

Malaria Diagnosis and Initial Management

Malaria Diagnosis

Epic Order: “Malaria Screen.”

Send blood (lavender top tube) immediately to lab. Initial screening test is BinaxNOW, with reflex to malaria smear. If smear results could affect initial treatment (see below) after hours, page Microbiology Director on call to request immediate smear. Immediate Infectious Diseases consultation is recommended when malaria is suspected.

Additional tests needed: CBC/diff, CMP, blood gas (venous acceptable). Prior to diagnosis, consider testing for other causes of fever in tropical settings – blood culture, dengue/Chikungunya serology, etc.

Assessment of Severity

In general, severe malaria is treated with IV artesunate, while nonsevere malaria is treated with oral antimalarials. Severe malaria is defined as the presence of *any of*:

- Impaired consciousness, convulsions, or coma
- Severe anemia (Hgb <7 mg/dL)
- Acute kidney injury
- Acute respiratory distress syndrome
- Circulatory shock
- Disseminated intravascular coagulation
- Acidosis
- Jaundice
- Parasite density ≥ 5%

Table 1: Antimalarial Agent Selection

Malaria Classification	Recommended therapy
Severe malaria	Initiate artesunate x 3 doses (followed by PO course) (Add primaquine if <i>P. vivax</i> or <i>ovale</i>)
Uncomplicated <i>P. falciparum</i>	Initiate artemether-lumefantrine
<i>P. vivax</i> or <i>ovale</i>	Initiate artemether-lumefantrine PLUS primaquine
Others	Refer to CDC Resources below

Table 2: Antimalarial Dosing

Drug	Pediatric Dose	Adult Dose	Schedule
Artesunate	2.4 mg/kg IV	2.4 mg/kg IV	3 doses at 0, 12, and 24 hours
Artemether-lumefantrine (Coartem™)	1 tab: 20 mg artemether, 120 mg lumefantrine 5-<15 kg: 1 tab PO per dose	4 tab PO per dose	Day 1: Initial dose and second dose 8 hours later

	15-<25 kg: 2 tab PO per dose 25-<35 kg: 3 tab PO per dose >35 kg: 4 tab PO per dose		Days 2 and 3: 1 dose BID
Primaquine	0.5 mg base/kg PO, max 30 mg base	30 mg base PO	Check G6PD before giving. Daily x 14 days

Note: See resources below for guidance on parasitemia monitoring, transitioning from IV to PO therapy, and completion of therapy course.

Resources

CDC Malaria Algorithm: <https://www.cdc.gov/malaria/resources/pdf/algorithm.pdf>

CDC Malaria Treatment Table:

https://www.cdc.gov/malaria/resources/pdf/Malaria_Treatment_Table_120419.pdf

This document is intended for educational purposes and does not replace the medical decision and diagnosis of a treating provider. Although we have made a good faith effort to provide accurate information as of the date of creation, we make no representation or warranty regarding its accuracy and have no obligation to update the guidelines as new medical information becomes available.