

Table 1: Distribution of malaria prevalence in the study population according to age and gender

Parameters				Chi-Square	p. value
		N	Prevalence of Malaria n(%)		
Gender	Male	109	54(49.5)	0.891	0.345
	Female	91	39(42.9)		
Age	<20	62	34(54.8)	5.782	0.216
	20-29	49	19(38.8)		
	30-39	27	14(51.9)		
	40-49	18	5(27.8)		
	≥50	44	21(47.7)		
Total		200	93(46.5)		

Table 2: Summary of the results obtained using the UMT and RDT against microscopy

Parameters	Microscopy		Total n (%)	
	Positive n (%)	Negative n (%)		
UMT	Positive	75(80.6)	16(15.0)	91(45.5)
	Negative	18(19.4)	91(85.0)	109(54.5)
	Total	93(46.5)	107(53.5)	200(100.0)
RDT	Positive	74(79.6)	14(13.1)	88(44.0)
	Negative	19(20.4)	93(86.9)	112(56.0)
	Total	93(46.5)	107(53.5)	200(100.0)

Table 3: Comparing the performance characteristics of UMT and RDT against microscopy

Parameters	UMT % (CI)	RDT % (CI)
Sensitivity	82.41 (77.4 – 92.8)	84.41 (78.6-93.0)
Specificity	83.48 (78.6 – 88.5)	83.03 (78.5 – 88.3)
PPV	81.46 (71.4 – 89.5)	80.05 (72.2 – 89.2)
NPV	85.06 (80.2 – 93.7)	87.00 (80.03 – 92.9)
PLR	4.99 (3.8 – 8.1)	4.98 (3.8 – 8.1)
NLR	0.21 (0.19 – 0.25)	0.19 (0.17 – 0.23)
Agreement between tests	83.0 (79.3 – 93.7)	83.5 (77.5 – 93.8)

Sensitivity = [true positive / (true positive + false negative) × 100]; specificity = [true negative / (true negative + false positive) × 100]; PPV = [true positive / (true positive + false positive) × 100]; NPV = [true negative / (true negative + false negative) × 100]; Agreement = [true positive + true negative / N × 100].

Table 4: Sensitivity of UMT against microscopy at different parasite densities

Parameters	Parasite density (parasites/μl)			Overall
	≤100	≤200	≥200	
Sensitivity	0%	40%	95%	81%
95% CI	0%-0%	5%-50%	89%-99.7%	73%-89%
Specificity	85%	85%	85%	85%
95%CI	78%-92%	78%-92%	78%-92%	78%-92%
PPV	0%	16%	100%	82%
95%CI	0%-0%	0.6%-32%	78%-100%	75%-90%
NPV	97%	87%	0%	83%
95%CI	93%-100%	80%-93%	0%-0%	77%-90%