

Mycobacterium Cell Wall Fraction (IMMUNOCIDIN®) for canine transitional cell carcinoma treatment

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Abstract:

- Introduction:** High-grade, muscle-invasive transitional cell carcinoma (TCC) of the urinary tract is an increasing cause of mortality in dogs and is characterized by a local aggressive behavior leading to urinary tract obstruction and a high metastatic potential.
- Study design:** Five dogs with T2N0M0 transitional cell carcinoma of the lower urinary tract confirmed by histopathology or cytology were solely treated with mycobacterium cell wall fraction (MCWF) administered intravesically. These dogs were presented with tumors that were recurrent, surgically unresectable, failed chemotherapy or their owners declined standard care of treatment. MCWF initial administrations were performed weekly for 4 treatments (3 dogs), and during 3 consecutive days (2 dogs) followed by treatment every 14 or 28 days depending on tumor and clinical response. The initial administered dose was 0.5mg of MCWF that was gradually increased to 2.5mg diluted in 0.9%NaCl and infused for 30 min. into the bladder.
- Results:** No significant toxicity was documented and significant improvement in quality of life was observed. Hematuria, dysuria, and pollakiuria were resolved or reduced in all treated dogs 14 days after the start of treatment. Tumor size and disease progress was measured and monitored monthly by ultrasound. Stable disease (3) or partial response (2) were observed in all treated dogs. Three dogs are still regularly receiving MCWF immunotherapy over the last 18, 15 and 3 months.
- Conclusion:** These preliminary data suggest that MCWF could be used as alternative or as adjuvant treatment for dogs with TCC, however, larger studies are needed to define full MCWF safety and efficacy.



Results:

Table 1. Study subjects

Subject#	Tumor	Stage	Histopathology /cytology	Previous Therapy	Cystoscopy
1	TCC	T2N0M0	Histopathology	Surgery & Chemotherapy	No
2	TCC	T2N0M0	Cytology	No	No
3	TCC	T2N0M0	Histopathology	chemotherapy cycle	No
4	TCC	T2N0M0	Cytology	No	No
5	TCC	T2N0M0	Histopathology	Surgery	No

Table 2. Immunocidin dosing schedule and tumor response

# Doses	Volume	Frequency	Tumour response	AE's	Survival time
19	0.5-2.05mL	weekly /every other week*	Partial Remission	No	alive
5	2,0 ml	every 21 days**	Stable Disease	No	6 mths
16	1,0 ml	weekly /every other week*	Stable Disease	No	11 mths
8	1,5 ml	every month**	Stable Disease	No	alive
8	1.5mL	weekly /every other week*	Partial Remission	No	alive

*weekly for 4 treatments and 4 treatments every other week

**treatments for 3 consecutive days followed by treatment every 14 or 28 days depending on tumor and clinical response.

