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## FELINE LEUKEMIA VIRUS AND FELINE IMMUNODEFICIENCY VIRUS

### Feline Leukemia Virus

Feline leukemia virus (FELV) is a contagious and often fatal virus that is widespread in the cat population. What is commonly called feline leukemia is not one disease, but a syndrome associated with the feline leukemia virus. This potent virus primarily attacks the cat's immune system and the cat becomes more susceptible to secondary infections and disease, including some cancers. No breed of cat is more susceptible than another, but kittens and older or debilitated cats are more susceptible than healthy cats.

### Mode of infection

After being infected with FELV, all cats will develop a low-grade level of the virus in their blood within the first two weeks. This infection will then progress in some cats, while others will successfully fight off the virus and not remain infected. All cats that develop the persistent infection serve as a source of infection to uninfected cats with which they come in contact. The virus is excreted primarily in the saliva, but may also be present in feces and urine. The major modes of spreading the virus are through social grooming, biting, sneezing and sharing litter boxes or food bowls. Kittens can become infected from their mother in utero, or through her milk.

### Symptoms and diagnosis

There are not necessarily any signs that a cat has FELV. Because the disease is associated with so many disorders, observable signs vary dramatically, but may include: depression, anemia, fever, loss of appetite, swollen glands in the neck or abdomen, or persistent upper-respiratory infections. Most kittens born to infected mothers develop what is termed "fading kitten syndrome." The kittens are lethargic, have stunted growth, and are susceptible to infection. A cat with FeLV may develop a number of diseases that are either directly or indirectly caused by a lowered immune response. With the weakening often cat's immune system, otherwise non-threatening conditions may prove serious or fatal. FELV cats recover slowly from such infections (upper Respiratory infections, bite wounds, abscesses) and can easily become severely debilitated.

Infection with feline leukemia virus is diagnosed by a blood test. Cats who test positive for FELV should be isolated from all other cats, and when possible be re-tested in 2 to 3 months. Some cats, when infected, mount an immune response to the virus thus neutralizing it. These cats may 'test positive for the virus during this time, but may have a transient infection and test negative at a later date.

### Treatment

There is no recognized cure for feline leukemia virus, and currently many cats will die within a year of diagnosis. Traditional treatments address the symptoms of the disease, and try to keep the cat as comfortable as possible. It is important to realize that FELV-infected cats are capable of infecting other cats in the household. If your cat tests positive, it is vital to follow your veterinarian's advice closely. Be aware though, that because of the poor prognosis most veterinarians currently give for a FELV cat to live a life of good quality, many people choose to euthanize their cat rather than pursue treatment and subject the cat to isolation from other cats. This is a difficult decision, which must be considered on an individual basis. There is no evidence linking human illness to the feline leukemia virus.

### Prevention

Many veterinarians feel that if you have only one cat and she is kept strictly indoors, there is little chance of the cat being exposed to feline leukemia virus. This is probably the best means of prevention. All new cats entering a multi-cat household should test negative. If you have previously had a cat with FELV, wait at least 30 day before acquiring a new cat. During that time, all litter boxes, food and water bowls should be replaced and the premises cleaned thoroughly.

Two vaccines are currently available for prevention purposes: However, it is important to recognize that the accepted efficacy rate of FELV vaccines is probably only 85 to 90%, which means that your cat is not necessarily completely protected. Until a 100% vaccine is developed, additional measures should be taken. Keeping your cat indoors 24 hours a day is currently the best safeguard. However, any cat may periodically be in a high risk situation, and it may be wise to have the cat vaccinated for extra protection even if it is an indoor cat. Only those cats who are FELV negative should be vaccinated. A vaccination schedule can be started as early as nine weeks of age, although specific vaccines may vary, vaccination usually consists of a series in the first year, followed by yearly boosters to sustain immunity. Check with your veterinarian to schedule a vaccination program for your cat.

### **Feline Immunodeficiency Virus**

FIV is a newly recognized feline virus. It is related to FELV and displays many of the same signs: anemia, low white blood cell counts and secondary infections. For some time, cats who showed symptoms of FELV syndrome but who tested negative were nevertheless assumed to be carrying FELV. Now a FIV test is available. FIV is not related to the human virus HIV, although many of the symptoms may be similar, FIV infection is restricted solely to cats.

Much remains unknown about FIV. The method of transfer is believed to be through bite wounds rather than casual contact. The virus may remain dormant for some time (up to years), during which the cat appears normal. As the immune system becomes affected, the cat is likely to contract secondary infections. It is these secondary infections that are responsible for most of the clinical signs associated with FIV infection.

There is no current treatment for FIV. Treatments used are to combat the secondary infections that arise. No vaccine is currently available. Protection can be assured only by preventing your cat from contacting infected cats. Cats kept indoors and away from free-roaming cats are highly unlikely to contract FIV.