HIV drug resistance among children & adolescents with viremia on treatment

GIVE MOVE Trial (NCT04233242)

284 Children and adolescents (6 months to 19 years) with HIV and viral load ≥400 copies/mL while taking ART

144 GRT Group
GRT <u>and</u> expert recommendation informed treatment

140 Usual Care Group
Viral load informed (empirical) treatment

Death
or HIV related hospitalization
or new WHO stage 4 event
or <u>un</u>suppressed viral load (≥50 copies/mL)

→ No significant difference between arms at 9 months[1]

Preplanned secondary analysis on genotypic resistance testing (GRT) data

1. Brown et al., Lancet Glob Health, 2024. doi: 10.1016/S2214-109X(24)00183-9

Included participants

284 participants included in the GIVE MOVE trial

Excluded
115 No GRT at baseline or at 9 months; viral load <400 copies/mL or unknown at baseline and 9 months
19 No GRT at baseline or at 9 months; viral load ≥400 copies/mL at one or both time points

150 participants included in the GRT analysis

<u>Baseline sample</u>[#]
12 No viral load, no GRT
12 Viral load <400 copies/mL, no GRT
6 Viral load ≥ 400 copies/mL, no GRT
120 GRT successful

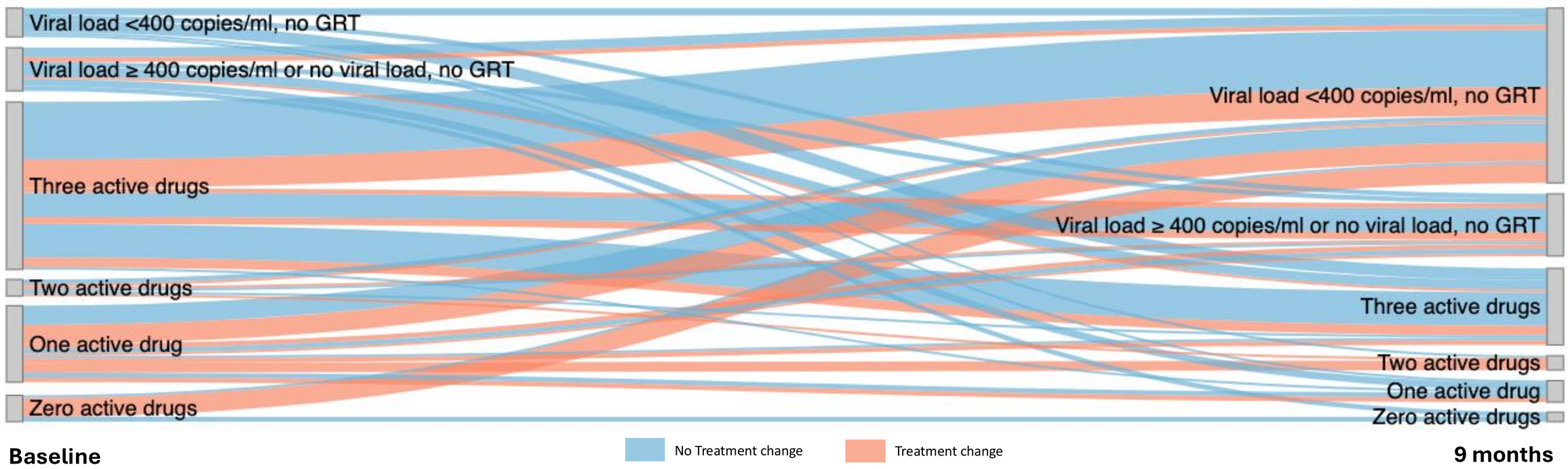
<u>9-month sample</u>[&]
5 Lost to follow up
2 No viral load, no GRT
73 Viral load <400 copies/mL, no GRT
19 Viral load ≥ 400 copies/mL, no GRT
51 GRT successful

Baseline characteristics (n=150)

Age (medium [IQR])		13.0 [5.4-16.1]
Sex (%)		
	Male	62 (41.3)
	Female	88 (58.7)
Country (%)		
	Lesotho	115 (76.7)
	Tanzania	35 (23.3)

[#] Sample between baseline and 9-month visit
[&] Sample at or after 9-month visit

150 participants with at least one successful GRT, stratified by treatment change



Frequencies of participants with resistance-associated mutations at each position

→ In most cases, treatment failure could not be explained by resistance

→ Resuppression with regimens that were not fully active was frequent, as was ongoing viraemia with regimens predicted to be fully active

GRT information, stratified by visit date

Category	Baseline (n=150)	9 months (n=150)
Current regimen (%)*		
INSTI-based	72 (48.0)	102 (70.3)
PI-based	69 (46.0)	1 (0.7)
NNRTI-based	9 (6.0)	42 (29.0)
Viral load		
<400 (copies/ml)	22 (14.7)	74 (49.3)
400-999 (copies/ml)	15 (10.0)	10 (6.7)
1000-99999 (copies/ml)	72 (48.0)	49 (32.7)
>100000 (copies/ml)	15 (10.0)	10 (6.7)
Missing viral load	26 (17.3)	7 (4.7)
GRT result		
No viral load, no GRT	12 (8.0)	2 (1.3)
Loss to follow up	-	5 (3.3)
Viral load <400 copies/ml, no GRT	12 (8.0)	73 (48.7)
Viral load >400 copies/ml, no GRT	6 (4.0)	19 (12.7)
Zero active drugs⁺	11 (7.3)	4 (2.7)
One active drug⁺	32 (21.3)	9 (6.0)
Two active drugs⁺	7 (4.7)	6 (4.0)
Three active drugs⁺	70 (46.7)	32 (21.3)

INSTI=Integrase Strand Transfer Inhibitors, PI=Protease Inhibitors, NNRTI=Non-Nucleoside Reverse Transfer Inhibitor

* 5 lost to follow up at 9 months (thereof 1, 3, and 1 taking INSTI-, PI-, and NNRTI-based ART at baseline)
⁺ Calculated for each drug per regimen using the Stanford HIV drug resistance database

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