

Table S1. Summary statistics of microscopy-based diagnosis in relation to the gold-standard molecular diagnosis. PPV: positive predictive value; NPV: negative predictive value.

Species	Sensitivity	Specificity	PPV	NPV
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
<i>Pf</i>	25 (18-33)	99 (99-100)	77 (62-88)	95 (94-96)
<i>Pv</i>	1 (0-5)	100 (100-100) ^a	100 (16-100)	93 (92-94)

^a There were zero instances of microscopy positive *P. vivax* diagnoses which were negative by molecular diagnosis.

Table S2. Association of infection outcomes according to household infection status, with odds ratios (OR) of infection prevalence by household type compared to the background population infection prevalence. Outcomes are presented as N individuals and % prevalence in italics. Panel A summarises outcomes associated with cohabiting with RDT positive individuals, Panel B, *P. falciparum* positive individuals (by PCR diagnosis), Panel C for *P. vivax* (by PCR diagnosis), and Panel D *P. vivax* infections in Duffy positive and Duffy negative households. Table shading correspond to the different infections: any species (orange), *P. falciparum* (green), and *P. vivax* (blue). The index infected individual(s) in each household is/are excluded from the counts.

Outcome	Outcome			OR	95% CI	p-value
	RDT pos	RDT neg	TOTAL			
Whole pop	85 <i>4%</i>	1978 <i>96%</i>	2063		Reference	
Cohabiting with ≥1 RDT pos	19 <i>0%</i>	326 <i>94%</i>	345	1.356	(0.81-2.26)	0.2408
Cohabiting with ≥2 RDT pos	6 <i>11%</i>	47 <i>89%</i>	53	2.97	(1.24-7.14)	0.0107
Outcome	PCR pos	PCR neg	TOTAL	OR	95% CI	p-value
Whole pop	284 <i>14%</i>	1779 <i>86%</i>	2063		Reference	
Cohabiting with ≥1 RDT pos	71 <i>21%</i>	274 <i>79%</i>	345	1.62	(1.22-2.17)	0.0010
Cohabiting with ≥2 RDT pos	66 <i>20%</i>	266 <i>80%</i>	332	1.55	(1.15-2.09)	0.0034
Outcome	<i>Pf</i> PCR pos	<i>Pf</i> PCR neg	TOTAL	OR	95% CI	p-value
Whole pop	145 <i>7%</i>	1918 <i>93%</i>	2063		Reference	
Cohabiting with ≥1 RDT pos	45 <i>13%</i>	300 <i>87%</i>	345	1.98	(1.39-2.83)	0.0001
Cohabiting with ≥2 RDT pos	41 <i>12%</i>	291 <i>89%</i>	332	1.86	(1.29-2.69)	0.0008
Outcome	<i>Pv</i> PCR pos	<i>Pv</i> PCR neg	TOTAL	OR	95% CI	p-value
Whole pop	137 <i>7%</i>	1926 <i>93%</i>	2063		Reference	
Cohabiting with ≥1 RDT pos	27 <i>8%</i>	318 <i>92%</i>	345	1.19	(0.78-1.83)	0.4190
Cohabiting with ≥2 RDT pos	26 <i>8%</i>	306 <i>92%</i>	332	1.19	(0.77-1.85)	0.4240

Outcome	Outcome			OR	95% CI	p-value
	PCR pos	PCR neg	TOTAL			
Whole pop	284 <i>14%</i>	1779 <i>86%</i>	2063		Reference	
Cohabiting with ≥1 <i>Pf</i> PCR pos	105 <i>22%</i>	362 <i>77%</i>	467	1.82	(1.41-2.33)	<0.0001
Cohabiting with ≥2 <i>Pf</i> PCR pos	41 <i>26%</i>	118 <i>74%</i>	159	2.18	(1.49-3.17)	<0.0001
Outcome	<i>Pf</i> PCR pos	<i>Pf</i> PCR neg	TOTAL	OR	95% CI	p-value
Whole pop	145 <i>7%</i>	1918 <i>93%</i>	2063		Reference	
Cohabiting with ≥1 <i>Pf</i> PCR pos	47 <i>10%</i>	420 <i>90%</i>	467	1.48	(1.05-2.09)	0.0253
Cohabiting with ≥2 <i>Pf</i> PCR pos	18 <i>11%</i>	141 <i>89%</i>	159	1.69	(1.01-2.84)	0.0455
Outcome	<i>Pv</i> PCR pos	<i>Pv</i> PCR neg	TOTAL	OR	95% CI	p-value
Whole pop	137 <i>7%</i>	1926 <i>93%</i>	2063		Reference	
Cohabiting with ≥1 <i>Pf</i> PCR pos	54 <i>12%</i>	413 <i>88%</i>	467	1.84	(1.32-2.56)	0.0003
Cohabiting with ≥2 <i>Pf</i> PCR pos	20 <i>13%</i>	139 <i>87%</i>	159	2.02	(1.23-3.33)	0.0049

Outcome	Outcome			OR	95% CI	p-value
	PCR pos	PCR neg	TOTAL			
Whole pop	284 <i>14%</i>	1779 <i>86%</i>	2063		Reference	
Cohabiting with ≥1 <i>Pv</i> PCR pos	97 <i>23%</i>	326 <i>77%</i>	423	1.86	(1.44-2.41)	<0.0001
Cohabiting with ≥2 <i>Pv</i> PCR pos	32 <i>23%</i>	94 <i>74%</i>	126	2.13	(1.40-3.25)	0.0003
Outcome	<i>Pf</i> PCR pos	<i>Pf</i> PCR neg	TOTAL	OR	95% CI	p-value
Whole pop	145 <i>7%</i>	1918 <i>93%</i>	2063		Reference	
Cohabiting with ≥1 <i>Pv</i> PCR pos	50 <i>12%</i>	373 <i>89%</i>	423	1.77	(1.26-2.49)	0.0008
Cohabiting with ≥2 <i>Pv</i> PCR pos	12 <i>10%</i>	114 <i>90%</i>	126	1.39	(0.75-2.58)	0.2920
Outcome	<i>Pv</i> PCR pos	<i>Pv</i> PCR neg	TOTAL	OR	95% CI	p-value
Whole pop	137 <i>7%</i>	1926 <i>93%</i>	2063		Reference	
Cohabiting with ≥1 <i>Pv</i> PCR pos	49 <i>12%</i>	374 <i>89%</i>	423	1.84	(1.31-2.60)	0.0004
Cohabiting with ≥2 <i>Pv</i> PCR pos	20 <i>16%</i>	106 <i>84%</i>	126	2.65	(1.60-4.41)	0.0001

Outcome	Outcome			OR	95% CI	p-value
	<i>Pv</i> PCR pos	<i>Pv</i> PCR neg	TOTAL			
Whole pop	23 <i>3%</i>	472 <i>93%</i>	495		Reference	
Cohabiting with ≥1 <i>Pv</i> PCR pos	5 <i>6%</i>	82 <i>94%</i>	87	1.25	(0.46-3.38)	0.6582
Cohabiting with ≥2 <i>Pv</i> PCR pos	2 <i>25%</i>	6 <i>73%</i>	8	6.84	(1.31-35.77)	0.0086
Outcome	<i>Pv</i> PCR pos	<i>Pv</i> PCR neg	TOTAL	OR	95% CI	p-value
Whole pop	107 <i>8%</i>	1266 <i>92%</i>	1373		Reference	
Cohabiting with ≥1 <i>Pv</i> PCR pos	39 <i>13%</i>	262 <i>87%</i>	301	1.76	(1.19-2.60)	0.0040
Cohabiting with ≥2 <i>Pv</i> PCR pos	15 <i>15%</i>	88 <i>85%</i>	103	2.02	(1.13-3.61)	0.0161

Table S3. *P. falciparum* infection among Duffy positive and negative hosts, as detected by molecular diagnosis. Odds ratios by unconditional maximum likelihood estimation (Wald).

	N	<i>P. falciparum</i> infection		Odds Ratio (95% CI)	Chi-Sq p-value
		Negative	Positive		
<i>Phenotype</i>					
Duffy positive	964	894 (92.7%)	70 (7.3%)	<i>Reference</i>	
Duffy negative	914	855 (93.5%)	59 (6.5%)	0.88 (0.62-1.26)	0.490
<i>Genotype</i>					
(+/+)	246	224 (91.1%)	22 (8.9%)	<i>Reference</i>	
(+/-)	718	670 (93.3%)	48 (6.7%)	0.73 (0.43-1.24)	0.239
(-/-)	914	855 (93.5%)	59 (6.5%)	0.70 (0.42-1.17)	0.174