



**Manufacturers of Mycobacterium Cell Wall Fraction (MCWF)
Technology for The Safe Treatment of Cancer in Pets**

THE BENEFITS OF MCWF

NATURAL IMMUNE STIMULANT

Mycobacterium species have been shown to be profound stimulants of the immune system. In addition, studies with other microorganisms have shown an ability to stimulate the host immune system, leading to inhibition of cancer progression.¹

HOW IT WORKS

NovaVive's MCWF anticancer immunotherapeutic, from the non-pathogenic *Mycobacterium phlei* (Immunocidin®), has been shown to trigger a rapid and broad response by stimulating innate and adaptive immunity through the formation of neutrophils, macrophages, and lymphocytes which enable tumor suppression and reduced tumor growth. It has been demonstrated that *M. phlei* inhibits the proliferation of cancer cells by inducing apoptosis (programmed cell death).²

WIDE MARGIN OF SAFETY

The source organism used by NovaVive is a non-pathogenic saprophytic mycobacterium (*M. phlei*) which is grown, extracted and formulated and has been proven safe and efficacious to treat cancer, as well as bacterial and viral infections in various species and by various routes of administration.³ All products developed from this technology are regulatory-approved.

RESEARCH RESULTS

Two studies were conducted to evaluate the safety of IV administration of Immunocidin® in healthy dogs. In these studies, there were no clinically significant adverse events observed. In addition, no macroscopic or microscopic changes were observed in any of the examined organs (lungs, liver, spleen, and bone marrow).⁴

CANINE MAMMARY ADENOCARCINOMA-DATA SUMMARY							
BREED	AGE	SEX	LOCATION	INITIAL SIZE (CM ²)	TIMES TREATED	TOTAL DOSE mL	RESULTS
MIXED	7.5	F	R-3	93.8	3	20 mL	80% REGRESSION AND SURGICALLY EXCISED
MIXED	10	F SPAYED	R-5	0.8	2	3.5 mL	REMISSION
DACHSHUND	8	F	L-3	210.0	6	30 mL	REMISSION
TERRIER/CHIHUAHUA	11	F SPAYED	R-5	2.3	3	6 mL	REMISSION
SHELTIE	14	F	R-5	2.4	6	9 mL	REMISSION
DACHSHUND	8	f	L-4	4.0	3	4.5 mL	REMISSION

WHEN USING IMMUNOCIDIN IN DOGS WITH KNOWN MAMMARY CANCER MALIGNANCIES...

5 OUT OF 6 DOGS TESTED WENT INTO REMISSION FOLLOWING TREATMENT.⁵

CANINE MIXED MAMMARY TUMOR-DATA SUMMARY							
BREED	AGE	SEX	LOCATION	INITIAL SIZE (CM ²)	TIMES TREATED	TOTAL DOSE mL	RESULTS
POODLE	11	F	R-4, L-3	0.5, 9.6	3	12 mL	REMISSION OF ALL SITES
POODLE	10	F	R-4, L-3	4.0, 16.2	2	14 mL	NON-RELATED DEATH, 58-60% REMISSION
POODLE	10	F	R-3, R-4, L-4	5.9, 1.2, 2.2	3	6.75 mL	REMISSION OF ALL SITES
BOSTON TERRIER	13	F SPAYED	R-2	1.7	3	3.5 mL	REMISSION
MIXED	14	F	R-3	21.9	3	6 mL	REMISSION

WHEN USING IMMUNOCIDIN IN DOGS WITH KNOWN MIXED MAMMARY CANCER...

5 OUT OF 6 DOGS TESTED WENT INTO REMISSION FOLLOWING TREATMENT.⁶

References: 1, 2, 3, 4, 5, 6
Data on file and available from Novavive upon request.

Immunocidin®



IMMUNOTHERAPEUTIC FOR CANINE MAMMARY TUMORS

**USDA APPROVED to inject directly into the tumor
or as an option it can be used as an adjunct to surgery.**

IMMUNOCIDIN REVS UP THE CANINE IMMUNE SYSTEM...

It has an effect like stepping on the gas pedal of a sick dog's immune system. Following injection, directly into the tumor, it is highly effective as a stand-alone treatment of mixed mammary tumor and mammary adenocarcinoma in dogs.

Although Immunocidin is administered by intratumoral injection, the response is generalized and untreated sites frequently undergo regression as well.

IMMUNOCIDIN OFFERS...

- ◆ A high tumor-free survival rate.
- ◆ An injection that is well-tolerated by dogs of all ages, including those with chronic illness.
- ◆ Induction of apoptosis in tumor cells.
- ◆ A treatment option for dogs that may be at risk for surgery.
- ◆ An option that minimizes the side effects associated with chemotherapeutic treatments.
- ◆ An excellent safety profile.
- ◆ An alternative that presents no risk to veterinary hospital staff.

WHEN TO USE IMMUNOCIDIN...

- ◆ As a sole treatment via intratumoral infusion.
- ◆ Pre-surgery to debulk tumors.
- ◆ Post-surgery to improve systemic effect and treat missed cancerous cells and tissue
- ◆ In conjunction with chemotherapy and/or surgery.

IMMUNOCIDIN DOSAGE...

- ◆ The actual dosage varies with tumor size.
- ◆ The average dose is 2.5 mL per tumor, but can range from 1 mL to 10 mL.
- ◆ Treatment should be repeated at 1-3 week intervals until the tumor is resolved.
- ◆ The average cumulative dose is about 7.5 mL to 10 mL, or 3-4 treatments to achieve remission.


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