Northwoods Humane Society - Deanna Persson, President

'Teddy' is a full-figured liver springer spaniel. He is the love of Diana's life, and he lives in Evanston, Illinois. Diana is my sister's dearest friend and 'Teddy' is my sister's dog, 'Gracie's' best friend and playmate. 'Teddy' has not been feeling well, wants to sleep, doesn't want to eat, his eye became cloudy and slightly bulged and he would cry out in pain. 'Teddy's' vet felt that it might be blasto (blastomycosis) and sent took what was needed for a blasto test. She prescribed amoxicillin and prednazone until they heard the final test results. One of our staff member's dog was recently diagnosed with blasto as was another friend's dog. Blastomycosis is a threat to animals in the Northwoods and we need to be alert to the symptoms.

The following is 'Part 1" of a two-part article about blastomycosis:

Blastomycosis is a fungal disease caused by *Blastomyces dermatitidis*. This fungus most commonly infects humans and animals through the respiratory tract. When the fungal spores are inhaled, they settle in the small airways and begin to reproduce. The organism then spreads throughout the body and may infect other organs. Rarely, infection occurs through contamination of an open wound.

Although researchers in human medicine have been largely unsuccessful in isolating the organism from the environment, it appears that both humans and animals become infected in particular geographical locations. In the United States, the disease is most prevalent in the warm, moist environments found along the Ohio, Missouri, Tennessee, and St. Lawrence River valleys. It is very common in the Southeastern United States. Blastomycosis has also been diagnosed in the Middle Atlantic States, Quebec, Ontario, Manitoba, and southern Great Lakes.

Dogs appear to be more susceptible to blastomycosis than many other species. The incidence of blastomycosis in cats and humans is much lower than in dogs. Dogs are estimated to be about ten times more likely to contract the disease than humans, and approximately 100 times more likely than cats.

Unfortunately, there is nothing you can do to eliminate the fungus from the environment. The organism is ubiquitous, meaning it lives everywhere.

The blastomycosis fungus seems to target the respiratory tract, although it may spread throughout the entire body. Pulmonary disease is the most common occurrence. Fever, depression, weight loss, and loss of appetite are also common clinical signs. Draining skin lesions are seen in many cases. Infection of the eyes may cause sudden blindness. Lameness, orchitis (testicular inflammation), seizures, coughing, enlarged lymph nodes, and a variety of other signs may occur with blastomycosis.

Cytology and/or histopathology are required to diagnose blastomycosis conclusively. Cytology, the microscopic examination of cells, may be performed using fluid that is draining from an open wound or aspirated from a nodule or lymph node. Biopsies may also be obtained for histopathology, the microscopic examination of cells within a tissue sample. A tissue sample is

obtained and sent to a veterinary pathologist for this diagnostic test. Since the organism is usually shed in large numbers in the draining lesions, blastomycosis may be diagnosed in the office with cytology.

There is also a screening blood test called an agar-gel immunodiffusion (AGID) test that can be used to determine potential exposure. A positive result on this test does not necessarily mean your dog is infected with blastomycosis. It only means that your dog has been exposed to the fungal organism. Many humans and animals have positive blastomycosis screening tests, but this does not mean that they have (or had) blastomycosis. To complicate matters further, up to 30% of dogs with blastomycosis lack measurable serum antibodies at the time of initial evaluation. If *Blastomyces dermatitidis* organisms are subsequently identified by cytology or histopathology, the veterinary clinician is left in a challenging position.

There is also an antigen test (enzyme immunoassay or EIA) for blastomycosis that may enable veterinarians to more quickly and accurately diagnose this condition. Ask your veterinarian about the availability of antigen urine and serum tests if your dog is suspected of having blastomycosis.

Dates to Save:
May 10 – Bingo at Powell's On Round Lake – 5:30
May 26 – Dining For Cats and Dogs – Lynn's Custom Meats and Catering - 10:30 a.m. to 2:00 p.m.
June 15 – Art For Animals – Flat Creek Inn – 6:30 – 9:00 p.m.