



# ALTERNATIVE APPROACHES TO TREATMENT OF URINARY TRACT INFECTIONS IN DOGS: PILOT STUDY



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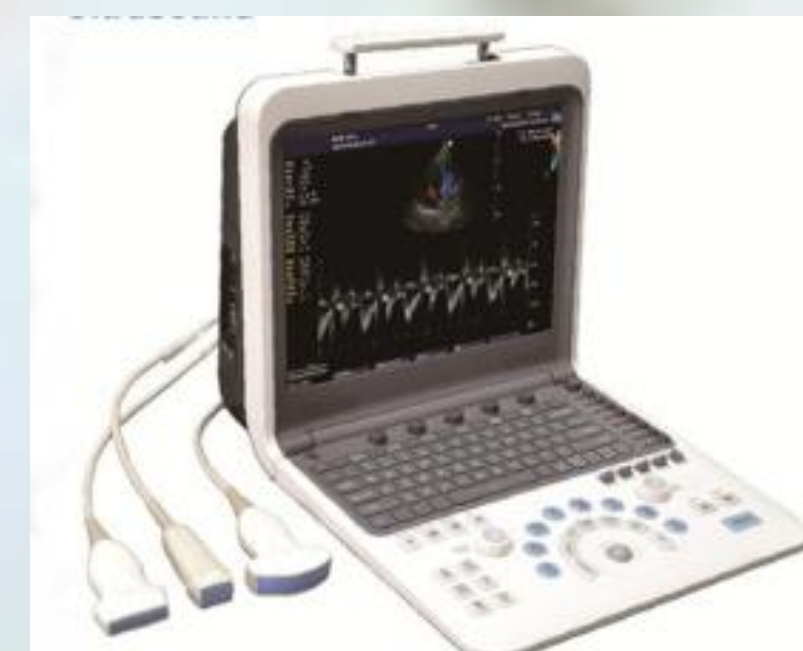
## Introduction:

Bacteria represent the most common cause of urinary tract infection (UTI). Bacterial UTIs occur as a consequence of ascending migration of pathogens through the genital tract and urethra to the bladder, ureters, and one or both kidneys. Antimicrobial drugs are the cornerstone of treatment of UTIs. Because of the chronic nature of UTIs and the potential for antibiotic resistance, a natural approach to prevention and treatment is desirable. Clinical research suggests the best natural options for long-term prevention include cranberry, mannose, and probiotics. The purpose of this study was to evaluate the efficacy of a polyphenolic extract from cranberry juice concentrate (35%) in canine cystitis.



## Material and Methods:

Enrollment was considered for 10 dogs with clinical signs consistent with bacterial cystitis confirmed by positive urine culture. The product was daily orally administered for 60 days. Complete blood count, serum biochemistry profile, right lateral abdominal radiograph, ecogafy and urine analysis were performed to exclude the presence of predisposing conditions for cystitis and to monitor the effects of the treatment. The evaluation were made at day 0 (D0), 15 (D15), 30 (D30) and 60 (D60) after the start of the treatment. The Wilcoxon-Mann-Whitney-Test was used to evaluate differences between the times;  $p < 0.05$  as significance level was chosen.

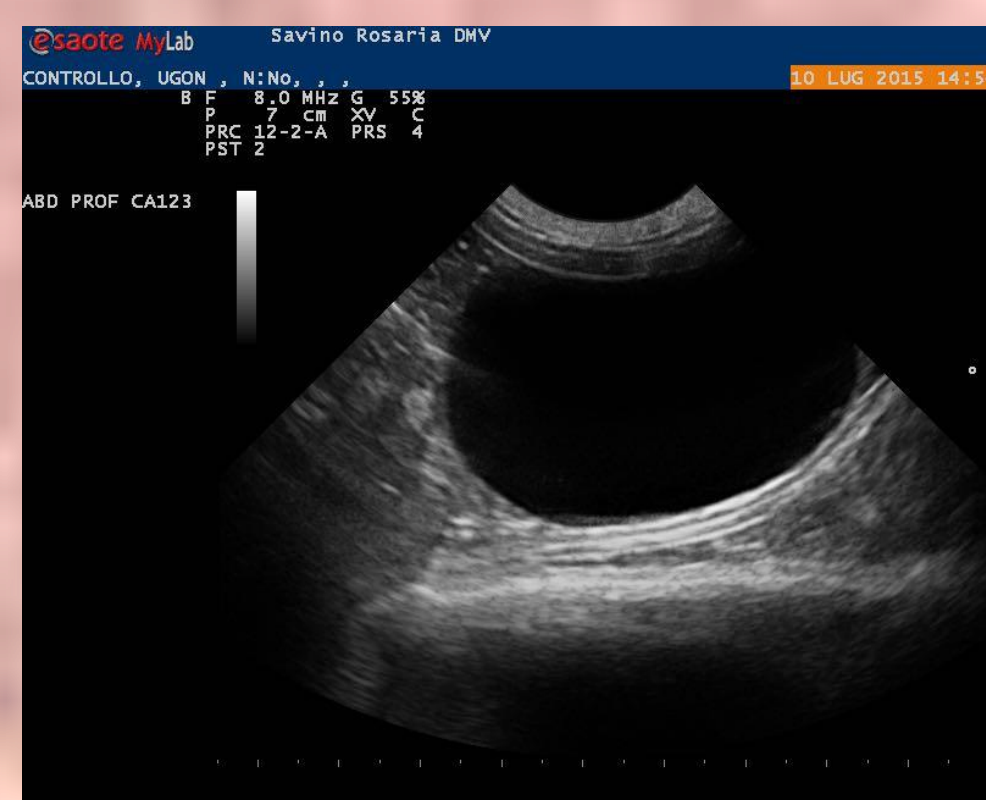


## Results and Discussion:

A significant decrease of protein, epithelial cells, leukocytes and bacterial counts were observed in urine at D60 compared to D0. All dogs at D60 showed a negative urine culture. Haematological analysis showed a significant decrease of leukocytes and neutrophils. Moreover ultrasonography revealed a significant improvement of the urinary bladder mucosal irregularity and thickening. This study, even if performed on a limited canine population, suggests a potential efficacy of the product on canine bacterial cystitis. A larger study need to be performed to confirm these data.



D0



D60



D0



D60

## References:

1 Head KA. Natural approaches to prevention and treatment of infections of the lower urinary tract. *Alt Med Rev* 2008;13(3):227-244, 2 Zafiri D, et al. Inhibitory activity of Cranberry juice on adherence of type 1 and type P fimbriated Escherichia coli to eucaryotic cells. *Antimicrobial Agents and Chemotherapy* 1989;33(1):92-98, 3 Yarnell E. Botanical Medicines for the urinary tract. *World J Urol* 2002;20:285-293, 4 Johnson JR et al. Phylogenetic and pathotypic similarities between Escherichia coli isolates from urinary tract infections in dogs and extraintestinal infections in humans. *JID* 2001;183:897-906