

**ABSTRACT****SENSITIVITY AND SPECIFICITY OF ICT  
(IMMUNOCHROMATOGRAPHY TEST) FOR EVALUATION OF ACT  
(ARTEMISININ COMBINATION THERAPY) TREATMENT IN  
PATIENTS WITH FALCIPARUM MALARIA  
IN DISTRICT LANDAK, WEST KALIMANTAN**

This study aims to determine the sensitivity and specificity of ICT on ACT treatment evaluation of patients with falciparum malaria in the District Landak, West Kalimantan. The study was conducted from December 2010 to February 2011 to respondents who visited three health centers (Karangan, Mandor, and Menjalin).

The design used was cross-sectional and as the gold standard was microscopic examination. A total of 50 respondents with falciparum malaria were included in this study, consisted of 33 (66%) men and 17 (34%) women. They had positive result in microscopic examination and positive diagnosis of ICT on day 0. They received ACT treatment (artesunate [50 mg base], in a dose of 4 mg/kg BW for 3 days and for amodiaquine [150 mg base], in a dose of 10 mg/kg BW for 3 days).

To determine the success of ACT treatment in respondents with falciparum malaria in the study area, evaluation was made after the treatment ended on day 3 and further on day 7. At the end of the treatment, microscopic examination was positive in 1 respondent (2%) and ICT diagnosis was positive in seven respondents (14%). On day 7 of microscopic examination, all respondents indicated negative result, but with ICT it was found that 1 respondent (2%) was still positive. Sensitivity on day 0 was 100% and specificity was also 100%. Positive predictive value was zero and negative predictive value was also zero. Sensitivity on day 3 was 100% and specificity was 87.8%. Positive predictive value was 12.5% and negative predictive value was 100%. Sensitivity on day 7 was zero and specificity was 49%. Positive predictive value was zero and negative predictive value was 100%.

The results of this study showed that ICT cannot be used to follow the evaluation of treatment, because on day 7 it still shows positive reaction. However, ICT can be used to confirm suspected falciparum malaria patients.

**Keywords:** ICT sensitivity, specificity, *P. falciparum*, ACT