S1 Table: characteristics of studies included in this meta-analysis

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| StudyRef.No. | Author/s and year | Country  | No.Positive | No.Tested | *Plasmodium* species (No. positive) | Diagnostic method  | Risk of bias assessment |
| [1] | Adane et al., 2020 | Ethiopia | 15 | 83 | Pf=8, Pv=5, Pf+Pv=2 | Mo | Low |
| [2] | Adesina et al., 2009 | Nigeria | 156 | 500 | Pf=156 | Mi  | Moderate  |
| [3] | Akinbo et al., 2014 | Nigeria | 197 | 439 | NR | Mi  | Moderate  |
| [4] | Anchang-Kimbi et al., 2015 | Cameroon  | 27 | 301 | Pf=27 | Mi  | Moderate  |
| [5] | Anyaehie et al., 2011 | Nigeria | 470 | 990 | NR | Mi  | Low |
| [6] | Bouyou-Akotet et al., 2003 | Gabon | 93 | 227 | Pf=93 | Mi  | Moderate  |
| [7] | Douamba et al., 2012 | Burkina Faso | 49 | 201 | Pf=49 | Mi and RDT | Moderate  |
| [8] | Emiasegen et al., 2017 | Nigeria | 55 | 242 | Pf=55 | Mi  | Low |
| [9] | Esu et al., 2018 | Nigeria | 32 | 459 | Pf=32 | Mi  | Low |
| [10] | Falade et al., 2008 | Nigeria | 138 | 1848 | NR | Mi  | Moderate  |
| [11] | Feleke et al., 2020 | Ethiopia | 15 | 263 | Pf=9, Pv=6 | Mi  | Low |
| [12] | Francine et al., 2016 | DR Congo | 68 | 363 | Pf=68 | Mi  | Low |
| [13] | Gajida et al., 2010 | Nigeria | 90 | 360 | NR | Mi  | Low |
| [14] | Gibson et al., 2020 | Kenya | 40 | 308 | Pf=35, Pm=3, Po=2 | Mi | Moderate |
| [15] | Hillier et al., 2008 | Uganda | 268 | 2459 | Pf=268 | Mi  | Moderate  |
| [16] | Igwe et al., 2014 | Nigeria | 194 | 250 | Pf=194 | Mi | Moderate |
| [17] | Isah et al., 2011 | Nigeria | 7 | 225 | Pf=7 | RDT | Low |
| [18] | Iwalokun et al., 2015 | Nigeria | 40 | 107 | Pf=40 | Mo | Low |
| [19] | Kattenberg et al., 2012 | Burkina Faso | 201 | 380 | Pf=201 | Mo | Low |
| [20] | Kiptoo Daniel, 2016 | Ghana | 22 | 400 | Pf=21, Pm=1 | Mi | Moderate |
| [21] | Laine Tiitus, 2018 | Malawi | 531 | 1308 | NR | Mo | Low |
| [22] | Maiga-Ascofare et al., 2015 | Madagascar | 174 | 1242 | Pf=157, Pv=1, Po=1, Pm=9, Pf+Pm=5, Pf+Po=1 | Mo | Moderate  |
| [23] | Martínez Pérez et al., 2018 | Liberia | 18 | 164 | Pf=18 | Mo | Moderate  |
| [24] | Matangila et al., 2014 | DR Congo | 72 | 332 | Pf=72 | Mo | Low |
| [25] | Mlugu et al., 2020 | Tanzania | 251 | 819 | Pf=202, Po=3, Pm=13, Pf+Pm=28, Pf+Po=5 | Mo | Low |
| [26] | Nega et l. 2015 | Ethiopia | 31 | 341 | Pf=12, Pv=15, Pf+ Pv=4 | Mi and RDT | Low |
| [27] | Nwaneri et al., 2013 | Nigeria | 22 | 85 | Pf=22 | RDT | Moderate  |
| [28] | Nyunt et al., 2005 | Zambia | 25 | 52 | Pf=25 | Mo | Low |
| [29] | Obebe et al., 2018 | Nigeria | 19 | 130 | Pf=19 | Mi and RDT | Low |
| [30] | Ogbodo et al., 2009 | Nigeria | 163 | 272 | Pf=163 | Mi  | Low |
| [31] | Ogbu et al., 2015 | Nigeria | 256 | 659 | NR | Mi | Moderate |
| [32] | Okusanya et al., 2009 | Nigeria | 49 | 150 | NR | Mi  | Moderate  |
| [33] | Saute et al., 2002 | Mozambique | 138 | 672 | Pf=138 | Mi  | Low |
| [34] | Sule-Odu et al., 2015 | Nigeria | 232 | 468 | NR | Mi | Moderate |
| [35] | Zablon et al., 2015 | Tanzania | 0 | 50 | Pf=0 | Mi and RDT | Moderate  |

Note: Pf ; *Plasmodium falciparum*, Pv: *Plasmodium vivax*, Po: *Plasmodium ovale*, Pm= *P. malariae*, Pf+Pm: *P. falciparum* and *P. malariae* mixed infection, Pf+Po= *P. falciparum* and *P. ovale* mixed infection, NR; Not reported, Mi; Microscopic examination, Mo; Molecular method Mi and RDT; Microscopic examination and Rapid Diagnostic Test, RDT; Rapid Diagnostic Test

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