Feline Immunodeficiency Virus (FIV)

Feline immunodeficiency was first discovered in the United States where some cats had been showing similar clinical signs to people with acquired immunodeficiency syndrome (AIDS). FIV was found to be very similar to the human equivalent (HIV), however it is species specific, meaning it can only infect cats and there is no risk to humans. Analysis of stored blood samples has shown that FIV has been in the cat population since the 1960s. FIV infection is found in around 7% of the UK cat population.

FIV infection is permanent and often fatal, although as in human HIV, carriers may show no signs for several years. During this time there is a gradual decline in the cat’s immune system due to the virus infecting white blood cells and killing or damaging them. The result is development of feline AIDS. Once the immune system is depleted the cat is increasingly vulnerable to disease and infection with other viruses and bacteria.

Who is at risk?
FIV is most commonly seen in middle-aged and older uncastrated male and feral cats. This is because the main route of transmission is by biting during fighting. Saliva of infected cats contains large amounts or virus and a single bite may be sufficient to cause infection. Other less common routes of transmission are sharing food bowls, mutual grooming and transmission from mother to kittens with in the womb or via milk. Sexual transmission is possible but not thought to be a significant route in cats. It is unknown whether blood-sucking parasites such as flea can transmit the disease.

Signs of disease
Initial infection causes mild illness that may go unnoticed. Signs can include fever, loss of appetite and swelling of lymph glands.

When the cat develops full feline AIDS (up to several years later) there is a progressive deterioration of health. Commonly fever, lethargy, poor appetite and weight loss are seen. Infected animals may develop recurrent disease such as gingivitis (gum inflammation),
rhinitis (causing nasal discharge and sneezing), conjunctivitis, skin infections, anaemia or diarrhoea. In addition they may suffer from kidney disease, uveitis (inflammation of the eye) and disease of the nervous system causing behavioural changes or fits. Infected queens may abort litters.

**Treatment**

There is currently **NO TREATMENT AVAILABLE** that is able to eliminate an FIV infection. The main aim of treatment is to stabilize the cat and give it good quality of life. Although not licensed for use in cats, agents such as AZT used to treat people with HIV provide improve a proportion of affected cats.

Evening primrose oil (one 550mg capsule daily) can be used in asymptomatic or mildly affected cats and may improve body weight and blood counts. Prompt and effective treatment of secondary problems is essential. Because of the weakened immune system longer courses of antibiotics are needed and response to treatment often less successful. Non-specific therapies such as corticosteroids, anabolic steroids and multivitamins may be used to relieve signs or improve appetite.

**Maintaining Health**

Cats with FIV should be vaccinated against cat flu and enteritis if entering high-risk situations such as a cattery or veterinary hospital. FeLV vaccination may be considered depending on the risk of exposure to this virus. They should be treated for fleas to minimize the risk of *Haemobartonella felis* (a blood parasite that can cause anaemia). Raw meat should not be fed due to risk of *Toxoplasma gondii* infection (a parasite which can cause uveitis (eye inflammation) and neurological signs. Routine worm treatment is recommended.

**Blood tests**

A blood test can be tested in our laboratory to detect antibodies present in the bloodstream of infected cats. Occasional false negative of positive results may be produced because of contamination or the delay between exposure to the virus and production of antibodies. A negative test in a cat at high risk of infection may therefore be repeated in 8-12 weeks. Kittens born to infected queens will have antibodies to the virus transferred in milk. However, only one third of these kittens are usually infected. Maternal
antibodies may persist for up to four months and in infected kittens it may be up to two further months before they develop their own antibodies. Kittens should therefore not be tested until they are at least six months old.

**Disease Control**

At present there are no effective FIV vaccinations available. As the main route of transmission is biting, FIV positive cats should be neutered and not allowed free access to outside. This will also reduce the exposure of the positive cat to other infections.

Other cats in the household should be tested and the infected cat segregated from negative cats. The risk of transmission by social contact is low, and some owners may decide to use separate feed bowls and keep the household as it is. Mutual grooming should certainly be avoided. Litter trays and feed bowls should be disinfected after use to kill the virus.

FIV-positive queens should be neutered and kittens born to FIV-positive queens tested at 6 months old.