Demonstrated efficacy in a laboratory challenge study using wild caught ticks

Objective: Demonstrate the ability of VANGUARD® crLyme to aid in the prevention of clinical disease and subclinical arthritis associated with Borrelia burgdorferi.

Methods: 36 healthy Beagles (8–9 weeks of age) seronegative for Lyme disease were randomized in a 155-day tick challenge study. Dogs were randomly divided into groups. Vaccinates and placebo vaccinated controls received two injections, three weeks apart, and then challenged with wild caught ticks for a total of ten days. The third group consisted of non-vaccinated, non-challenged controls that received identical care throughout the study.

Group 1: 16 dogs received placebo
Group 2: 16 dogs received VANGUARD crLyme
Group 3: 4 dogs in sentinel group were not vaccinated or challenged with ticks

Study Timeline

C₆ Antibody Test Results

IDEXX® C₆ SNAP® Test Results at 30, 60 and 90 Days Post-Challenge
A significant difference (p<0.0001) was noted between vaccinates and controls with respect to the prevention of B. burgdorferi infection:

- After challenge, all dogs in the placebo vaccinated (control) group tested positive
- All dogs in the sentinel group were negative at all time points
- One dog in the product treatment group tested positive once for B. burgdorferi on day 30 post-tick challenge via a C₆ SNAP test and tested negative at all other times
Efficacy Study

OspA & OspC Antibody Response

VANGUARD® crLyme demonstrated a robust antibody response post-vaccination
Vaccinations at Days 0 and 21; Wild Caught Tick Challenge from Days 42–52

OspA Antibody Titers
After VANGUARD crLyme vaccination, robust OspA antibody titers were observed and maintained in dogs.

OspC Antibody Titers
Post-challenge, there was no increase in OspC antibodies with VANGUARD crLyme vaccinates, demonstrating protection against B. burgdorferi infection.

Histopathology Results

VANGUARD crLyme helped prevent inflammation in the skin and joints.

Vaccinates

Synovial Layer
No inflammatory infiltrates present

Skin
Normal neural fiber

Non-Vaccinates

Synovial Layer
Nodular mononuclear (lymphoplasmacytic) infiltrate present

Skin
Nodular lymphoplasmacytic infiltrate present around neural fiber

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