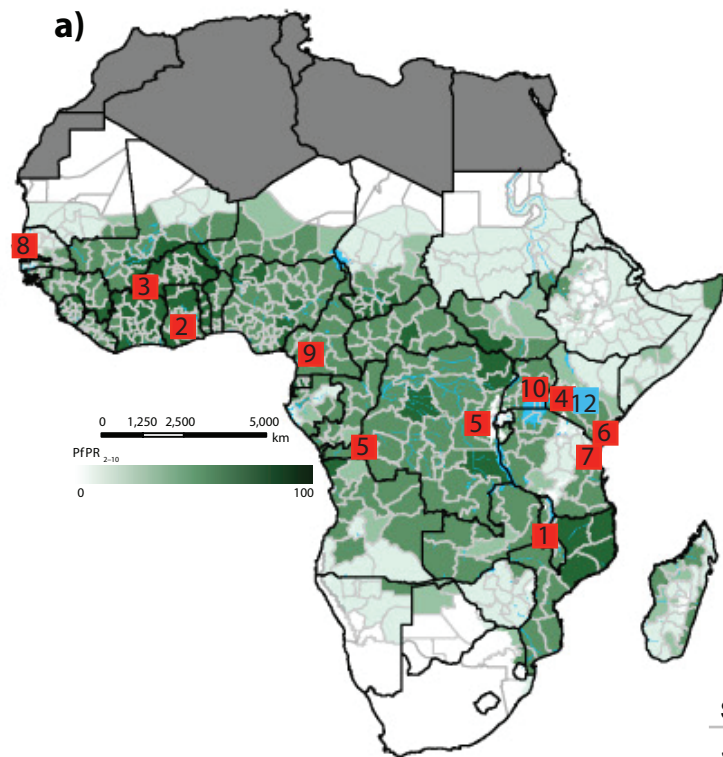


**b)****Study***Studies in malaria-endemic sites*

	Malaria	HbAS	Iron deficiency
1 Malawi	273/1024 (26.66%)	101/1035 (9.76%)	252/1035 (24.35%)
2 Ghana	225/1060 (21.23%)	133/1123 (11.84%)	248/1123 (22.08%)
3 Banfora, Burkina Faso	60/290 (20.69%)	36/314 (11.46%)	114/314 (36.31%)
4 Western Kenya	78/379 (20.58%)	67/411 (16.30%)	105/411 (25.55%)
5 Sud-Kivu and Congo Central, DRC	127/653 (19.45%)	71/678 (10.47%)	113/678 (16.67%)
6 Kilifi, Kenya	156/875 (17.83%)	151/996 (15.16%)	393/996 (39.46%)
7 Muheza, Tanzania	105/652 (16.01%)	98/652 (15.03%)	158/652 (24.23%)
8 West Kiang, The Gambia	84/721 (11.65%)	97/723 (13.42%)	157/723 (21.72%)
9 Yaoundé and Douala, Cameroon	25/287 (8.71%)	40/292 (13.70%)	30/292 (10.27%)
10 Entebbe, Uganda	88/1212 (7.26%)	206/1229 (16.76%)	437/1229 (35.56%)
Pooled	1221/7153 (17.07%)	1000/7453 (13.42%)	2007/7453 (26.93%)

Studies in malaria-free sites

11 Jackson Heart Study, USA	0/3207 (0%)	270/3207 (8.42%)	320/3207 (9.98%)
12 Nairobi, Kenya	0/611 (0%)	88/611 (14.40%)	38/611 (6.22%)
Pooled	0/3818 (0%)	358/3818 (9.38%)	358/3818 (9.38%)

c)**Study***Studies in malaria-endemic sites*

	% ID in HbAA/HbAS		OR (95% CI)	%Weight	n
Malawi	24.84/19.80	◆	0.75 (0.45, 1.25)	8.94	1035
Ghana	23.74/12.03	◆	0.45 (0.26, 0.77)	22.01	1123
Banfora, Burkina Faso	37.41/27.78	◆	0.64 (0.30, 1.39)	4.82	314
Western Kenya	26.45/20.90	◆	0.73 (0.39, 1.39)	5.72	411
Sud-Kivu and Kongo Central, DRC	16.80/15.49	◆	0.91 (0.46, 1.79)	3.24	678
Kilifi, Kenya	40.83/31.79	◆	0.68 (0.47, 0.98)	22.01	996
Muheza, Tanzania	24.19/23.47	◆	0.96 (0.58, 1.59)	5.61	652
West Kiang, The Gambia	22.20/18.56	◆	0.80 (0.46, 1.38)	6.76	723
Yaoundé and Douala, Cameroon	10.32/10.00	◆	0.99 (0.39, 2.53)	1.25	292
Entebbe, Uganda	36.27/32.04	◆	0.83 (0.60, 1.14)	19.63	1229
Overall (I-squared = 0.0%, P = 0.68)		◇	0.70 (0.58, 0.82)	100.00	7453

Studies in malaria-free sites

Jackson Heart Study, USA	10.06/9.26	◆	0.91 (0.60, 1.40)	89.29	3207
Nairobi, Kenya	6.12/6.82	◆	1.12 (0.46, 2.77)	10.71	611
Overall (I-squared = 0.0%, P = 0.74)		◇	0.93 (0.55, 1.31)	100.00	3818

HbAS reduces ID HbAS increases ID

d)