Why diagnose and treat advanced disease?

- High mortality
- High use of the health system
- Likely cost effective

COP Guidance updates

1. Proposed new "core standard": Diagnose and Treat People with Advanced HIV Disease (AHD).
2. TB Screening updated to emphasize that diagnostic interventions should happen in parallel, and that TB treatment should be initiated for all positive results including a positive LAM.
3. Cryptococcal meningitis management updated to recommend SD LAmB per WHO guidance
4. Rapid start for all: the exception only for active intracranial infection.

Talk outline

1. Prevalence estimates: AFRICOS and PHIA

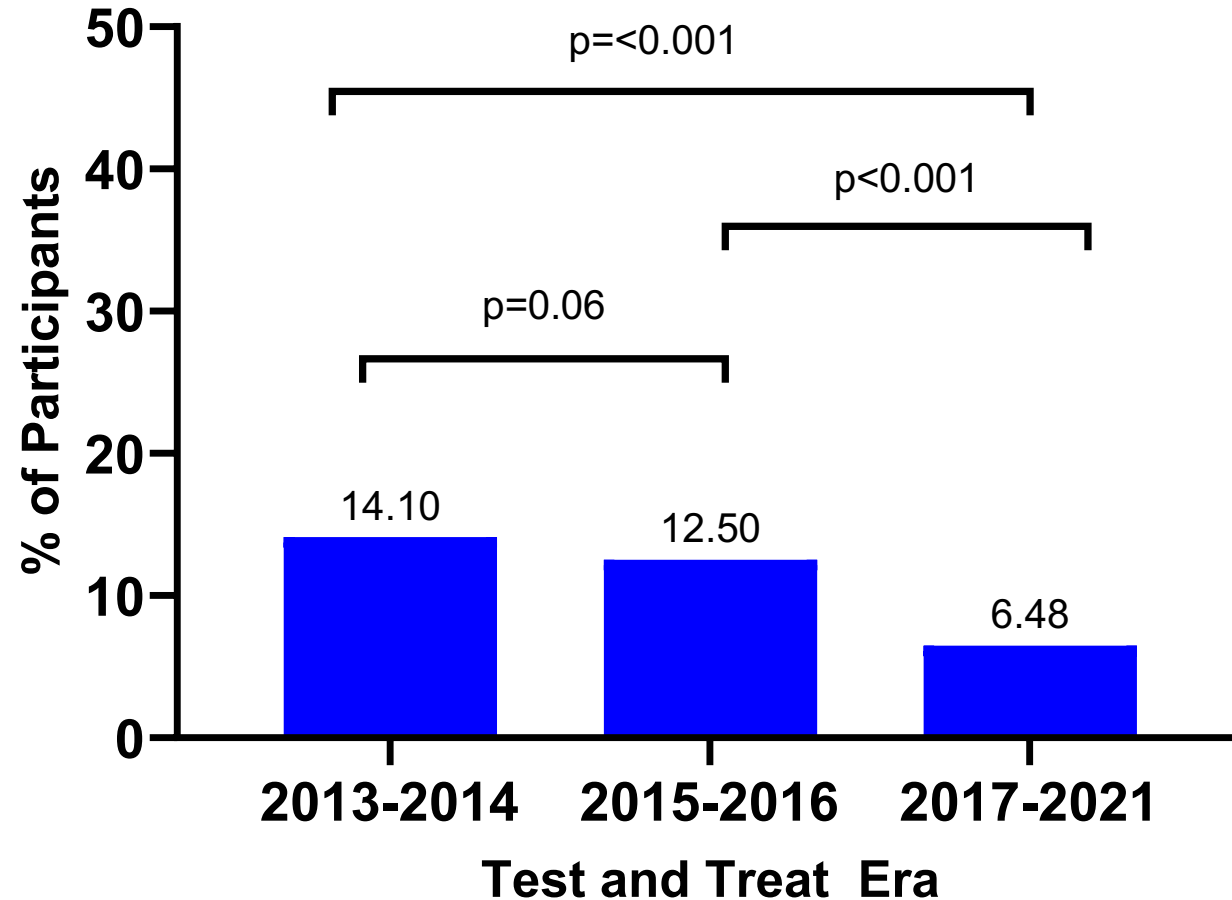2. Management updates

3. Network optimization

METHODS

- Clinical history review and laboratory testing were performed at enrollment and every 6 months.

- "test and treat" eras categorized as:

  - ➤ Pre: 2013–2014

  - ➤ Early: 2015–2016

  - ➤ Broader implementation: 2017–2021

- Generalized estimating equations was used to estimate odds ratios for factors associated with CD4 <200 cells/mm^3 across all study visits

AFRICOS results

- 3097 adults LWH were enrolled during the study period

    - 3059 (99%) with CD4 data were included in the analysis

- Median age was 38 years [interquartile range, 31–46 years]

- 41.3% of those enrolled were men

- Of 3059 adults with CD4 results at enrollment, 575 (**18.8**%) had CD4 <200 cells/mm^3

- At the most recent visit 8.0% of participants had a CD4<200 cells/mm^3

- Including all visits, 8.7% had a CD4<200 cells/mm^3

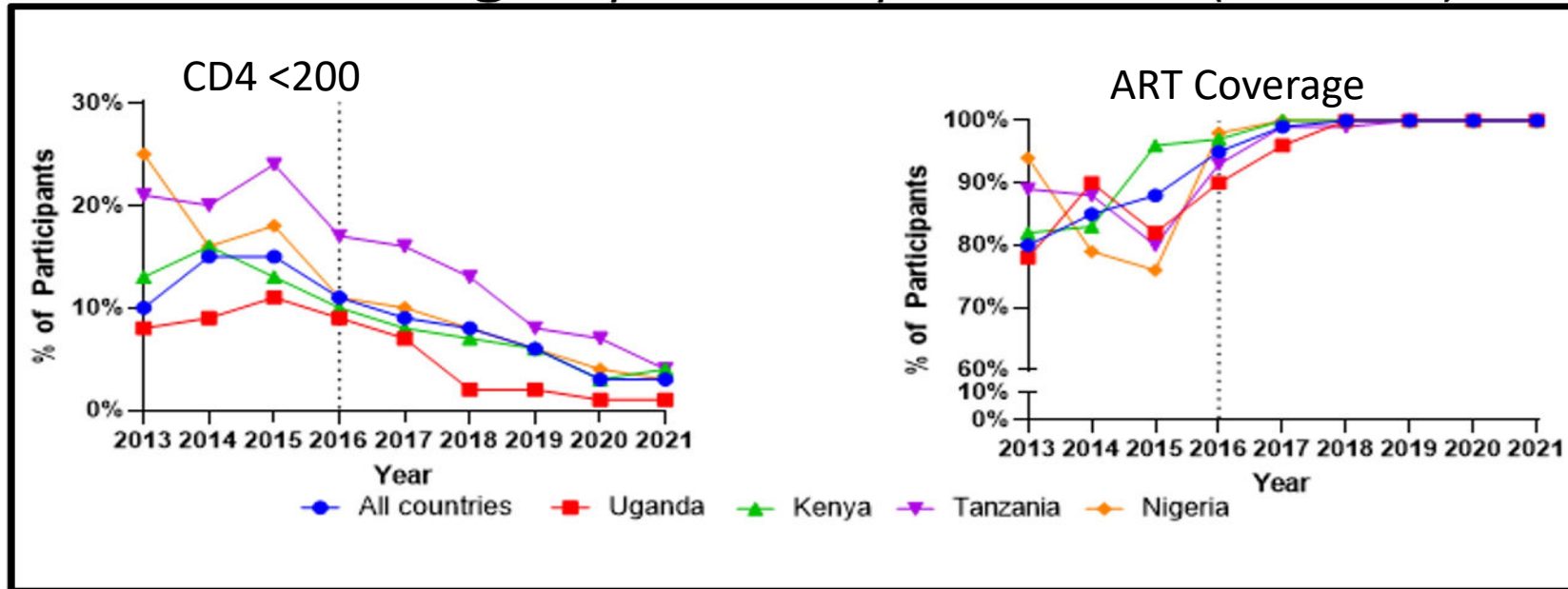# Trends in percentage of participants with CD4 <200 by Test and Treat Era (all visits)

Trends in Percentage of Participants with CD4 <200 and ART coverage by Country and Year (all visit)

CD4 <200

ART Coverage

Legend: All countries (blue circle), Uganda (red square), Kenya (green triangle), Tanzania (purple inverted triangle), Nigeria (orange diamond)

The prevalence of AHD consistently declined since 2016, aligning with consistent increases in ART coverage

PHIA questions

- What is the prevalence of CD4 <200 among HIV+ adults (15+ years) by sex and age group?

- What is the prevalence of CD4 <200 among HIV+ adults by self-reported treatment status and ARV status by sex and age group?

- Among HIV+ adults with CD4 <200
  - ➢ what proportion interrupted treatment?
  - ➢ what proportion are treatment naïve?
  - ➢ what proportion have viral load suppression (VLS, HIV viral load <1000 copies/ml)?

Inclusion considerations (PHIA)

- **PHIA-round 1 countries (public use datasets):** Cameroon, Cote d'Ivoire, Eswatini, Ethiopia (urban only), Lesotho, Malawi, Namibia, Tanzania, Uganda, Zambia, Zimbabwe

- Data collection period: 2015-2018

- Adults; age groups: <50 years; >50 years

- Weighted analysis accounting for the survey design

- HIV positive status; CD4 result

Study Population (PHIA)

Countries	Number of PLHIV	Number of PLHIV with AHD (%)
Malawi	2200	272 (12.8)
Zimbabwe	3364	519 (17)
Cote d'Ivoire	429	26 (5.9)
Eswatini	3000	219 (7.6)
Zambia	2446	330 (13.9)
Lesotho	3191	334 (11.5)
Cameroon	975	124 (13.5)
Ethiopia	614	82 (14.1)
Namibia	2442	189 (7.4)
Uganda	1747	163 (9)
Tanzania	1771	251 (14.6)

People experiencing interruptions and non-suppressed viral loads may have significant risk for advanced HIV disease

Percent of AHD (CD4 <200) by treatment status* from 11 PHIA (Round 1) countries

Category	Range %	
	Low	High
Currently on treatment	3.4	13.3
Treatment naïve	7.5	22.0
Treatment interruption	14.1	36.5
Viral load suppressed on treatment	0.7	8.1
Viral load unsuppressed on treatment	16.9	56.5

Currently on treatment: Aware of HIV-positive status and self-reported currently on ART and ARVs detected

Treatment naïve: Unaware of HIV-positive status and self-reported never used ART and ARVs not detected

Treatment interruption: Aware of HIV-positive status **and** self-reported currently not on ART and ARVs detected, **or** self-reported currently not on ART and ARVs not detected **or** self-reported currently on ART and ARVs not detected
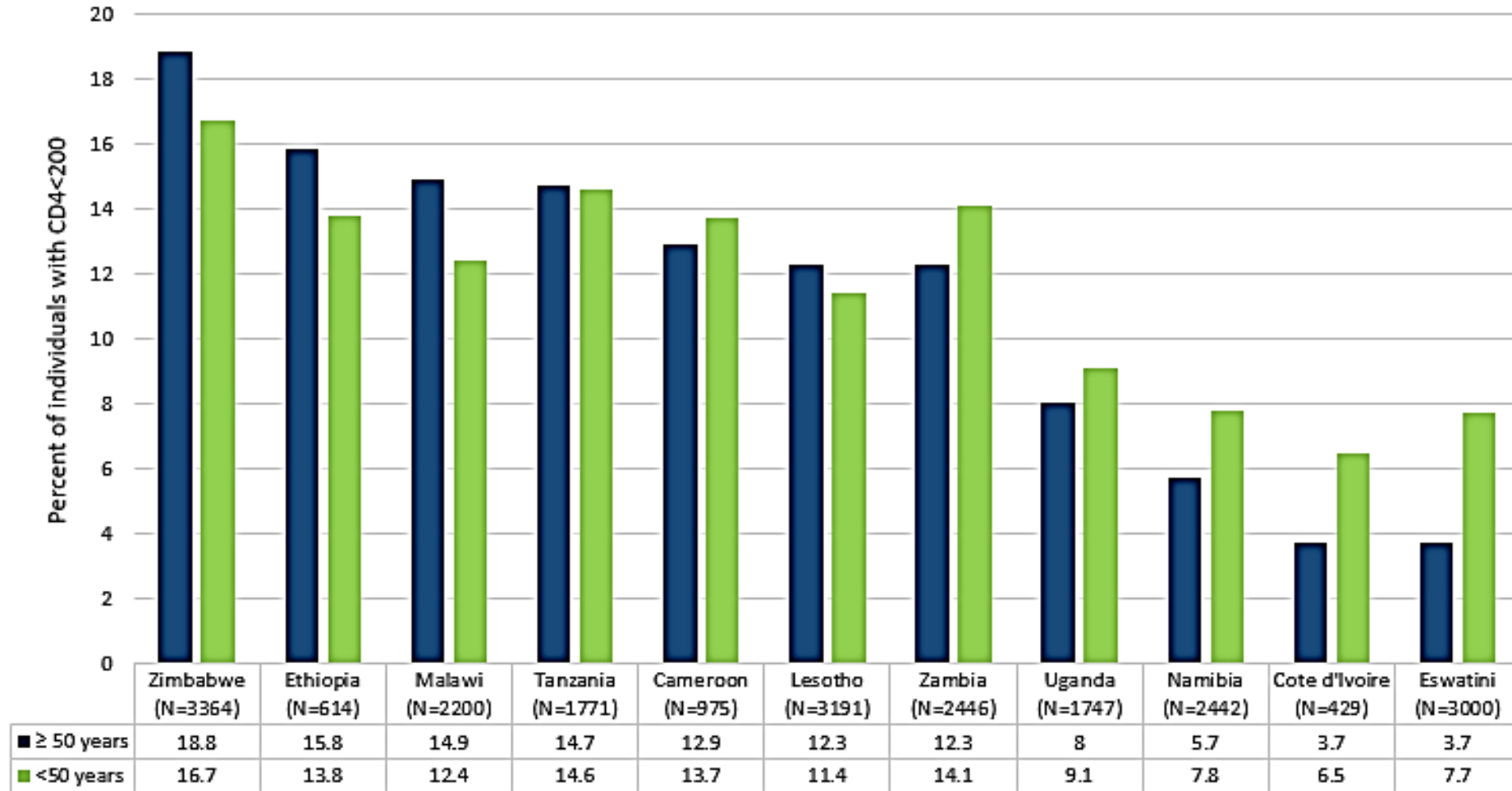
Data is preliminary and subject to change

*(1) Excludes unaware of HIV-positive status and ARVs detected; (2) aware of HIV-positive status and self-reported never used ART and ARVs detected (3) Assay for ARV detection detects only first and second line regimens

Percent AHD (CD4 <200) among PLHIV currently on treatment

PHIA

	Zimbabwe (N=3364)	Ethiopia (N=614)	Malawi (N=2200)	Tanzania (N=1771)	Cameroon (N=975)	Lesotho (N=3191)	Zambia (N=2446)	Uganda (N=1747)	Namibia (N=2442)	Cote d'Ivoire (N=429)	Eswatini (N=3000)
≥ 50 years	18.8	15.8	14.9	14.7	12.9	12.3	12.3	8	5.7	3.7	3.7
<50 years	16.7	13.8	12.4	14.6	13.7	11.4	14.1	9.1	7.8	6.5	7.7

Percent AHD (CD4 <200) of PLHIV >15 years with treatment interruption

	Malawi (N=82)	Zimbabwe (N=172)	Lesotho (N=156)	Zambia (N=73)	Ethiopia* (N=17)	Tanzania* (N=34)	Namibia (N=141)	Eswatini (N=105)	Uganda (N=117)	Cote d'Ivoire* (N=25)	Cameroon* (N=33)
Men	51.1	42.6	42.5	33.6	22.0	25.3	22.3	24.5	15.0	9.5	8.0
Women	29.5	22.2	20.5	25.3	38.4	31.4	10.7	22.1	13.5	19.6	29.4
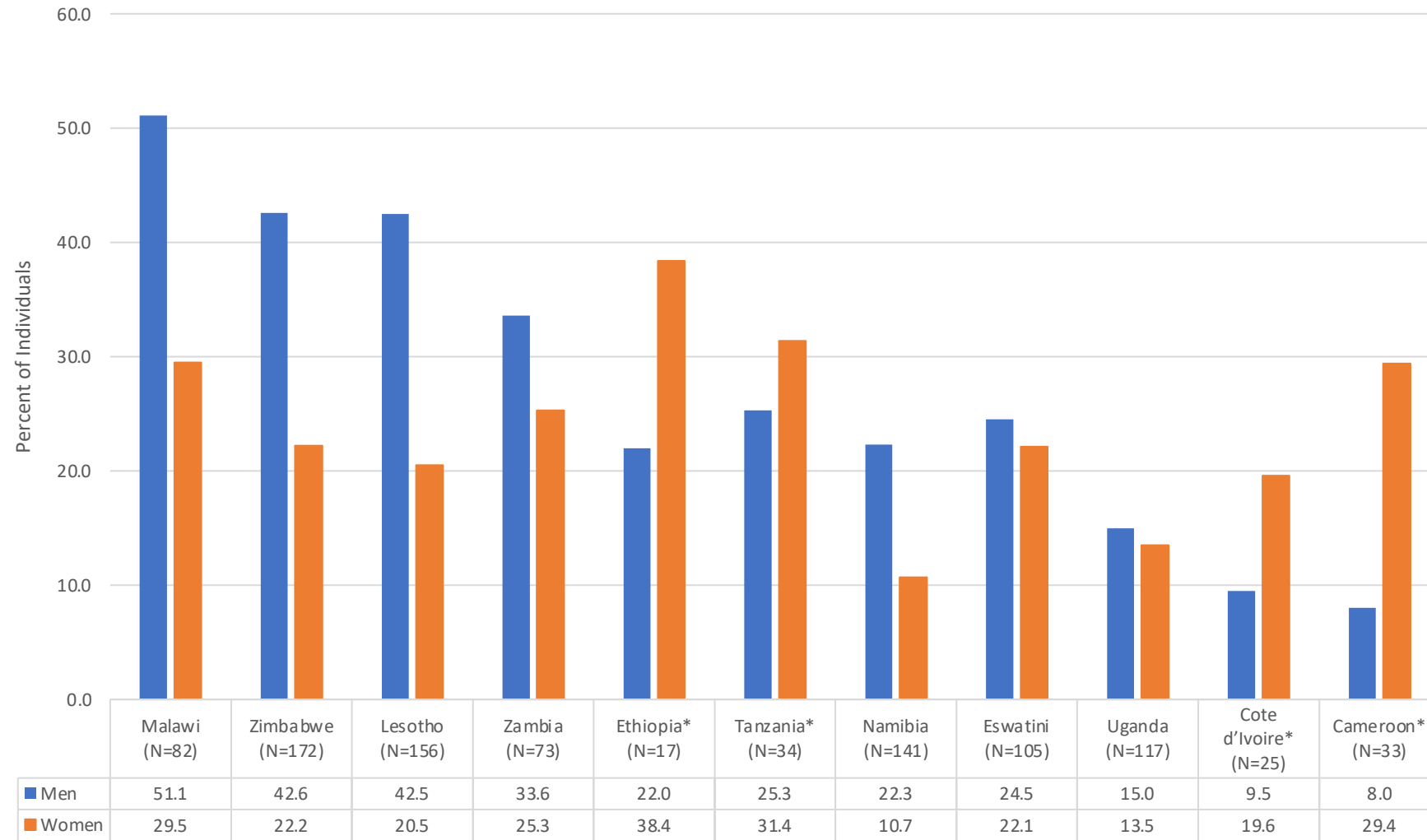
PHIA

Summary prevalence

In the setting of "treat all" the prevalence of advanced disease at ART initiation may be going down.'

Individuals who have had a treatment interruption should be evaluated for advanced disease

More men than women in the community survey have advanced disease.

CD4 Network Optimization: aiming to provide access to reliable CD4 testing for all eligible individuals

- Tool filled in by all Operating Units
  - Identify clinical facilities need and gaps for CD4 testing services
  - Identify and assess CD4 testing facilities capacity
  - Identify the CD4 testing network
- Outcomes
  - Prioritize facilities to improve access to CD4 testing
  - Choose appropriate CD4 assays and placement at facilities or laboratories
  - Linkage of clinical facilities to CD4 testing services

Cost effectiveness analysis of LAmB
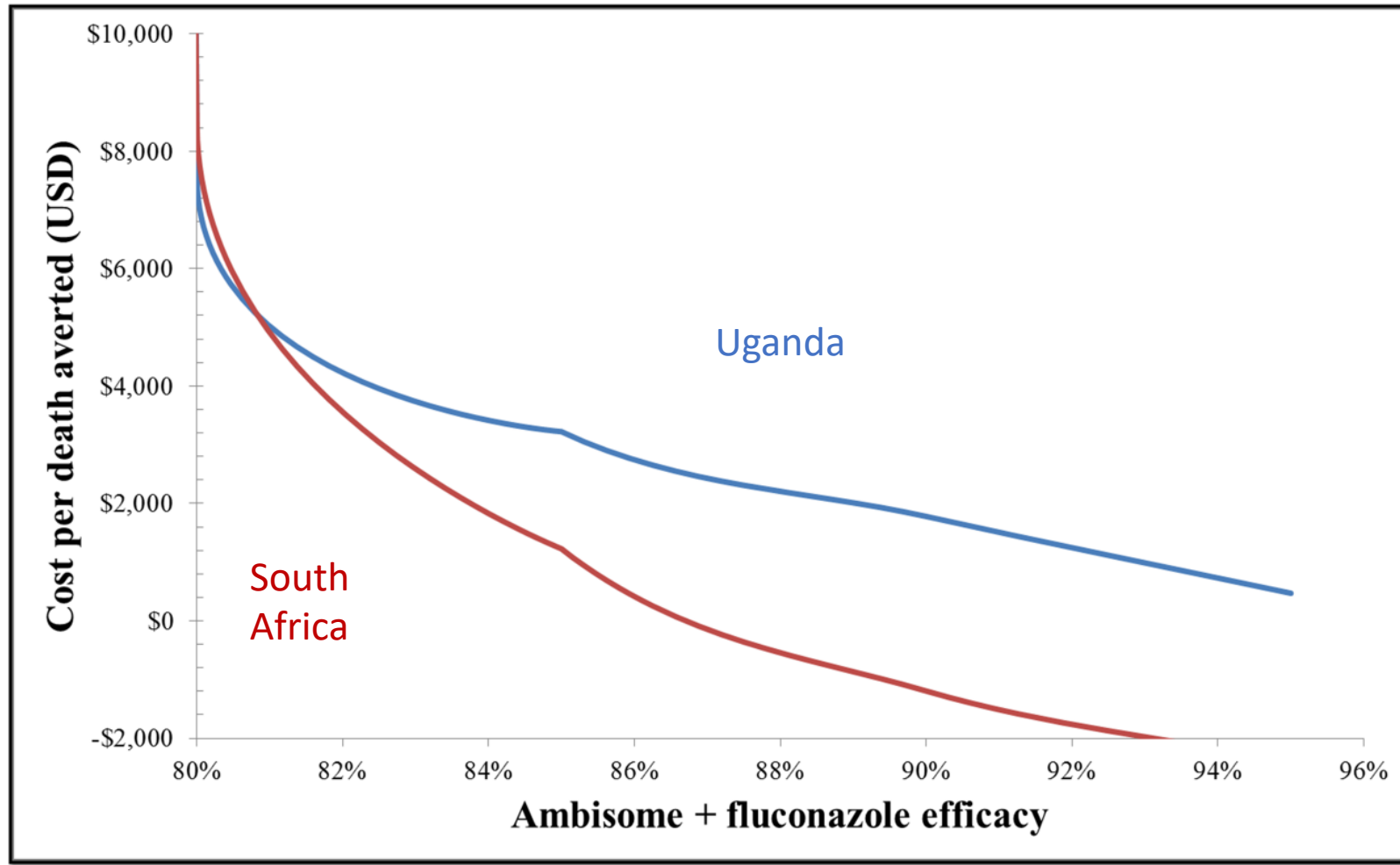
Rajasingham et al. 2022

NB pre-emptive therapy