

Letter to the Editor

To the editor,

In the excellent paper on the attributable fraction of malaria in Mali by Dicko *et al.* (2005) it is not clear if the malaria 'case definition' is also a suggestion to treat. The 'optimal' cut-off value, where the sensitivity curve crosses the specificity curve cannot be used for the decision to prescribe treatment. This cut-off value is rather an epidemiological threshold than a clinical one. For identification of the treatment threshold, decision theory should be applied. The individual and global weight of false positives and false negatives should be taken into account (Zweig & Campbell 1993; Xiao-Hua *et al.* 2002). These are based on prevalence of the disease, mortality, morbidity and cost and side effects of current treatment. For some conditions, possible effects on transmission directly or through the reservoir function of patients and carriers, and stigma might enter the scene as well.

In the setting where the study has been done, the high prevalence, the high mortality and morbidity of the disease,

the so far cheap treatment with few and non-life threatening side effects all point towards a predominance of the individual and global weight of the false negatives, warranting a much lower treatment threshold.

J. Van den Ende
IMTA, Antwerp, Belgium
M. Mukaminega
CHUK, Kigali, Rwanda

References

- Dicko A, Mantel C, Kouriba B *et al.* (2005) Season, fever prevalence and pyrogenic threshold for malaria disease definition in an endemic area of Mali. *TM & IH* 10, 550–556.
- Xiao-Hua Z, Obuchowski N & McClish D (2002) *Statistical Methods in Diagnostic Medicine*. John Wiley & Sons, New York, p. 437.
- Zweig MH & Campbell G (1993) Receiver-operating characteristic (ROC) plots: a fundamental evaluation tool in clinical medicine. *Clinical chemistry* 39, 561–577.