
Feline Leukaemia Virus (FeLV)

1. What is FeLV?

Feline Leukaemia Virus is a retrovirus. This is a family of viruses to which the HIV (human AIDS virus) and FIV (Feline Immunodeficiency Virus) belong. However, FeLV belongs to a different subfamily.

FeLV is one of the most important virus diseases of the domestic cat and produces a wide variety of diseases which are rarely curable and ultimately result in death.

2. Can People Catch FeLV?

NO – there is no evidence to suggest that man can be infected by FeLV.

3. Can Other Animals Catch FeLV?

NO – FeLV has not been found to infect any animal other than the cat.

4. How is FeLV Spread from Cat to Cat?

FeLV is shed in the saliva, urine, faeces, milk and nasal secretions of infected cats. Transmission can occur from cat to cat (horizontal) or kittens can become infected whilst in the uterus (vertical). The saliva from infected cats seems to be the major source of infection for susceptible cats especially via fighting (bites and scratches). Prolonged and close contact is necessary for transmission via mutual grooming or sharing a food bowl. The virus does not survive well in the environment.

5. Which Cats Are Infected?

The highest prevalence is amongst cats living communally. This is because there is a greater number of contacts and a higher environment pollution. Male, free ranging cats are also more likely to be infected because they lead a less sedentary lifestyle. Purebred cats are also more likely to be infected than moggies because they are usually kept as a group.

6. Can A Cat Fight Off the Virus?

The cat's response to infection with the virus depends on a number of factors, which include the particular strain of virus involved, the infecting dose of the virus, the duration of exposure, the state of the cat's own immune system and the age of the cat at the time of infection. There is some evidence that the breed of cat may also be important.

Once infected, one of three events may occur:–

- (i) The cat may become immune.
- (ii) The cat may remain permanently infected. These cats are contagious to other cats.
- (iii) The cat may appear to recover but fail to fully eliminate the virus, i.e. have a latent (hidden) infection. These cats will carry the virus and, following a period of stress in later life, may go on to develop clinical disease. These cats are a potential risk to other cats.

7. Do All Infected Cats Become Ill?

NO. Young cats especially those less than two months old (except those born to immune mothers) are more likely to become ill because they have an incompetent immune system. Adults greater than seven years of age are also more susceptible. FeLV is much more common in sick cats (about 16%) than healthy cats (9%). Two out of three cats will come into contact with the virus once or several times in their lifetime.

8. What Are the Usual Clinical Signs?

There is a very wide range of clinical signs and none is specifically associated with FeLV infection.

In most cases cats will show a general malaise (lethargy) and have a fever two to four weeks after initial infection. However, these signs are seldom significant and often go unnoticed. Typically an infected cat will go on to develop one or more chronic or recurrent problems. These can be divided into two groups:

- (i) Tumour diseases (about 33%), e.g. leukaemia, lymphosarcoma.
- (ii) Non-tumour diseases (about 66%), e.g. gum inflammation, recurrent abscesses, non-healing skin lesions, anaemia, cat 'flu (despite vaccination), fading kitten syndrome, fertility problems, abortions and auto-immune disease (cat's immune system attacks itself).

Clinical signs include anorexia (off food), lethargy, depression, pale colour of mucus membranes due to anaemia, fever (high temperature), vomiting, diarrhoea, constipation, swollen glands, nervous signs, limb pain, lameness, small tumours on the skin and other signs depending on where tumours are sited.

9. Is There Any Treatment?

There is no specific anti-viral therapy. However, in many cases the secondary infections can be treated with antibiotics; tumours may, in rare circumstances, undergo remission using chemotherapy.

10. Is There A Vaccine Available?

YES – see handout on vaccination.

11. Is There Any Benefit in Vaccinating A Cat Which Has Tested Positive?

NO – There is no evidence that any benefit is gained from vaccinating a cat which is already infected.

12. Is Pre-Vaccination Testing Necessary?

There is no benefit in vaccinating an infected cat. Whether or not to test prior to vaccination is a clinical decision which depends on many factors and each case should be treated individually.

13. What is the Outlook for the Cat with FeLV?

The outlook must always be guarded, but is not necessarily too bleak. A positive test need not condemn a cat **providing** it is not clinically ill.

FeLV infection has a long incubation period and there may be a considerable period (3 months – 3 years) before the cat becomes very ill, however, FeLV positive cats are very contagious, i.e. spread the disease very readily and must be kept strictly isolated during this time.

14. What If Your Cat Has FeLV?

Firm advice is difficult to give as many of the considerations are ethical and therefore depend on individual choice.

- (a) **YOUR CAT:** Treatment for a clinically ill cat with FeLV cannot really be justified as worthwhile from a medical viewpoint. Treatment does not eliminate the danger of passing on the disease and the methods of treatment available at present are limited, difficult to use and often doomed to failure. However, in the meantime the FeLV positive cat must be isolated. This prevents any chance of passing on the disease and reduces the risk of secondary infection. This must be accompanied by traditional disinfection methods (housing, litter, utensils etc.) and sanitary disposal. In cases where two successive tests are positive the prognosis is very pessimistic.
N.B. For greater safety, cats testing negative can be tested one month and three months later.
- (b) **YOUR NEIGHBOUR'S CAT:** FeLV and its associated diseases are the leading infectious causes of death in cats. You should try and minimise contact with neighbouring cats since the infection is extremely contagious, ideally quarantining infected cats.
- (c) **BREEDING CATTERIES:** All newcoming cats should be tested for FeLV. Positive cats should be excluded from joining. Negative cats should be quarantined for three months and if they then re-test negative can join the main group. Arrival tests are recommended since the incubation period of the infection is variable.

15. How is FeLV Diagnosed?

In our laboratory a kit is used to test blood samples. It is also possible to detect FeLV infection by two other tests (virus isolation and immunofluorescence) in special diagnostic laboratories.

16. Where Did FeLV Come From?

The existence of FeLV was first demonstrated in 1964. Since then knowledge about the virus has grown continuously. In 1991 research showed the annual incidence is approximately 200 cases per 100,000 cats per year.

17. Which Cats Should Be Tested?

- (a) **SICK CATS:**
 - (i) Cats that have recurring infections without good explanation.
 - (ii) Cats with tumours (70% are FeLV positive).
- (b) **HEALTHY CATS:**
 - (i) Individuals before introduction to a group, before going to stud, before vaccination, before going to shows or potential blood donors.
 - (ii) Groups – regular checks.

If you have any further queries, please contact your veterinary surgeon.