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## Feline Leukemia Virus (FeLV)

Feline leukemia virus, a retrovirus, is a common infection of cats. It is the cause of more cat deaths, directly or indirectly, than any other organism and is widespread in the cat population.

### **Disease Transmission**

Feline leukemia virus infection (FeLV) can be transmitted several ways:

1. By the saliva of infected cats contaminating the eye, mouth, and/or nose membranes of uninfected cats via licking.
2. By passing infected blood to uninfected cats from mother to fetuses (developing kittens) during pregnancy.

### **The Disease**

Most infected cats eliminate the virus and become immune. In those cats that do not develop immunity, the virus spreads to the bone marrow.

Proliferative and degenerative diseases may occur in any of the tissues invaded by the virus, or the virus may be indirectly responsible for other illnesses because of its immunosuppressive effect. A large percentage of the cats that are exposed to the virus will have latent (hidden) infections and will be capable of transmitting the disease in saliva, tears, and urine. Some of these latent carriers will become clinically ill when stressed.

### **Diagnostic Tests**

Necessary diagnostic tests may include blood chemistry, hematology, radiography, bone marrow aspiration, ophthalmoscopy, and specialized antibody tests.

### **Treatment**

There is no effective treatment for the myeloproliferative (bone marrow) form of leukemia. Treatment is mainly supportive, and may require blood transfusions, prednisone, and anabolic steroids.

FeLV cancer (lymphoma) has a better response to therapy than the myeloproliferative diseases do. Treatment may include chemotherapy, glucocorticoids, interferon, Protein A, and supportive treatment.

### **Prognosis**

Eighty-five percent of cats with FeLV infection die within 3 years of the diagnosis.

### **Prevention of FeLV**

There are several preventive measures that can be taken to decrease the risk of contracting FeLV. Adult cats can be FeLV tested, and then vaccinated if they are negative. FeLV vaccination of infected cats does not affect the carrier state, the capacity to infect other cats, or the development of disease in the infected cats. Booster vaccinations with recombinant vaccine are generally used in adult cats only if they have continuing risk of exposure. Killed, adjuvanted vaccines should be used only if the cat has been tested and is FeLV negative. Cats are most vulnerable to the virus as kittens. Kittens should be vaccinated with a



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recombinant vaccine. Leukemia is almost-entirely preventable with just two kitten vaccines and a booster one year later. After that, even if the cat is exposed, the vaccines will help protect it -- plus the cat will naturally be more resistant to infection because of its age. Kittens may be tested at any age. However, infection in newborn kittens may not be detected until weeks to months after birth. Therefore, several FeLV tests during the first six months of life may be necessary to feel completely "safe" about a negative test result. All kittens or adult cats that test negative by the first ELISA screening test, but with a known or suspected exposure to FeLV, should be retested. Although the majority of cats will test positive within several weeks, final retest of negative cats should be no sooner than 90 days post-exposure. In large catteries, a test and removal program can be instituted. Multi-cat households with FeLV positive cats should be maintained as a closed colony. (No new cats should be brought into the household to prevent the spread of infection to the new arrivals.)

**Notes:** Retroviruses are unstable, live for only minutes outside the cat's body, and are readily destroyed by most disinfectants. Because the feline leukemia virus is so unstable, a new, healthy cat can be brought safely into a "contaminated" house within days of the departure of a FeLV infected cat.