



		EMLc	ATC codes: P01BF02
Indication	Malaria due to Plasmodium falciparum	ICD11 code: 1F40	
INN	Artesunate + mefloquine		
Medicine type	Biological agent		
List type	Core (EML) (EMLc)		
Formulations	Oral > Solid: 25 mg + 55 mg tablet ; 100 mg + 220 mg tablet		
EML status history	First added in 2013 (TRS 985)		
Sex	All		
Age	Also recommended for children		
Therapeutic alternatives	The recommendation is for this specific medicine		
Patent information	Patents have expired in most jurisdictions Read more <a href="#">about patents</a> .		
Wikipedia	<a href="#">Artesunate + mefloquine</a>		
DrugBank	<a href="#">Artesunate</a> <a href="#">Mefloquine</a>		

## Summary of evidence and Expert Committee recommendations

An application for the addition of the fixed-dose combination of artesunate + mefloquine was submitted by the Drugs for Neglected Diseases initiative (DNDi), Geneva, Switzerland. Expert reviews were prepared by Dr Shalini Sri Ranganathan and Dr Eva Njenga. Artesunate (AS) and mefloquine (MQ) are well established for the treatment of malaria and are listed in the EML and EMLc, with notes advocating their use in combination therapy. The combination artesunate + mefloquine (ASMQ) is recommended by WHO as one of five fixed-dose combinations for the treatment of uncomplicated falciparum malaria. The ASMQ combination is first-line therapy for Plasmodium falciparum malaria in the national policies of some Asian and South American countries. Fixed-dose combinations of the drugs reduce the pill burden and, more importantly, eliminate the possibility of patients taking only one component of the combination or providers selling only one drug to reduce costs. The age-based unit dose packaging provided is appropriate for all age groups, which should make the dosing easier at all levels of the health care system, including in the community. Evaluations of the fixed-dose combination in clinical studies have shown similar comparative efficacy to that demonstrated with separate tablets of artesunate and mefloquine (1, 2). Reported adverse events were also comparable between the fixed-dose combination and separate tablets. There is some evidence to suggest that transmission is decreased in places where the fixed-dose combination is used (3). The current price per child and adult treatment with the ASMQ fixed-dose combination compares well with co-blister presentations or separate tablets of artesunate and mefloquine. DNDi and its partners are working towards lowering the price of the ASMQ combination in the future. ASMQ fixed-dose combination products are prequalified by WHO and the fixed-dose combination is currently registered in Brazil, India, Malaysia and Myanmar. WHO does not recommend the use of separate tablets of artesunate and mefloquine in African children because of concerns about toxicity, including vomiting. To address these concerns DNDi is sponsoring a multicentre, open label, prospective, randomized and controlled phase IV study in Burkina Faso, Kenya and the United Republic of Tanzania to assess the efficacy, safety and pharmacokinetics of the ASMQ fixed-dose combination versus artemether–lumefantrine in approximately 1000 children with uncomplicated P. falciparum malaria (4).

The Expert Committee recommended the addition of both ASMQ 25+55 mg and ASMQ 100+220 mg to the EMLc and EML. The Committee further emphasized the need for access to the data from the planned clinical trial in children, as well as to evidence on the use in *P. vivax* malaria.

1. Smithuis F, Kyaw MK, Phe O, Win T, Aung PP, Oo AP, et al. Effectiveness of five artemisinin combination regimens with or without primaquine in uncomplicated falciparum malaria: an open-label randomised trial. *Lancet Infect Dis.* 2010;10(10):673-81. [http://dx.doi.org/10.1016/S1473-3099\(10\)70187-0](http://dx.doi.org/10.1016/S1473-3099(10)70187-0) PMID:20832366
2. Ashley EA, Lwin KM, McGready R, Simon WH, Phaiphun L, Proux S, et al. An open label randomized comparison of mefloquine-artesunate as separate tablets vs. a new co-formulated combination for the treatment of uncomplicated multidrug-resistant falciparum malaria in Thailand. *Trop Med Int Health.* 2006;11(11):1653-60. <http://dx.doi.org/10.1111/j.1365-3156.2006.01724.x> PMID:17054744
3. Santelli AC, Ribeiro I, Daher A, Boulos M, Marchesini PB, dos Santos RL, et al. Effect of artesunate-mefloquine fixed-dose combination in malaria transmission in Amazon basin communities. *Malar J.* 2012;11(1):286. <http://dx.doi.org/10.1186/1475-2875-11-286> PMID:22905900
4. Efficacy, safety and population-pharmacokinetics of artesunate-mefloquine combination for the treatment of uncomplicated falciparum malaria in African children. Geneva: World Health Organization: 2011 (<http://apps.who.int/trialsearch/trial.aspx?trialid=PACTR201202000278282>, accessed 28 December 2013).

