

Virologic failure and drug resistance after programmatic switching to dolutegravir-based first-line ART in Malawi and Zambia

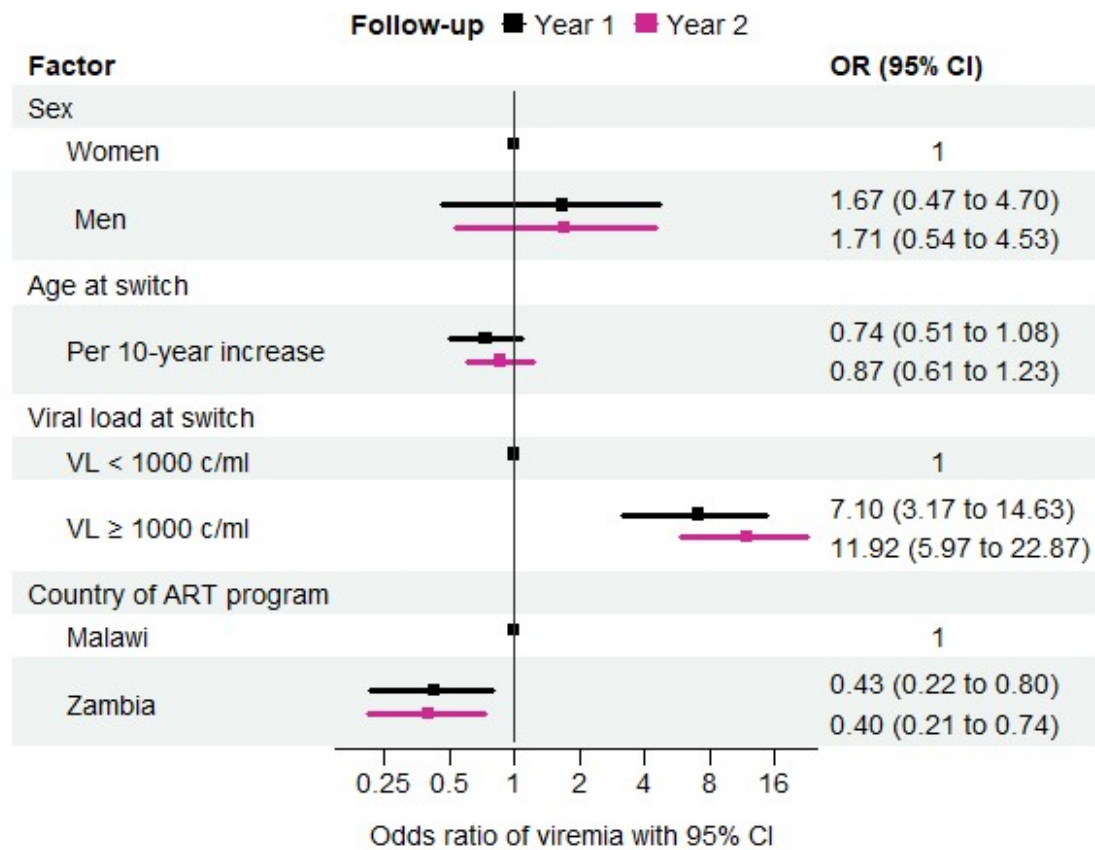
Supplementary materials

Supplementary Table 1. Virologic outcomes of PWH at 1 year and 2 years after routine switching to DTG-based first-line ART by viral load at switch, and relative risk (RR) of viremia with exact 95% confidence intervals (CI) and P-values, in two ART programs in Malawi and Zambia. Sensitivity analysis using cut-off 1000 copies/mL.

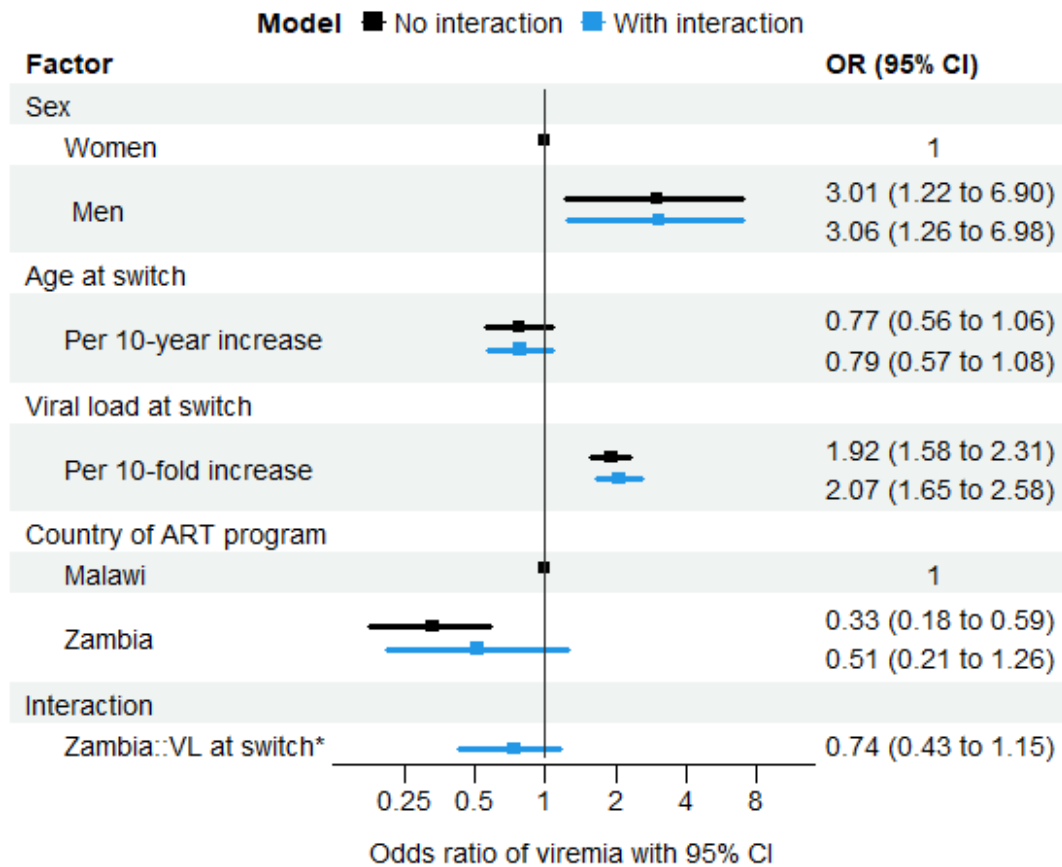
At switch No. of PWH (%)	Viral load* (No. of patients)			
	At 1 year of follow-up No. of PWH (%)		At 2 years of follow-up No. of PWH (%)	
	Viremic	Suppressed	Viremic	Suppressed
Malawi N=1422	N=1137		N=1140	
Viremic 64 (4.5%)	11 (19.3%)	46 (80.7%)	14 (25.9%)	40 (74.1%)
Suppressed 1358 (95.5%)	25 (2.3%)	1055 (97.7%)	29 (2.7%)	1057 (97.3%)
Relative risk (95% CI)	8.34 (3.85 to 16.5)		9.71 (4.98 to 17.7)	
P	<0.001		<0.001	
Zambia N=1410	N=1320		N=1248	
Viremic 26 (1.8%)	1 (2.6%)	38 (97.4%)	1 (2.6%)	38 (97.4%)
Suppressed 1384 (98.2%)	15 (1.2%)	1266 (98.8%)	17 (1.4%)	1192 (98.3%)
RR (95% CI)	2.19 (0.05 to 13.5)		1.82 (0.04 to 11.0)	
P	0.77		0.88	

* Viremia was defined as viral load (VL) ≥ 1000 copies/mL and virologic suppression as VL < 1000 copies/mL. Viremia was defined as viral load ≥ 400 HIV-1 copies/mL and virologic suppression as VL < 400 copies/mL. In Malawi viral load was missing in 285 (20.0%) patients at 1 year, and 282 (19.8%) patients at 2 years. In Zambia, viral load was missing in 90 (6.4%) patients at 1 year and 162 (11.5%) patients at 2 years. PWH; people living with HIV

Supplementary Figure 1. Odds ratios of viremia (viral load ≥ 1000 copies/mL) at 1 year (black) and 2 years (magenta) after routine switching to DTG-based first-line ART, with 95% confidence intervals (CI). Results from logistic regression models adjusted for all variables shown (Model S1).



Supplementary Figure 2: Odds ratios of viremia (viral load ≥ 400 copies/mL) at 2 years after routine switching to DTG-based first-line ART, with 95% confidence intervals (CI), based on model without interaction (black) and with interaction (blue) (Models S2 and S3). Viral load (VL) at switch was modelled continuously as log₁₀-transformed VL with a set-off 10 for undetectable VL measurements.



*The interaction corresponds to the contrast in OR (per 10-fold increase in VL at switch) between Zambia and Malawi.