

2026 Veterinary Advisory #7

Diagnostic Reference Poster for Tick-Borne Diseases in Dogs and Cats

Please share with your colleagues in veterinary medicine and your staff.

Background

- Dogs and cats are at risk of tick-borne diseases. Signs in animals may be nonspecific and include fever, anorexia, and lethargy.
- The NYC Health Department advises veterinarians to recommend tick bite prevention measures and products for pets living in areas where ticks are present in and outside NYC.

Ticks in NYC

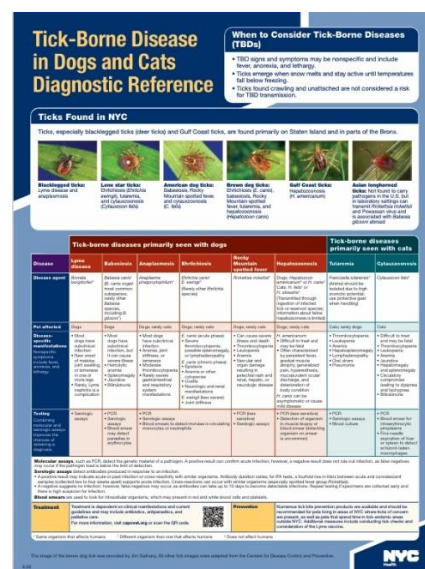
- [Tick-Borne Disease in Dogs and Cats Diagnostic Reference](#) serves as a quick-reference tool to support the diagnosis and management of tick-borne diseases in companion animals.
- Ticks, especially blacklegged ticks (deer ticks) and Gulf Coast ticks, are found primarily on Staten Island and in parts of the Bronx.
- Risk to pets in NYC likely mirrors that in people and is greatest for pets that frequent tick-endemic areas outside of NYC or that reside in Staten Island or parts of the Bronx. See the [Health Advisory #14: Tick-Borne Diseases in New York City](#) for human data.

August 13, 2026

Dear Colleagues,

We are pleased to announce a new resource for veterinarians: the [Tick-Borne Disease in Dogs and Cats Diagnostic Reference](#) poster. Printed copies were mailed to veterinary facilities in New York City. If you did not receive a copy, or would like to request additional posters, please call 311.

The poster serves as a quick-reference tool to support the diagnosis and management of tick-borne diseases in companion animals. It provides an overview of the tick species found in NYC and the associated tick-borne diseases that affect dogs and cats, with information on the disease agent, disease-specific manifestations, and diagnostic options.



Background

NYC veterinarians should remain vigilant for tick-borne diseases throughout the summer and fall as pets spend more time outside in tick-endemic habitats. Ticks emerge when the snow melts and stay active until temperatures fall below freezing. Recent travel to tick-endemic areas outside NYC (such as upstate New York, Long Island, other parts of the Northeast, the mid-Atlantic region, and the upper Midwest) or inside NYC (such as residency in Staten Island or the Bronx) should prompt consideration of tick-borne diseases in pets with a compatible clinical presentation.

Limited surveillance data are available on the number of pets diagnosed with a tick-borne disease. Risk to pets in NYC likely mirrors that in people and is greatest for pets that frequent tick-endemic areas outside of NYC or that reside in Staten Island or parts of the Bronx. See [Health Advisory #14: Tick-Borne Diseases in New York City](#) for human surveillance data. Lyme disease is the most commonly reported tick-borne disease among New Yorkers; less common diseases include anaplasmosis and babesiosis, while Rocky Mountain spotted fever is rarely reported.

Advise owners to use tick bite prevention measures and products for pets living in areas of NYC where ticks are present or for pets that spend time in tick-endemic areas outside NYC. Remind owners to be mindful of which products are appropriate for dogs and cats, as some products that are designed for dogs may be toxic to cats.

Clinical Signs

Most tick-borne diseases can initially present with nonspecific signs and symptoms, including fever, anorexia, and lethargy.

Lyme disease and **babesiosis** are primarily seen in dogs, and infection is often subclinical. Dogs with Lyme disease may develop joint swelling, malaise, or lameness in one or more legs. Lyme nephritis is a rare but serious complication. Babesiosis is characterized by hemolytic anemia, splenomegaly, jaundice, and bilirubinuria.

Hepatozoonosis is a debilitating protozoan disease caused by *Hepatozoon americanum*. It is difficult to treat and may be fatal in dogs. Clinical signs commonly include persistent fever, progressive muscle atrophy, generalized pain, hyperesthesia, mucopurulent ocular discharge, and declining body condition. Hepatozoonosis is established in southern states, and while the Gulf Coast tick vector has recently emerged in NYC, we are not aware of any canine cases.

Anaplasmosis in dogs, and rarely cats, is also often subclinical, but affected animals may develop anemia, moderate thrombocytopenia, and, less commonly, severe gastrointestinal or respiratory signs.

Ehrlichiosis (*E. canis*) typically causes severe thrombocytopenia with possible splenomegaly or lymphadenopathy in the acute phase, while the chronic phase may progress to epistaxis,

anemia, or other cytopenias, uveitis, and neurologic or renal disease. *E. ewingii* generally causes a milder illness, most commonly presenting with joint stiffness.

Rocky Mountain spotted fever (RMSF) may cause severe, potentially fatal illness with thrombocytopenia, leukopenia, anemia, vascular injury, and organ damage. RMSF is rarely diagnosed among humans or pets in NYC.

Tularemia and **cytauxzoonosis** are primarily seen in cats. Tularemia may cause thrombocytopenia, leukopenia, anemia, hepatosplenomegaly, lymphadenopathy, oral ulcers, and pneumonia. Cytauxzoonosis is a protozoan disease that is often severe and difficult to treat, with clinical findings that may include thrombocytopenia, leukopenia, anemia, jaundice, hepatomegaly, splenomegaly, and circulatory compromise. No feline cases of cytauxzoonosis have been confirmed in the Northeast.

Diagnostic Testing

Testing may be performed on the patient or on a submitted tick.

Animal testing for tick-borne diseases can be done through various testing methods.

Molecular assays, such as PCR, detect the genetic material of a pathogen. A positive result can confirm acute infection; however, a negative result does not rule out infection, as false negatives may occur if the pathogen load is below the limit of detection.

Serologic assays detect antibodies produced in response to an infection. A positive result may indicate acute or past infection or cross-reactivity with similar organisms. Antibody duration varies; for IFA tests, a four-fold rise in titers between acute and convalescent samples (collected two to four weeks apart) supports acute infection. Cross-reactions can occur with similar organisms (especially spotted fever group *Rickettsia*). A negative result suggests no infection; however, false negatives may occur, as antibodies can take up to 10 days to become detectable. Repeat testing if specimens were collected early and there is high suspicion of infection.

Tick testing is available at some commercial veterinary diagnostic laboratories but has limitations as a tool in diagnosing disease in animals. Ticks with a positive test result may not have been attached long enough to transmit the pathogens and even with a negative test result the pet might have unknowingly been bitten by a different tick. Some molecular assays used to test ticks are unable to speciate beyond the genus level. For example, results reported as *Rickettsia* species may not reflect *Rickettsia rickettsii*, the causative agent of RMSF, but rather another *Rickettsia* species, such as *Rickettsia buchneri*, which is an endosymbiont of blacklegged ticks and not known to be pathogenic to dogs or humans.

Ticks in NYC and Associated Tick-Borne Diseases

Most ticks, especially blacklegged ticks (deer ticks) and Gulf Coast ticks, are found primarily on Staten Island and in parts of the Bronx.

Tick Species	Associated Diseases & Conditions	Where in NYC
Blacklegged Tick	Lyme disease and anaplasmosis	Staten Island and focal areas of the Bronx (Pelham Bay Park and Hunter Island) *
Lone Star Tick	Ehrlichiosis (<i>Ehrlichia ewingii</i>), tularemia, and cytauxzoonosis (<i>Cytauxzoon felis</i>)	Staten Island and rarely Queens
American Dog Tick	Babesiosis, Rocky Mountain spotted fever (<i>Rickettsia rickettsii</i>), and cytauxzoonosis (<i>C. felis</i>)	Historically all five boroughs, but rarely detected in recent years except for parts of Brooklyn
Brown Dog Tick	Ehrlichiosis (<i>E. canis</i>), babesiosis, Rocky Mountain spotted fever, tularemia, and hepatozoonosis (<i>Hepatozoon canis</i>)	Surveillance data are currently not available
Gulf Coast Tick	<i>Hepatozoonosis (H. americanum)</i>	Staten Island
Asian Longhorned Tick	Not found to carry pathogens in the U.S. Can transmit <i>R. rickettsii</i> and Powassan virus in lab settings. Associated with <i>Babesia gibsoni</i> abroad.	Staten Island and, less frequently, other boroughs

*Recent surveillance found a very small number of adult blacklegged ticks in focal areas of northern Manhattan, eastern Queens, and Brooklyn. These may be a result of migrating birds. Additional tick surveillance conducted in 2026 will assess whether blacklegged ticks are becoming established in new areas.

Sincerely,

Asha Abdool, MPH; Maya Hajny Fernandez, MPH; Renee King, MPH; Kevin Lovingood, MPH; Ryan MacDonald, MPH; Marc Paladini, MPH; Christina Ng, MPH; Stephanea Roeser, MPH; Sally Slavinski, DVM, MPH, DACVPM

Zoonotic and Vector-Borne Disease Unit
Bureau of Communicable Disease
ZIVDU@health.nyc.gov
347-396-2600

Visit our webpage: [Zoonotic and Vector-borne Diseases: Information for Providers](#)

If you do not receive these alerts via email and would like to be added to the distribution list, email zivdu@health.nyc.gov

Report animal diseases to the NYC Department of Health and Mental Hygiene:

- Online through a [secure web-based reporting platform](#)
- Call 347-396-2600
- Fax the [Animal Disease Case Report form](#) to 347-396-2753

Report upon suspicion: Anthrax, brucellosis, glanders, influenza (novel with pandemic potential), mpox, plague, Q fever, rabies, SARS, tularemia

Report upon laboratory diagnosis: Arboviral encephalitides, leptospirosis, psittacosis, Rocky Mountain spotted fever, salmonellosis, tuberculosis

Report within 24 hours any outbreak or suspected outbreak of any disease, condition, or syndrome, of known or unknown etiology, which may pose a danger to public health.