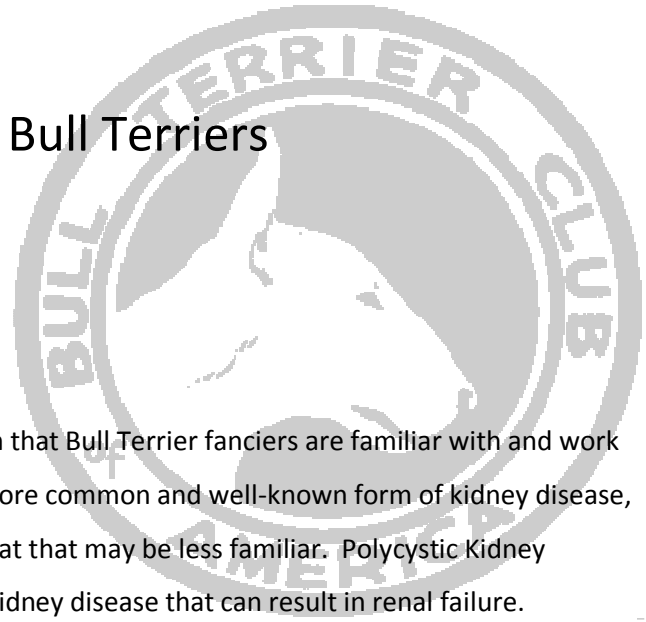


Polycystic Kidney Disease in Bull Terriers

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Hereditary kidney disease has long been a problem that Bull Terrier fanciers are familiar with and work actively to eliminate. Hereditary nephritis is the more common and well-known form of kidney disease, but a second heritable kidney disease is also a threat that may be less familiar. Polycystic Kidney Disease (PKD) is a slowly progressive, irreversible kidney disease that can result in renal failure.

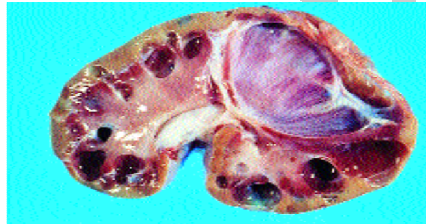


Cross section of a normal kidney.

In PKD, cysts are present in the functional areas of the kidney. The cysts are usually in both kidneys and can vary in size from 1 mm to 2.5 mm in diameter. Clinical signs of kidney disease may occur as the cysts expand and affect adjacent functional tissue. It can take years for clinical signs to be apparent. Renal failure can occur, usually at middle to old age.

PKD is an autosomal dominant disease that has high penetrance-i.e. most animals that have the gene (genotype) will also have the disease (phenotype). The UPC (urine protein to creatinine ratio) commonly performed screening test for hereditary nephritis may be normal in affected animals and does not serve as an effective screening test for PKD. Fortunately, cysts can be detected by ultrasonography. This makes it comparatively easy to detect affected animals prior to breeding. Ultrasound is a non-invasive test that is easy to do and is typically reasonably priced. Some animals may require sedation to facilitate the procedure. Scans can be performed as early as 8 weeks, but it is not currently known at what age cysts will be detectable in all affected animals. Scans should be performed in adults as late as possible

prior to breeding. In cases where fewer than 3 cysts are detected, or if only one kidney is affected, retesting is recommended in 6-12 months. Repeat scanning on apparently unaffected middle-aged animals is advisable in those with an affected or equivocally affected parent or sibling.



A cross-section of a kidney from a dog with PKD showing multiple cysts.

PKD is a problem all Bull Terrier breeders must consider. Ultrasound is a tool that can be used to affectively eliminate affected dogs from breeding populations. Breeders are strongly encouraged to test their breeding stock.

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