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**Hereditary nephritis in the bull terrier: evidence for inheritance by an autosomal dominant gene**

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**Abstract**

A high prevalence of renal failure has been reported in bull terriers in Australia. The pattern of inheritance was analyzed in a family of 33 bull terriers in which 10 dogs had renal disease manifested by proteinuria, ultrastructural abnormalities in the glomerular basement membrane, renal failure, or 'end stage' kidneys. The presence of at least one affected parent for each affected offspring, the approximately equal male/female ratio and the apparent absence of 'generation-skipping', strongly supported an autosomal dominant mode of inheritance, assuming a fully penetrant single major gene locus. Further evidence was not compatible with either an autosomal recessive or X-linked inheritance pattern. This contrasts with the X-linked inheritance shown in Alport's-type human hereditary nephritis and hereditary glomerulopathy in the samoyeds. Hereditary nephritis in the bull terrier should be a useful model for non-Alport's-type human hereditary nephritis, which is also reported to have an autosomal dominant inheritance pattern.