

## Circulating resistance to first-line HIV drug regimens in sub-Saharan Africa: a sheep in wolf's clothing?

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## Circulating resistance to first-line HIV drug regimens in sub-Saharan Africa: A sheep in wolf's clothing?

**Table.** Case base scenario for number needed to treat for 12 months according to pre-treatment drug resistance (PDR) prevalence observed in OLA (0.0975) and SOC (0.0769) arms in Chung et al. and simulations at different levels of PDR prevalence

Case base	OLA arm			Standard of care arm			Absolute diff. in prob. of VF	NNT
	N	Virologic failure (VF)	Probability of VF	N	VF	Probability of VF		
Total	400	34	0.08500	403	39	0.09677	0.01177	84.9
Wild type	361	28	0.07756	372	24	0.06452		
2-9%	4	1	0.25000	5	2	0.40000		
10%+	35	5	0.14286	26	13	0.50000		
PDR	39	6	0.15385	31	15	0.48387		
Simulations	PDR prevalence			PDR prevalence				
		0.10	0.08519		0.10	0.10645	0.02126	47.0
		0.15	0.08900		0.15	0.12741	0.03841	26.0
		0.20	0.09281		0.20	0.14839	0.05558	18.0
		0.25	0.09663		0.25	0.16935	0.07272	13.8
		0.30	0.10044		0.30	0.19032	0.08988	11.1

### Explanatory notes:

Table 2 of the manuscript represents the base case scenario with probability of virologic failure (VF) in the OLA arm being 34/400 (0.085) and in the SOC arm 39/403 (0.097) at a pre-treatment drug resistance (PDR) prevalence of 39/400 (0.0975) and 31/403 (0.0769) respectively. The number needed to treat (reciprocal of the absolute difference in VF) to prevent one case of VF in the OLA arm will be 84.9.

We computed the probability of VF in both arms at different simulations of PDR prevalence as follows:

OLA arm:  $\text{PDR prevalence} \times \text{Prob. of VF in those with PDR} + (\text{Wild-type prevalence} \times \text{Prob. of VF in those with wild-type virus})$

SOC arm:  $\text{PDR prevalence} \times \text{Prob. of VF in those with PDR} + (\text{wild-type prevalence} \times \text{Prob. of VF in those with wild-type virus})$

We estimated the number needed to treat by the reciprocal of the absolute difference in prob. of VF from both arms.