Primary Ciliary Dyskinesia

Primary ciliary dyskinesia, in dogs, is a rare genetic (inherited) disorder with defective structure and/or function of cilia that can lead to chronic respiratory or otic disease, reversed organs, fertility problems, and even hydrocephalus. Electron microscopy can be used to examine the cilia for defects in the ultrastructure of the cilia associated with ciliary dyskinesia.

Answers to Frequently-Asked Questions about samples submitted for Primary Ciliary Dyskinesia:

(1) Nasal, bronchial, or tracheal biopsies may be submitted. Patient should be free of respiratory infections prior to obtaining the biopsy, if possible, as secondary changes associated with inflammation can confound a diagnosis. Oviduct and sperm (ejaculate or testes) are optimal samples, because they are typically without associated infection; however, we realize this is not possible in patients who have been neutered/spayed.

(2) If submitting reproductive tissue, it would be advantageous to send a biopsy from the respiratory area as a second sample. Male dogs occasionally have aspermia and female dogs at certain stages of the cycle have few ciliated cells in the oviduct.

(3) Maximum of 2mm (in any one dimension) pieces of tissue for the best preservation in a buffered glutaraldehyde fixative. Please contact us if there are questions about proper fixation. The amount of fixative should more than double the tissue sample in the container for adequate fixation during shipping.

(4) Include as much history as possible about the patient. Use our EM Submission Form when submitting tissue samples. Copies of previous reports or other data relevant to the patient’s case may be added or attached to the form.

(5) Send samples double contained under refrigeration (cold pack) overnight with accompanying form(s). Days of the week to ship: Monday – Thursday.

(6) Ship as you would any Biological Specimen to the following address:
Georgia Electron Microscopy
ATTN: Mary Ard
151 Barrow Hall, University of Georgia
115 DW Brooks Drive
Athens, GA 30602

(7) Estimated Fees for PCD:
   a. $350.00 – if second sample is submitted, the fee is $40 more ($390.00)
   b. Pathologist’s fee for evaluation: $114.50
   c. Total cost: $464.50 or $504.50 (second sample submitted)

(8) Reasonable turnaround time: approximately 3 weeks – 10 working days for the EM Lab and 1-2 weeks for pathologist’s evaluation.

If there are any other questions, either Mary Ard or Dr. Elizabeth Howarth should be able to answer them. Updated October 2019