

## **Prevalence and risk factors for positive lymphatic filariasis antibody in Sabah, Malaysia: a cross-sectional study**

### **ABSTRACT**

**Background:** Lymphatic filariasis (LF) is a public health problem in Sabah, Malaysia. In the subdistrict of Tangkarason, nine rounds of mass drug administration (MDA) were probably not effective in reducing the prevalence of microfilaria to the <1% threshold recommended by the World Health Organization for stopping MDA. This cross-sectional study was conducted to identify the risk factors associated with positive LF antibody in Tangkarason.

**Methods:** Eligible adults >18 y of age in seven endemic villages in Tangkarason, Beluran, Sabah, were interviewed and tested for LF antibody using the Brugia Rapid kit. Multivariable logistic regression was employed to analyse the associated factors.

**Results:** A total of 244 respondents were included in this study. Their median age was 40 y (interquartile range 30–53). The antibody prevalence of brugian filariasis in the study population was 31.1% (95% confidence interval [CI] 25.7 to 37.2). Older age (adjusted odds ratio [aOR] 1.04 [95% CI 1.02 to 1.06]) and outdoor jobs (aOR 2.26 [95% CI 1.05 to 4.85]) were identified as independent risk factors for positive LF antibody. Participating in the MDA program previously (aOR 0.24 [95% CI 0.10 to 0.57]) was found to be a protective factor for LF infection.

**Conclusions:** A high prevalence of microfilariae was confirmed in all the study sites, which was above the target of <1%. Important factors associated with positive LF antibody were identified, which could be used as a guide for program managers to design more focused control measures in LF-endemic areas.