# Prevalence of Thalassemia in Southeast Asia


## ABSTRACT

Thalassemia is a hereditary red blood cell disorder. It is due to globin gene mutations in either alpha and/or beta globin genes resulting imbalance in numbers of alpha (a) and beta (b) chains in red blood cells. There are two major types of thalassemia which are a- and beta- thalassemia, in which the former is the most common form of thalassemia worldwide especially in Southeast Asia populations. We report here the analysis of the prevalence rate of 83,674 subjects in Southeast Asia. The pooled prevalence rates were calculated using random effect models based on high observed heterogeneity ($I2 > 99.5$, p-value $< 0.1$). The prevalence of a- thalassemia is 22.6% in Southeast Asia. The highest a-thalassemia prevalence was observed in Vietnam (51.5%) followed by Cambodia (39.5%), Laos (26.8%), Thailand (20.1%), and Malaysia (17.3%). This study suggested that a high prevalence of alpha thalassemia occurred in selected Southeast Asia countries and provides a perspective to design healthcare policies with better genetic counselling programs for thalassemia in large populations.