

## What You Can Do About SLO (Symmetrical Lupoid Onychodystrophy) in the Bearded Collie

SLO is an autoimmune chronic nail problem in a number of dog breeds; it is the second most common autoimmune disease in Bearded Collies, being reported in 3.5% of dogs in BeaCon's Open Health Registry. 88% of SLO dogs are diagnosed before the age of 8 years. The dogs suffer from pain, loose nails, bleeding nail beds, nails falling off, splitting nails, and more. After initial treatment the course can be stability on a reduced treatment regimen, complete recovery, or recurrence necessitating the initial treatment regimen again. In rare instances it may resolve completely. Trigger events (e.g., environment, preventive use (vaccination; flea, tick, heartworm) stress and heredity may be among contributing causes of SLO.

Initially, signs of SLO will depend on the symptoms which can include pain, bleeding, shedding, or loose nails. Diagnosis is made by the clinical findings and response to treatment regimens that are effective in control of SLO; for research purposes, the gold standard for diagnosis is a toe/claw biopsy and this is highly preferred by researchers. An affected dew claw can also be used for biopsy.

The pictures below show symptoms of a dog affected with SLO. Pictures cannot describe the dog's suffering or the owner's support efforts (financial, emotional, and care needs).



There are two parts of SLO research.

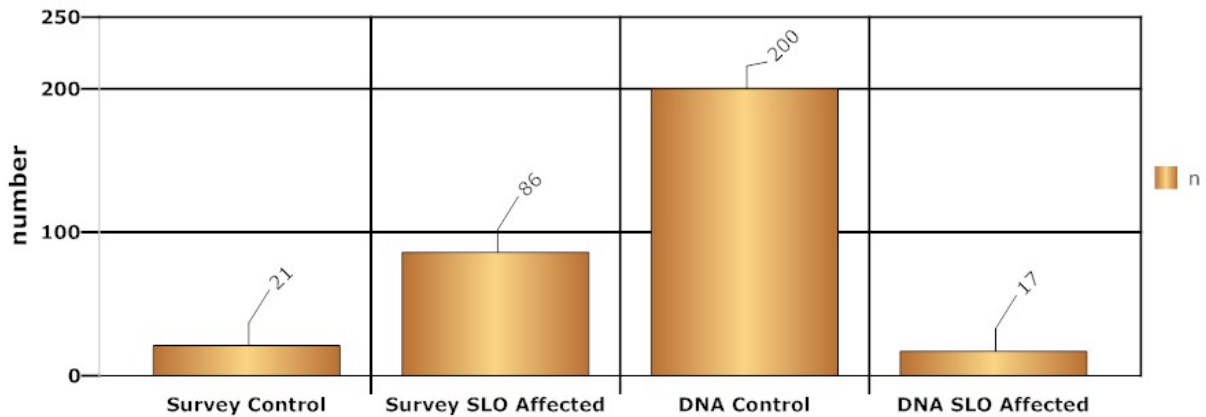
1. First is an epidemiological survey of "Environmental Factors and Preventive Practices", and family history – a BeaCon project. The goal of this part is to determine if there is/are a unique factor(s) contributing as trigger events to the development of SLO, and whether the disease is more prevalent in some families.
2. Second is collection of DNA samples (with a history form) by Dr. Anita Oberbauer's lab at UC Davis. The ultimate goal is to develop a test for gene markers or the actual gene(s) involved in SLO; this would help guide breeders in choices of prospective mates, a process that when judiciously used, could possibly reduce frequency of the disease.

Participation needed:

1. The "environmental and family survey" (BeaCon project) needs:
  - a. 100 healthy (control) dogs (n=100) AND
  - b. 100 SLO affected dogs (n=100)
2. Dr Oberbauer's "DNA study" (UC Davis project) needs :
  - a. 100 DNA samples from healthy (control) dogs (they have > 200 samples) AND
  - b. 100 DNA samples from SLO affected dogs (n=100)

The purpose of having healthy controls (dogs that show no signs of SLO or other serious health problem) is to allow comparison with the SLO affected dogs in the areas of epidemiologic factors, family history, and DNA markers for genes associated with SLO. While the same control or SLO dogs may participate in both DNA and survey projects, the two projects are administered independently. Participation in the UC Davis project (DNA samples) is confidential. Participants in the surveys are asked for owner contact information in the event survey details need clarification; survey reports are anonymous.

## Participation (June 2013)



While DNA samples have been received from additional dogs that may have SLO, the clinical diagnosis was not clear-cut, so the number of samples in that group is small.

### How You Can Help the Campaign to Eliminate SLO

Project	Task
Survey, control over 7 years of age*	Complete a survey - <a href="https://www.surveymonkey.com/s/L7NTZ2P">https://www.surveymonkey.com/s/L7NTZ2P</a>
Survey, SLO affected, any age*	Complete a survey - <a href="https://www.surveymonkey.com/s/XNNC3ZC">https://www.surveymonkey.com/s/XNNC3ZC</a>
DNA sample, SLO affected, any age	Dr. Oberbauer's lab for DNA cheek swabs and to history forms and blood collection instructions - <a href="http://cgap.ucdavis.edu/BCAddisonsSLO.htm">http://cgap.ucdavis.edu/BCAddisonsSLO.htm</a>
DNA sample, SLO affected, already submitted	You may be contacted by Janelle Belanger at the UCDavis lab for additional clinical history. Your cooperation will be appreciated.
DNA sample already submitted for Addison's or SLO projects, control or affected	Update your dog's health history and whether deceased, if you haven't done so in the last year - <a href="http://cgap.ucdavis.edu/BCAddisonsSLOhealthupdateform.htm">http://cgap.ucdavis.edu/BCAddisonsSLOhealthupdateform.htm</a>

\*You will need your dog's date of birth, parent names, vaccination records, diet info, health and family info. Dog's with SLO need details about diagnosis, treatment, and response.