

Additional File 1: Association between *pfk13* and *pfmdr1* polymorphisms and late treatment failures observed during therapeutic efficacy studies in Angola, 2015, stratified by treatment, full data

	Artemether-lumefantrine						Dihydroartemisinin-piperaquine						Artesunate-amodiaquine							
	ACPR	Recrudescence (DF)	RR†	P-value††	Recrudescence + Reinfection (DF)	P-value†††	ACPR	Recrudescence (DF)	RR†	P-value††	Recrudescence + Reinfection (DF)	P-value†††	ACPR	Recrudescence (DF)	RR†	P-value††	Recrudescence + Reinfection (DF)	P-value†		
<i>pfk13</i>							<i>pfk13</i>						<i>pfk13</i>							
Wildtype	165/166 (99%)	9/9 (100%)	-	-	28/28 (100%)	-	Wildtype	165/167 (99%)	1/1 (100%)	-	-	15/15 (100%)	-	Wildtype	94/94 (100%)	0	-	-	7/7(100%)	-
A578S	1/166 (<1%)	0	0	1	-	-	A578S	2/167 (1%)	0	0	1	-	-	A578S						
<i>pfmdr1</i> copy number							<i>pfmdr1</i> copy number						<i>pfmdr1</i> copy number							
1	171/171 (100%)	9/9 (100%)	-	-	26/26 (100%)	-	1	185/185 (100%)	0	-	-	13/13 (100%)	-	1	90/90 (100%)	0	-	-	7/7 (100%)	-
<i>pfmdr1</i> haplotype							<i>pfmdr1</i> haplotype						<i>pfmdr1</i> haplotype							
NYD	92/161 (57%)	8/9 (89%)	Ref	Ref	23/28 (82%)	Ref	NYD	116/182 (64%)	1/1 (100%)	Ref	Ref	12/15 (80%)	Ref	NYD	62/92 (67%)	0	Ref	Ref	6/7 (86%)	Ref
YYD	35/161 (22%)	1/9 (11%)	0.3	0.4	2/28 (7%)	0.04	YYD	15/182 (8%)	0	0	1	2/15 (13%)	0.7	YYD	7/92 (8%)	0	0	1	1/7 (17%)	0.6
NFD	44/161 (27%)	4/9 (44%)	1.0	1	13/28 (46%)	0.7	NFD	66/182 (36%)	1/1 (100%)	1.75	1	7/15 (47%)	1	NFD	28/92 (30%)	0	0	1	2/7 (29%)	1
YFD	5/161 (3%)	1/9 (11%)	2.0	0.4	2/28 (7%)	0.6	YFD	6/182 (3%)	0	0	1	1/15 (7%)	0.5	YFD	0	0	-	-	0	-
YYY	5/161 (3%)	0	0	1	0	0.6	YYY	1/182 (<1%)	0	0	1	0	1	YYY	0	0	-	-	1/7 (14%)	0.1
NY Y	0	0	0	1	0	1	NY Y	0	0	-	-	0	-	NY Y	0	0	-	-	0	-
YFY	1/161 (<1%)	0	0	1	0	1	YFY	0	0	-	-	0	-	YFY	0	0	-	-	0	-
<i>pfmdr1</i> SNP							<i>pfmdr1</i> SNP						<i>pfmdr1</i> SNP							
N86	121/161(75%)	9/9 (100%)	Ref	Ref	27/28 (96%)	Ref	N86	163/182 (90%)	1/1 (100%)	Ref	Ref	15/15 (100%)	Ref	N86	86/92 (93%)	0	Ref	Ref	6/7 (86%)	Ref
86Y	42/161 (26%)	1/9 (11%)	0.3	0.5	2/28 (7%)	0.03	86Y	22/182 (12%)	0	0	1	3/15 (20%)	0.5	86Y	7/92 (8%)	0	0	1	2/7 (29%)	0.1
Y184	128/161 (80%)	8/9 (89%)	Ref	Ref	23/28 (82%)	Ref	Y184	129/182 (71%)	1/1 (100%)	Ref	Ref	13/15 (86%)	Ref	Y184	68/92 (74%)	0	Ref	Ref	7/7 (100%)	Ref
184F	48/161 (30%)	4/9 (44%)	1.3	0.7	13/28 (46%)	0.3	184F	71/182 (39%)	0	0	1	8/15 (53%)	0.8	184F	28/92 (30%)	0	0	1	2/7 (29%)	1
D1246	155/161 (96%)	9/9 (100%)	Ref	Ref	27/28 (96%)	Ref	D1246	181/182 (99%)	1/1 (100%)	Ref	Ref	15/15 (100%)	Ref	D1246	92/92 (100%)	0	Ref	Ref	6/7 (86%)	Ref
1246Y	6/161 (4%)	0	0	1	0	0.6	1246Y	1/182(<1%)	0	0	1	0	1	1246Y	0	0	-	-	1/7 (14%)	0.07

SNP: single nucleotide polymorphism; ACPR: adequate clinical and parasitological failure; DF: day of failure; RR: relative risk; Ref: reference

† Relative risk of treatment failure (recrudescence)

†† Statistical significance of difference in risk of treatment failure (recrudescence)

††† Statistical significance of difference in risk of treatment failure (recrudescence or reinfection)

