



# Association of variable number of tandem repeats polymorphism in the IL-4 gene with end-stage renal disease in Malaysian patients

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**ABSTRACT.** Variable number of tandem repeats (VNTR) polymorphism in the interleukin 4 (IL-4) gene has been associated with end-stage renal disease (ESRD) subjects in many different populations, although with conflicting results. We determined the 70 bp of VNTR polymorphism at intron 3 of the IL-4 gene in Malaysian ESRD subjects. Buccal cells were collected from 160 case and 160 control subjects; genomic DNA was amplified using PCR, followed by agarose gel electrophoresis. There were significant differences in genotypes and alleles of the IL-4 gene. We conclude that VNTR polymorphism of the IL-4 gene is a risk factor for the development of ESRD among Malaysians.

**Key words:** Genetic polymorphism; VNTR; ESRD; Interleukin