

Feline Leukemia (FeLV) & Feline Immunodeficiency Viruses (FIV)

Feline leukemia virus (FeLV) is an oncovirus that is primarily transmitted through prolonged contact of nasal secretions and saliva from an infected cat (i.e., sharing food/water bowls and grooming). This virus is very delicate and does not survive long in the environment. Outdoor male cats, 1-6 years of age, are most commonly infected. This virus causes suppression of the immune system; therefore the cat is highly susceptible to opportunistic secondary infections (i.e., upper respiratory tract infections ["colds"] and gastrointestinal infections [vomiting, diarrhea]). This virus may also induce formation of cancer cells (lymphoma). The majority of cats (approximately 70%) infected with this virus have a self-limiting infection (fight the infection on their own), the rest usually become overwhelmed with secondary infections and die within 2-3 years following infection with FeLV. Clinical signs are nonspecific with this virus. FeLV ELISA test detects the presence of viral antigen in the serum approximately 30 days following exposure. A bone marrow sample is taken to confirm diagnosis by detecting the presence of viral antigen in the cells approximately 6-8 weeks following exposure.

Feline immunodeficiency virus (FIV) is a lentivirus, similar to human immunodeficiency virus (HIV) that is primarily transmitted via bite wounds. Transmission may also occur through artificial insemination (AI) of infected semen, and from an infected queen to her kittens *in utero* or during nursing. Outdoor, older male cats are most commonly infected. This virus is very delicate and does not survive long in the environment. This virus causes suppression of the immune system; therefore the cat is highly susceptible to opportunistic secondary infections (i.e., upper respiratory tract infections ["colds"] and gastrointestinal infections [vomiting, diarrhea]). Clinical signs are nonspecific with this virus. FIV ELISA test detects the presence of antibody in the serum 60+ days following exposure. Currently, there is no good test to distinguish FIV infected cats from FIV vaccinated cats. Kittens can have FIV antibodies from there infected or vaccinated mother. At approximately 6 months of age, kittens will eliminate these maternal antibodies.

Should your cat be tested for FeLV/FIV? If your cat is at risk, sick, or a new addition to the household, then yes your cat should be tested. At risk cats should be retested in 2 months following a risk event to identify infection at the time of the event. Kittens tested positive for FIV at less than 6 months of age should be retested after 6 months of age in order to distinguish actual infection from maternal antibodies.

At Risk Cats

- Cats that spend any amount of time outdoors unsupervised.
- Cats that have been in a fight, or show evidence of being in a fight.
- Cats exposed to a known infected cat.

Sick Cats

- Vomiting
- Mouth disease (gingivitis, stomatitis)
- Abscess
- Diarrhea
- Fever and/or
- Decreased activity level (lethargy)

Management of FeLV and/or FIV positive cats

- Keep indoors to prevent the spread of these viruses to other cats.
- Isolate positive cats from negative cats.
- Do not share litter pans, food bowls, or water bowls between positive and negative cats.
- Kittens born to a positive queen should not be allowed to nurse from that queen.
- Neuter/Spay your cat to minimize stress and/or aggression.
- Feed a healthy, balanced diet and avoid raw diets due to the risk of food-borne pathogens. Try to prevent your cat from hunting to decrease the risk of parasitic infection.
- Seek immediate veterinary care if your cat shows any signs of illness so that prompt diagnosis and treatment can be performed.
- Have your cat examined by your veterinarian every 6 months to detect changes in health status. Complete blood count (CBC), complete chemistry, urinalysis, and fecal analysis should be performed yearly. Keep vaccination status current.
- Maintain good flea control with monthly topical products (i.e., Frontline®, Advantage®, Revolution®).

Prevention:

- Test all cats/kittens before they are introduced into the household. Retest in 2 months to confirm a negative result.
- House cats indoor to avoid exposure to FeLV/FIV infected cats.
- Vaccination of all cats that are at risk for exposure. Note vaccination is not 100% effective.
- Cleaning litter pans, food bowls, and water bowls periodically with hot water and detergent will inactivate both viruses and prevent possible infection.

References:

- 1. Report of the American Association of Feline Practitioners and Academy of Feline Medicine Advisory Panel on Feline Retrovirus Testing and Management. 2005.
- 2. Evans E. A Practical Approach to Feline Retroviruses. IDEXX Laboratories, Inc. presentation. 2007.
- 3. Barr SC and Bowman DD. The 5-minute Veterinary Consult Clinical Companion Canine and Feline Infectious Diseases and Parasitology. Ames: Blackwell Publishing; 2006:213-217, 227-231.