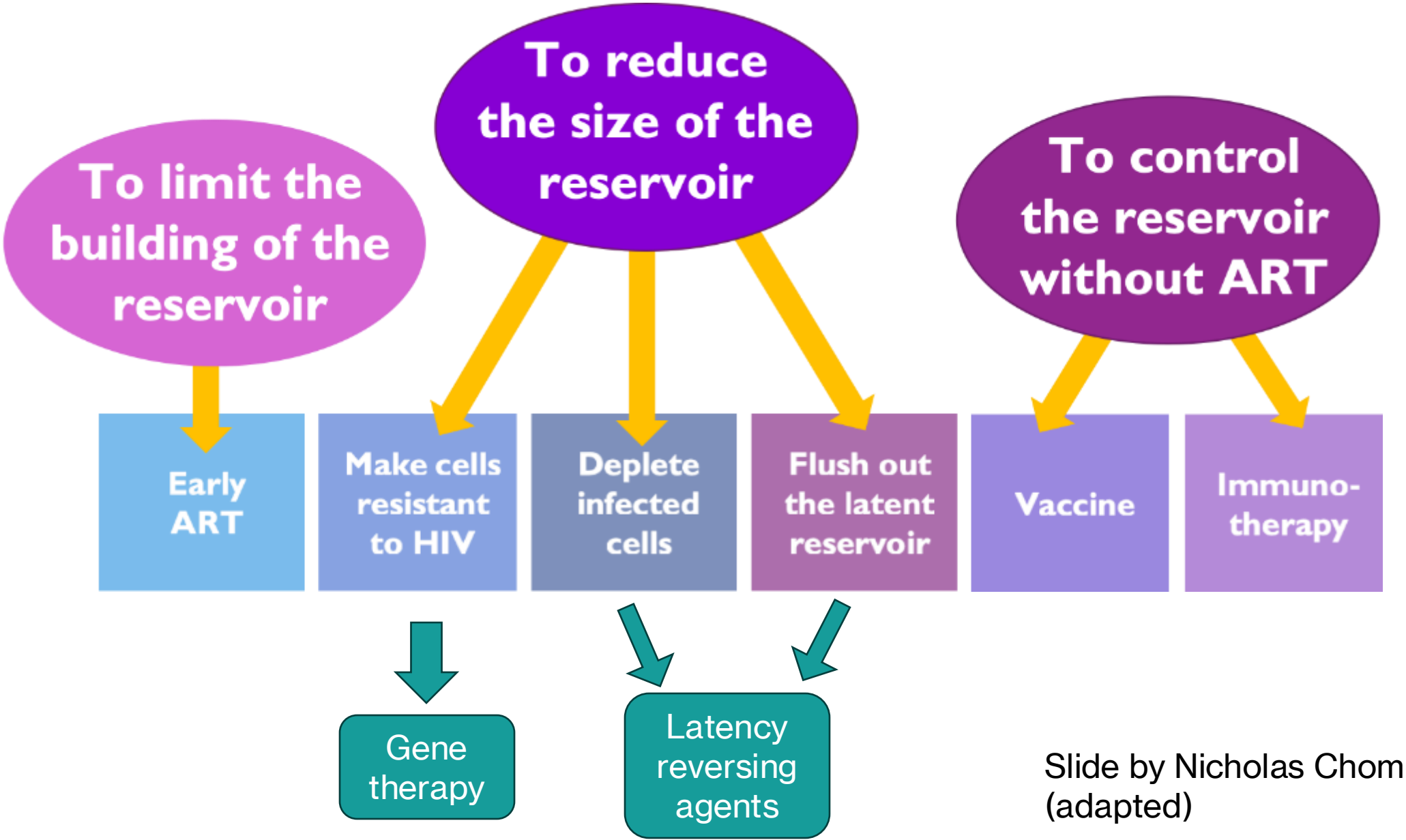
Where is the reservoir?



Landscape of the HIV reservoir

Deeks *et al*. 2021. *Nature Medicine*

So – how do we cure HIV?

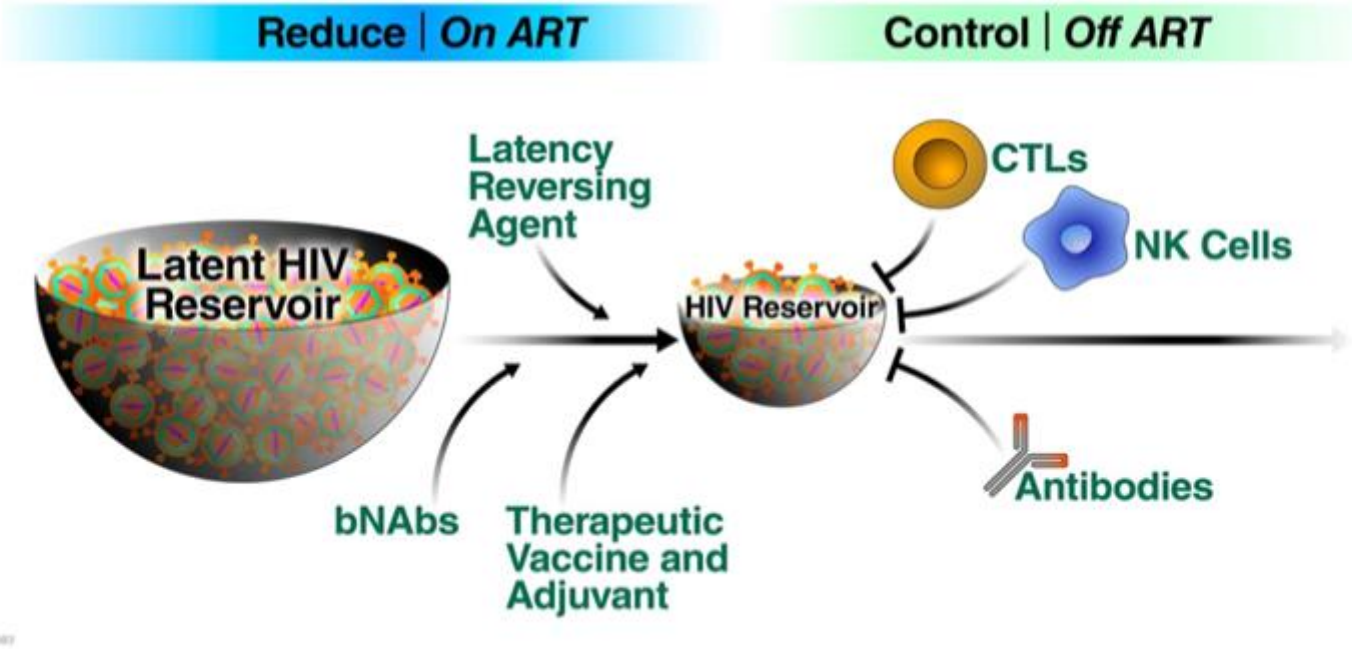


Slide by Nicholas Chomont (adapted)

IDEALLY, A CURE WILL:

Reduce and Control:

low reservoir and a sustained host response



Slide credit: Michael Peluso

Analytical Treatment Interruptions: *How to assess for cure*

- No biomarker for who will/won't cure or control HIV
- Need to do an Analytical Treatment Interruption (ATI)
- This is where ART is stopped under strict monitoring and safety measures often after the use of one or more cure-related strategies
- Two types:
  - Time-to-rebound ATI
  - Setpoint ATI

Where are we now?

- Africa = most affected of all continents by HIV
- Wealth of scientists, doctors & researchers on African continent
- Need to leverage political and public will to maintain the hard-won gains & take cure research further →advocates and community members are CRITICAL for taking this forward
- Current exciting HIV cure studies in SSA – some examples:
  - FRESH Gilead Trial – RSA (young women)
  - Ucwaningo Lwabantwana ("Baby Cure") Study – RSA (children)
  - Tatelo Plus – Botswana (children)
  - P1115 – 11 countries including African countries (children)

Considerations for HIV Cure Research in Africa

1. Communities

- Africa = known for our incredible interconnectedness & relationships
- Reason why decentralised ART programmes work in RSA (with CHCW)
- Education, sensitization of communities, dispelling myths (e.g. around blood drawing), mobilising advocates & political will
- CABs & community advocates = most important role – ensure cure research can be done & rolled out in future

https://cartoondealer.com/image/324594503/man-woman-portrait-afro-community-over-african-continent.html

Considerations for HIV Cure Research in Africa (contin)

2. Children & Adolescents

- Own unique set of considerations
- Adherence relies on caregiver/family unit in addition to child friendly formulations – family linkage to care = NB
- Disclosure = a major issue – particularly around HIV cure research
- Assent
- Education
- Young people need support in terms of navigating their status while navigating adolescence & health ownership

childrenforhealth.org

Take home points

- Cure is possible – we just aren't there yet
- **Will likely require**
  - A small reservoir – easily done through early
  - An intervention with a following treatment interruption

- **What do we tell communities?**
  - Start Rx early (regular testing is key)
  - Maintain good Rx adherence
  - Enrol for cure trials/ studies if you are eligibl
  - Ensure that HIV cure remains a priority for fu & governments alike – ADVOCACY!
  - Ensure local government buy-in & accountal for HIV programmes & cure research

https://www.dreamstime.com/stock-illustration-take-home-away-box-hand-vector-japanese-style-illustration-image68135344

“*My greatest hope is that in the next five years, scientists and researchers will finally get to the bottom of the HIV cure. Not just for adults, but especially for children and young people who were born with HIV. I wish for a world where no child has to take medicine everyday to stay alive*”

-Z, young person living with HIV

Thank you

Ucwaningo
Lwabantwana

Any questions/comments?

Dr Gabriela Cromhout

gabriela@uirm.co.za

HIV Cure research in focus

Africa's Role

Adaobi Lisa Olisa
Nigeria Project Lead
IAS HIV Vaccine and Cure Advocacy Fellow

December 2025

Root to Rise
Transforming Global Health Access

I'm not a Scientist, please direct all your sciency questions to Gabby & Professor Thumbi !

Agenda

1. **Community Perspectives on HIV Cure Research**
   - What is an HIV Cure and why do we need it?
   - Host/Viral factors and impact on cure strategies
   - Issues in Ongoing HIV Cure Research
   - Social and Behavioral Science and Cure Research
2. **Misinformation and Effectively Communicating HIV Cure R&D**
3. **Key Takeaways**

Defining HIV Cure

- "Classic" Cure:
  - Elimination of all replication competent HIV-1 from the body
  - Substantial challenges[1,2] and difficult (impossible) to prove[3]
- "Functional" Cure:
  - Control of HIV in the absence of ART
    - Minimize potential replication events (infected cells with replication competent virus)
    - Improve immune control and potentially protect uninfected cells
  - Reduce or eliminate persistent immune activation and inflammation

1. Henrich et al. *Ann Intern Med*. 2014 Sep 2;161(5):319-27
2. Luzuriaga et al. *N Engl J Med*. 2015 Feb 19;372(8):786-8
3. Jiang et al. Litcherfeld, Yu *Nature* 2020

HIV CURE RESEARCH STATUS: QUICK SUMMARY

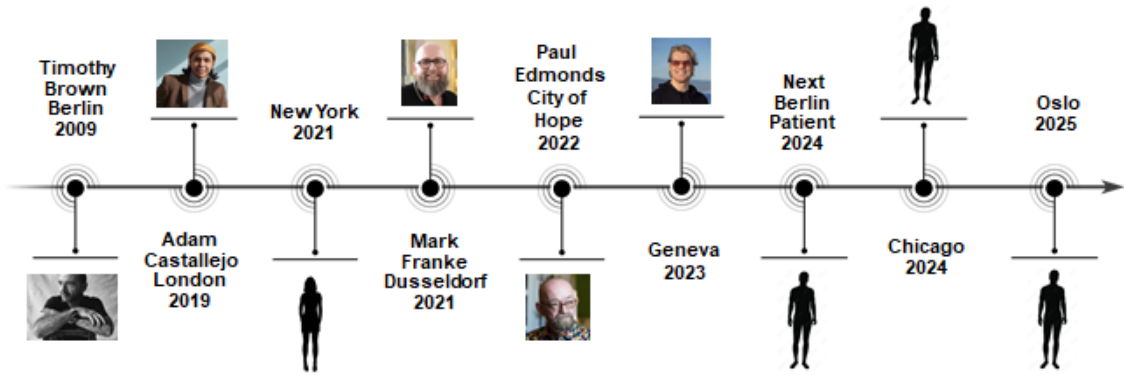
TREATMENT ACTION GROUP
MARCH 2025

- There are currently nine examples of people considered to be cured, or very likely cured, of HIV infection (in most cases they continue to be monitored for any signs of HIV returning).
- Seven of these cases resulted from stem cell transplants that were required to treat life-threatening cancers. In most cases the stem cell transplants were sourced from donors who possessed a rare genetic mutation that makes their cells resistant to the majority of HIV variants.
- Two cases involve elite controllers, a rare group of people who can control HIV viral load to undetectable levels without ART. Evidence indicates that these two individuals have cleared all viable HIV from their bodies over time. Reports suggest there may be additional similar elite controller cases, and they are now being studied.
- These outcomes remain rare and resulted from exceptional circumstances, but they are providing important clues to researchers working to develop a broadly applicable cure.
- There are more numerous — but still relatively rare — examples of individuals who have controlled HIV viral load to low levels either naturally (elite controllers) or after an ART interruption (posttreatment controllers; most commonly after beginning treatment early), but it is not always certain how long this immune-mediated control will last and if it may come at some cost to long-term health.
- The first person to be identified as cured of HIV, Timothy Ray Brown, died in 2020 because of a recurrence of cancer but has left a profound legacy of inspiration and activism that spurs the HIV cure research effort we see today.
- While many different therapeutic approaches are being studied, so far no broadly usable interventions have produced clear evidence of cures or remissions — the best reported results involve small reductions in the amount of HIV that persists in the body despite treatment (the HIV reservoir) and some cases of extended control of HIV viral load to low levels after ART interruption.

Where are we currently?

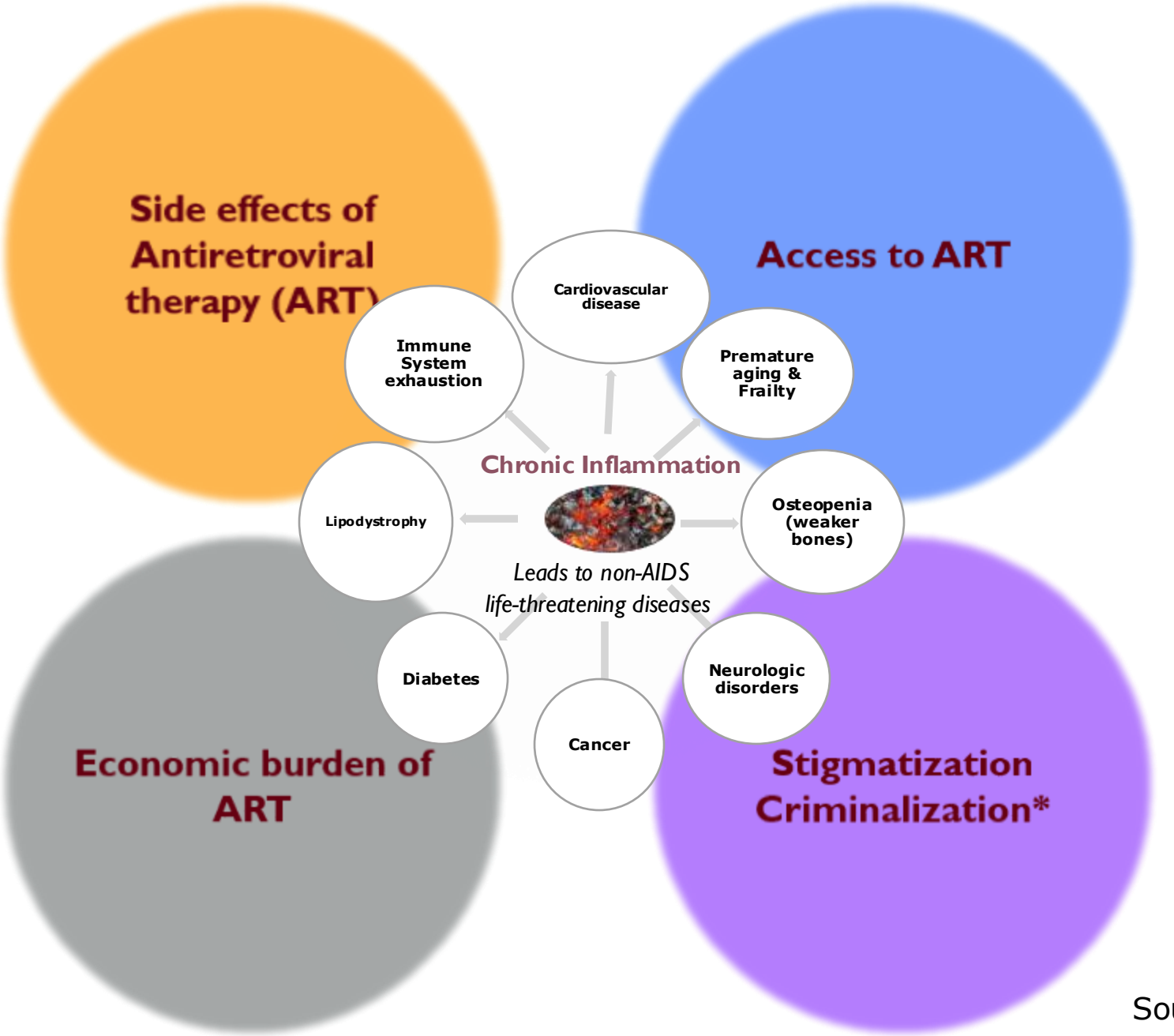
Complete eradication has now been achieved in 9 allogenic stem cell transplants

Cure achieved despite residual virus in Chicago case



Slide credit: Steve Deeks

Why Do We Need an HIV Cure?



"A cure can potentially improve the quality and quantity of life for PLHIV and that's what matters most."

Source: Adapted from TAG CUREiculum

How will these host & viral factors impact cure strategies?

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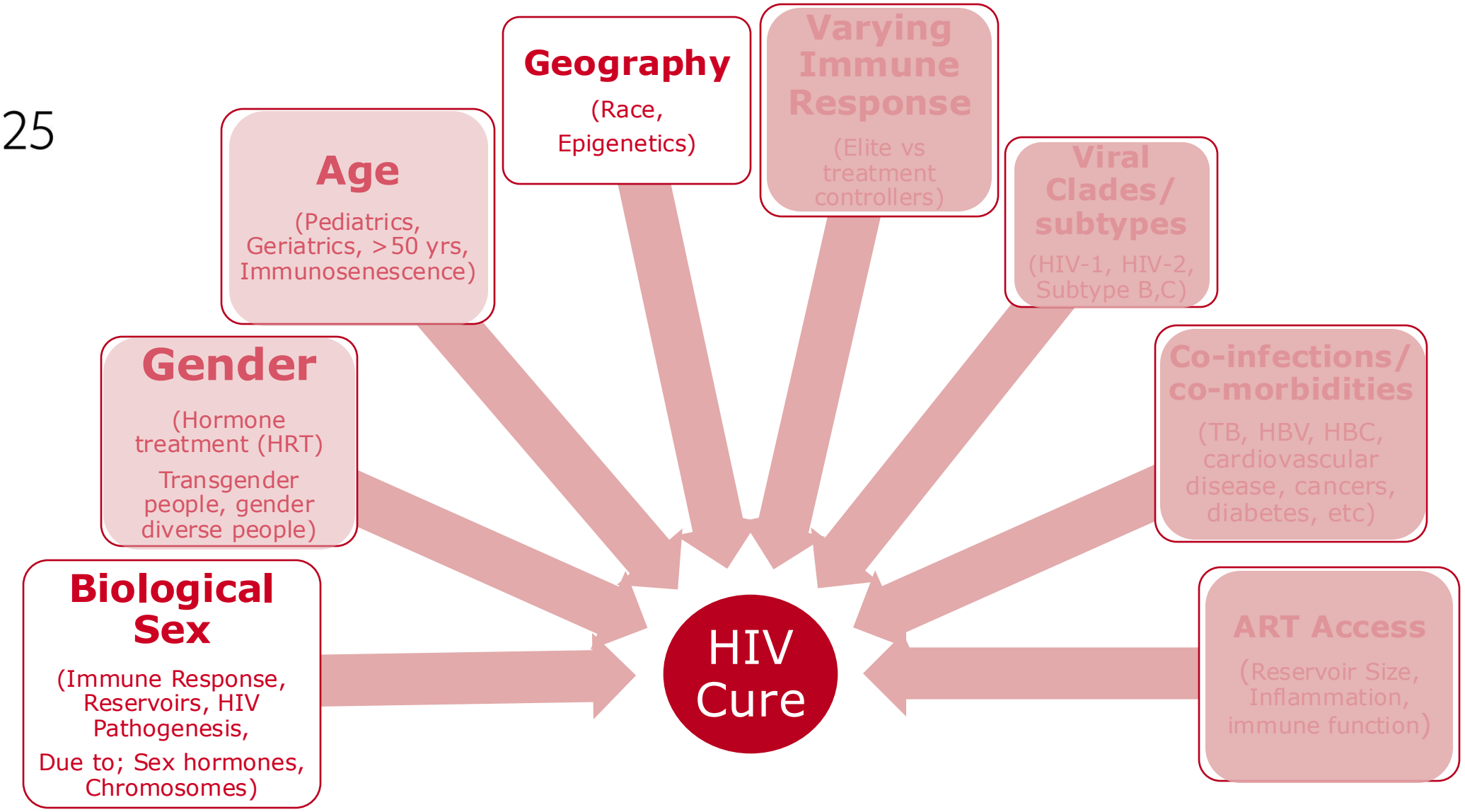

Much remains unknown; diversity considerations need to be kept at the forefront of HIV cure research

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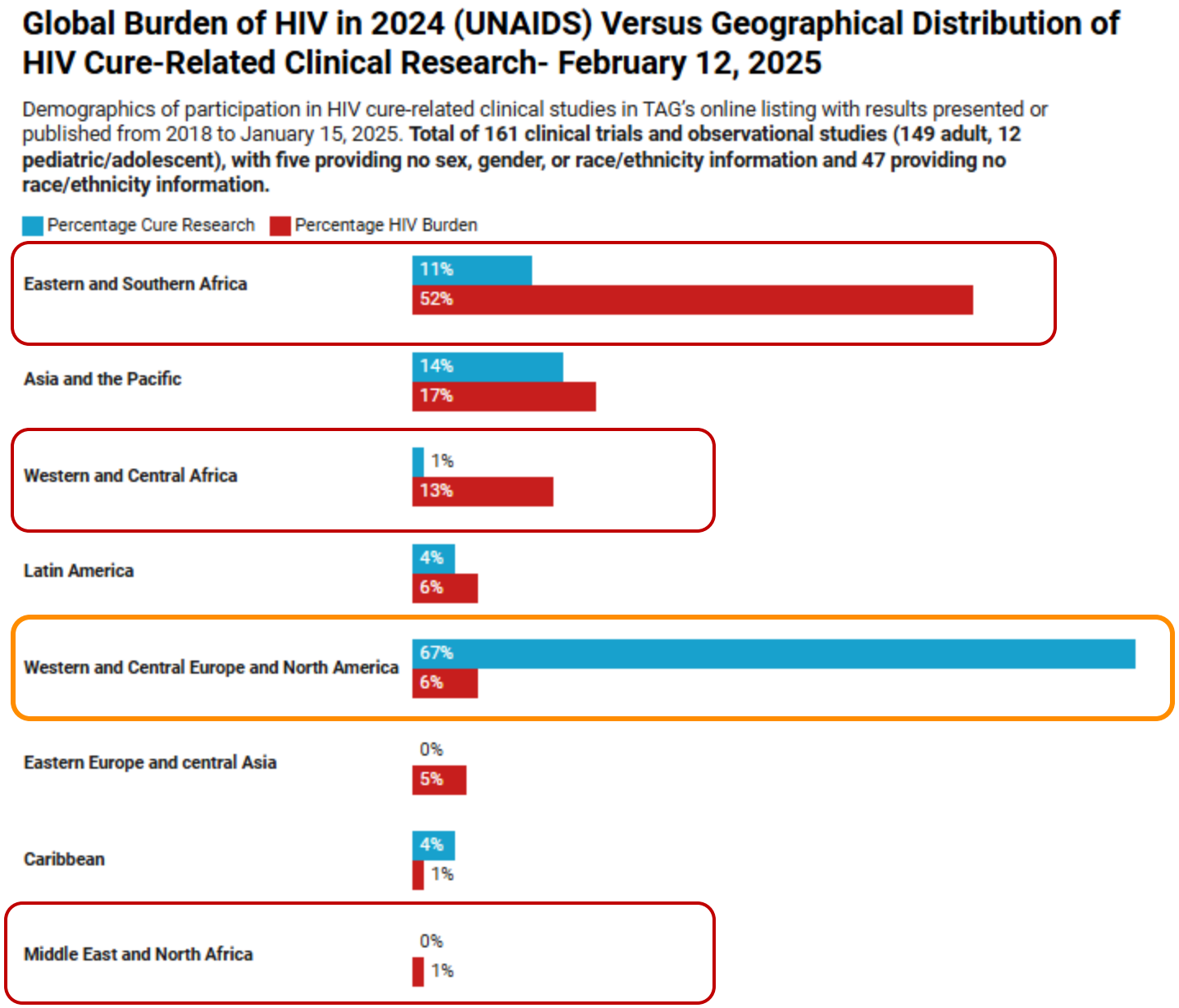
Issues in Ongoing HIV Cure Research

Geographical Distribution of HIV Cure Research

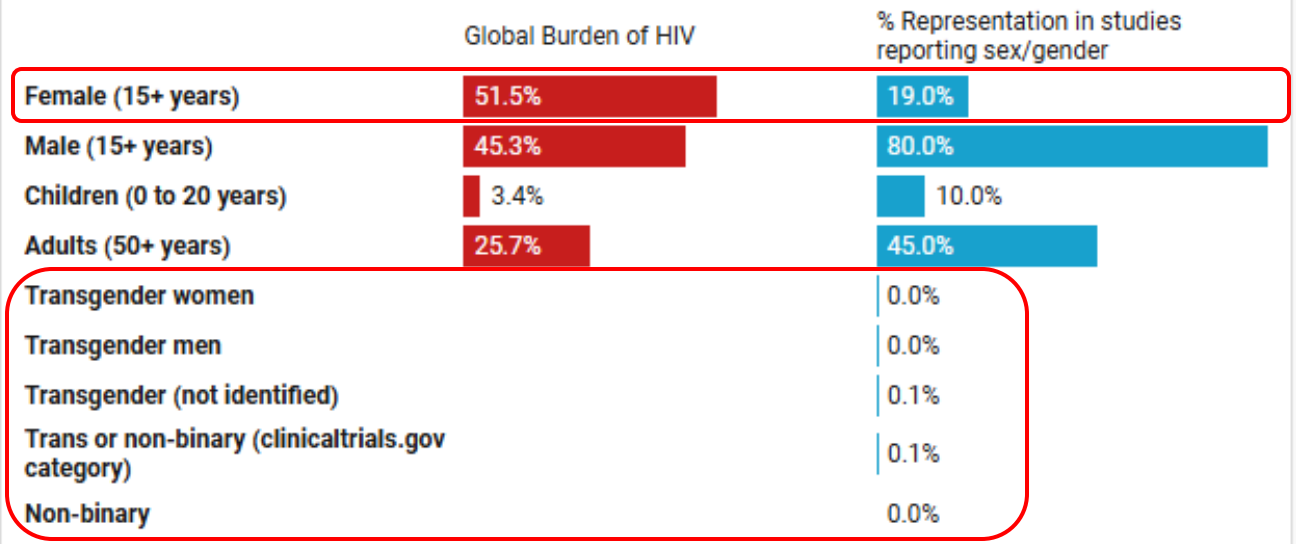


- Sadly, ongoing HIV cure trials don't reflect the epidemic's true geographic and demographic burden.
  - **Only 12% of HIV cure trials are in Africa, despite bearing the highest HIV burden (66%).**
  - **By contrast, 67% of trials are in Western/Central Europe & North America, which represent only 6% of the HIV burden.**
- This highlights a deep inequity, being worsened by the ongoing funding crisis.
- Funding cuts from NIH, USAID, and PEPFAR threaten over 27 HIV trials (including cure-related) trials in South Africa, putting critical research and progress at serious risk.

Disparities in HIV Cure Research- Biological Sex, Age and Gender

Global Burden of HIV in 2024 (UNAIDS) Versus HIV Cure-Related Clinical Research Participant Demographics February 12, 2025

Demographics of participation in HIV cure-related clinical studies in TAG's online listing with results presented or published from 2018 to January 15, 2025. **Total of 161 clinical trials and observational studies (149 adult, 12 pediatric/adolescent), with five providing no sex, gender, or race/ethnicity information and 47 providing no race/ethnicity information.**



Source: Treatment Action Group Resource on the Demographics of Participation in HIV Cure-Related Clinical Research

*WECENA: Western and Central Europe and North America

Biological Sex & Geography

-Women are over 50% of people with HIV but only 19% of cure trial participants.

-HIV Burden by Sex in WECENA: 74% Male/ 24% Female

-67% of trials are in (*WECENA) male-dominated regions, partly explaining men's higher enrollment.

-More trials in Africa would potentially address the sex disparity due to higher HIV burden among women and girls

Age

-UNAIDS projections: By 2030, PLHIV over 40 years will account for 64% in ESA and 60% in WCA

-Immunosenescence may particularly impact immune-based strategies

-need to conduct trials in PLWH across the age range – what strategies are most effective in which groups of people?

Gender

-Transgender and Non-binary or gender non-conforming people represent only 0.58% of cure trial participants.

-more gender diversity is needed to confirm impact of gender affirming hormones, implants and other nuances

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Misinformation and Effectively Communicating HIV Cure R&D

Misinformation and Effectively Communicating HIV Cure R&D

A groundbreaking HIV cure trial in Durban, South Africa shows hope: 20% of participants stayed off HIV meds for over 1.5 years, with their immune systems keeping the virus in check.

This first-of-its-kind African trial used combination immunotherapy-boosting the immune system after early HIV treatment.

Led by African scientists and focused on women, it proves advanced HIV research can thrive in resource-limited settings.

A major step forward in the global fight to end HIV.

SOURCE: Africa Health Research Institute

Warning
Misinformation

Situation

A single image suggesting that an HIV cure already exists is spreading like wildfire.

This misinformation began circulating after the FRESH trial results were presented at CROI 2025.

Problem

The info. was communicated in scientific language.

While correct, it was misinterpreted

We can't fault the people who misinterpreted or misunderstood

Solution

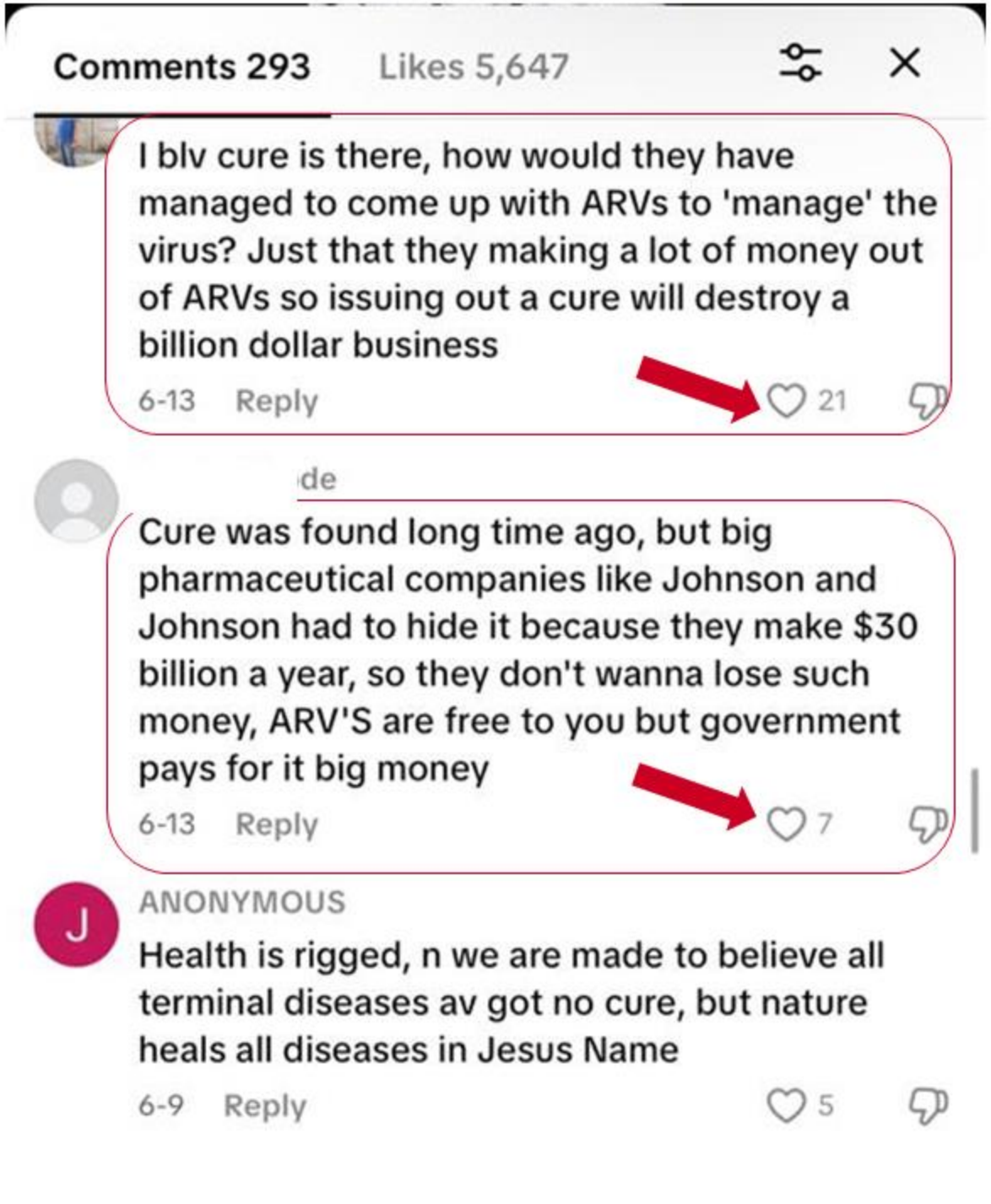
1) Scientists should simplify information when first shared to reduce risk of misinterpretation.

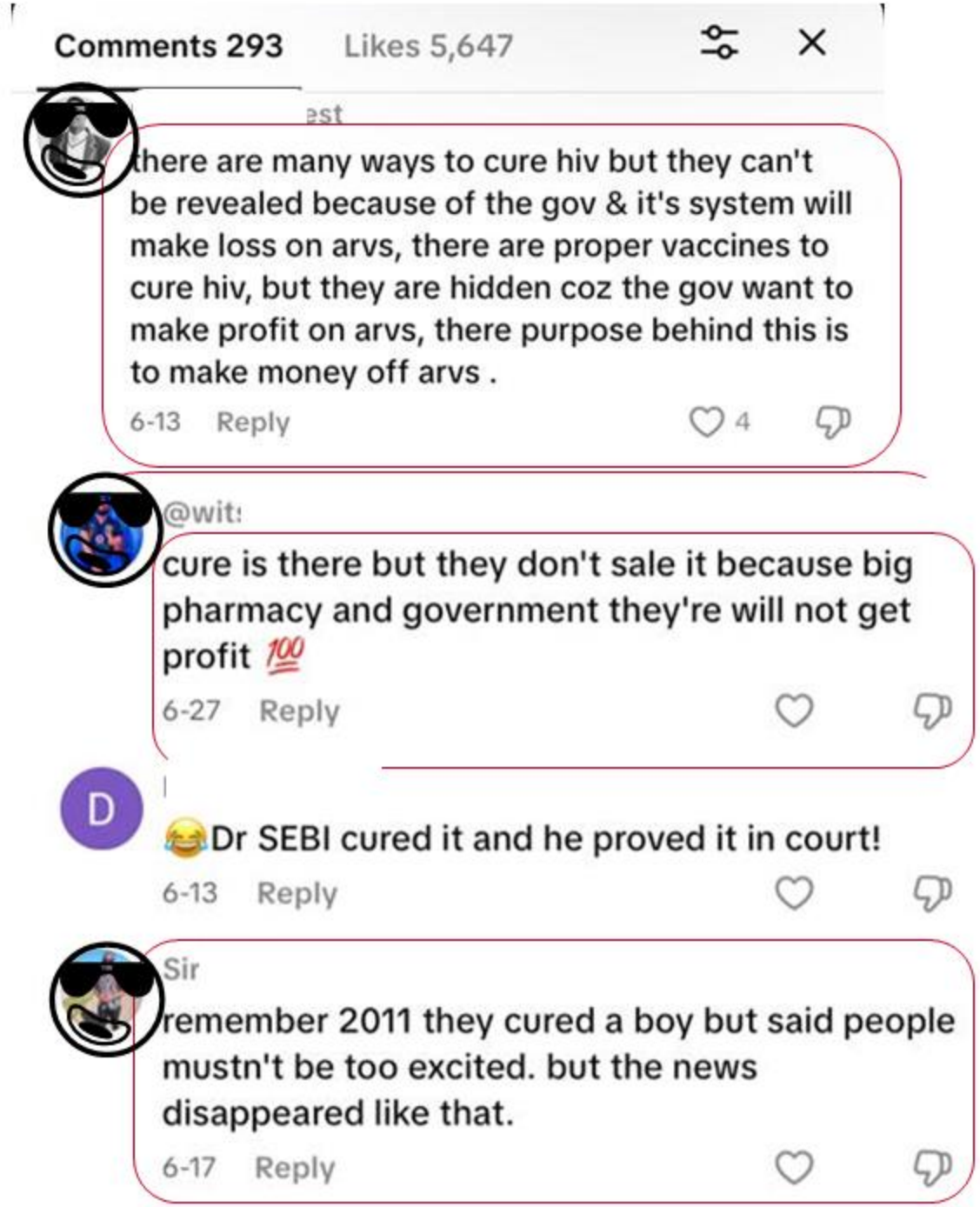
2) Ensure early presentations are clear and cannot be easily misunderstood.

3) Integrate communication plans into trial designs

4) Train journalists and reporters

With so many exciting innovations being developed and approved in the HIV field, every announcement risks misinformation on social media. Let's Get Ahead of Misinformation!


Comments 293
Likes 5,647
I blv cure is there, how would they have managed to come up with ARVs to 'manage' the virus? Just that they making a lot of money out of ARVs so issuing out a cure will destroy a billion dollar business
6-13 Reply 21
de
Cure was found long time ago, but big pharmaceutical companies like Johnson and Johnson had to hide it because they make $30 billion a year, so they don't wanna lose such money, ARV'S are free to you but government pays for it big money
6-13 Reply 7
ANONYMOUS
Health is rigged, n we are made to believe all terminal diseases av got no cure, but nature heals all diseases in Jesus Name
6-9 Reply 5


Comments 293
Likes 5,647
est
there are many ways to cure hiv but they can't be revealed because of the gov & it's system will make loss on arvs, there are proper vaccines to cure hiv, but they are hidden coz the gov want to make profit on arvs, there purpose behind this is to make money off arvs .
6-13 Reply 4
@wit
cure is there but they don't sale it because big pharmacy and government they're will not get profit 💯
6-27 Reply
D
😂Dr SEBI cured it and he proved it in court!
6-13 Reply
Sir
remember 2011 they cured a boy but said people mustn't be too excited. but the news disappeared like that.
6-17 Reply

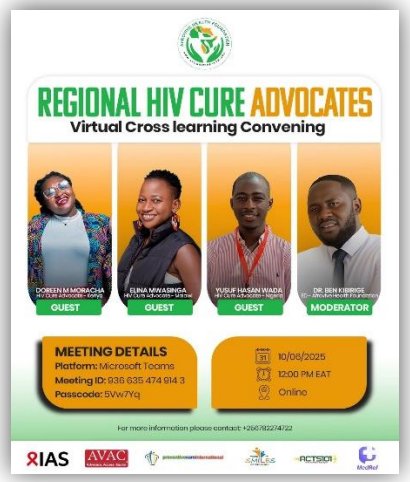
CASE STUDIES

Simplifying the Science and Communicating HIV Cure Research

Trained advocates are leveraging various **platforms to increase HIV cure literacy/awareness**, advocacy and community engagement

- YouTube
- Podcasts
- Blogs
- Radio
- Social media platforms; TiKToK, Instagram, WhatsApp, Facebook, etc

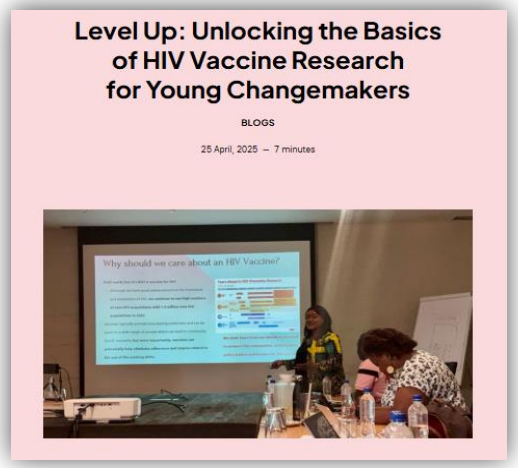
Kenya



Regional Collabo

Liberia/ Regional Collabo

Botswana



Nigeria

Key numbers

AVAC Advocacy. Access. Equity.

Towards an HIV Cure
IAS

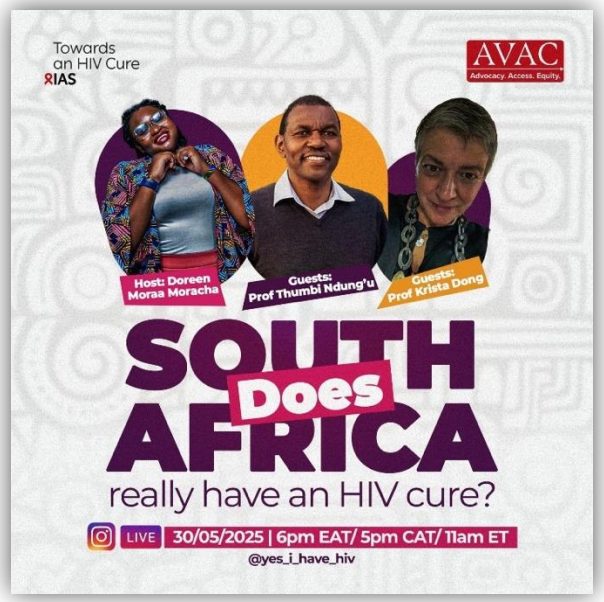
208	13	3
change makers supported through the HIV Cure Academies since 2017	advocates supported with grants to carry out original cure advocacy projects since 2020	IAS Global Scientific Strategies on Research Priorities for an HIV Cure published since 2012

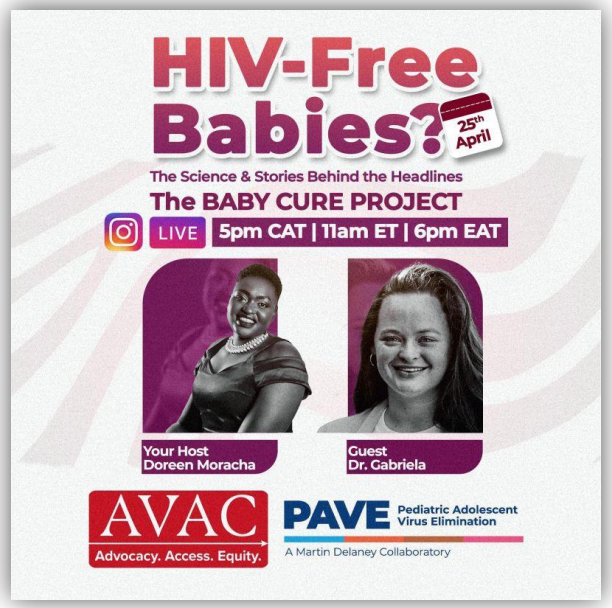
In this era of misinformation, additional efforts should be directed towards Communicating HIV Cure Research

We need:

- More collaborations between scientists and advocates
  - **a call to action to other scientists to be willing to go beyond conferences and collaborate with advocates to simplify messages and keep the public updated on HIV Cure R&D**

- Global, Regional & National cross-learning platforms;
  - **to engage with Governments, policy makers, communities and all relevant stakeholders to secure buy-in**





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Key Messages

Community

1) Keep using your voice, we need a cure for everyone, everywhere!

2) Stay updated with the science/research

3) Fight misinformation, inform your communities

Scientists

1) Ensure age, sex, gender and geographical balance in trials; center diversity!

2) Co-design trials with the communities most affected!

3) Simplify the science, communicate in a way that prevents misunderstanding and misinformation.

Donors/Governments

1) Boost political will and investment in HIV cure R&D in Africa

2) Prioritize domestic, sustainable HIV cure funding

3) Strengthen regional collaboration for cure R&D

4) Promote cross-country learning and research use

In Summary, to ensure that we find an HIV cure that will be:

- relevant
- applicable
- and effective for the communities most affected

We need to:

- **Conduct more cure research in high HIV burden regions (Africa)**
- **Co-design clinical trials with the most affected communities**
- **Ensure diversity in trial participant demographics (biological sex, age, gender, etc)**
- **Elevate social and behavioral science in cure research!**

"All the science and research will mean nothing if we develop a cure that remains on the shelf and out of reach because we did not account for the preferences and lived experiences of the end users"

- Jim Pickett (2023 Pre-CROI Community HIV Cure Workshop)

Implementing HIV Cure Research and ATI-inclusive Trials

1. Conduct HIV research in regions of the world where it is needed the most
2. Basic science and clinical research can be strengthened by integrating social interventions that address critical challenges facing participants *(poverty, unemployment, food insecurity, rape/GBV, teen pregnancy, etc.)*
3. Build-in ways for investigators to engage with participants & the clinical team
4. Commit to build capacity to accelerate and sustain discovery.

Acknowledgement

I would like to thank the following people for their contributions and resources used to develop this presentation;

- **Sekgabo Seselamarumo, IAS HIV Vaccine & Cure Advocacy Fellow, Botswana**
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- Dr. Samuel Anya, Adviser, Science Systems & Services, UNAIDS, Nigeria
- Dr. Mitch Matoga, MD, PhD, University of North Carolina Project, Malawi

Faculty, 2024 Advocacy for HIV Cure Academy

- Riccardo Maddalozzo, IAS, Geneva
- Dr. Gabriela Cromhout, UKZN BabyCure Study, South Africa
- Adam R. Ward, PhD, Research Enterprise to Advance a Cure for HIV, USA
- Sherazaan Ismail, International Centre for Genetic Engineering and Biotechnology, South Africa
- Sam Byrd, Yale LGBTQ Center, USA
- Jessica Salzwedel, AVAC, USA
- Josphat Kosgei, KEMRI/Walter Reed, Kenya


RAHMET
OBRIGADO
HVALA
GRAZIE
谢谢
KIITOS
DANKE
TAK
DANK JE
THANK YOU
SHUKRAAN
ευχαριστώ
GRACIAS
BARKA
MERCI
СПАСИБО
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