



## FELINE IMMUNODEFICIENCY VIRUS (FIV)

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*Feline immunodeficiency virus (FIV) is a lentivirus of the family retroviridae that causes an acquired immunodeficiency syndrome (AIDS) in domestic cats. FIV is morphologically and biochemically related to HIV, but is antigenically distinct. The virus share a similar pathogenesis, characterized by a long period of latency after infection, during which immune function gradually deteriorates. Eventually, AIDS develops and is accompanied by opportunistic infections, systemic diseases and malignancies.*

### Epidemiology

FIV has a worldwide distribution in domestic cats, with infection rates approaching one third of the cats in some populations. Altered strains of the virus have also been detected in at least 17 species of wild cats.

Adult male cats living outdoors compose the majority of FIV-infected cats, and the risk is highest for sexually intact males. The fighting and biting behaviour of this group of cats is the main cause of transmission. Infectious virus is found in the saliva of FIV-positive cats and the virus has been successfully transmitted by experimental bite wounds. Sexual transmission, the most common mode of transmission of HIV, is unusual in FIV, even though the semen of infected cats frequently contains infectious virus. Vertical transmission (from mother to kitten) occurs infrequently.

### Clinical signs of disease

After natural FIV infection, most cats experience a prolonged asymptomatic period of several years following seroconversion. The most common disease syndromes diagnosed in FIV-positive cats are stomatitis, neoplasia (especially lymphoma and cutaneous squamous cell carcinoma), ocular inflammation (uveitis and chorioretinitis), anaemia and leukopaenia, opportunistic infections, renal insufficiency and lower urinary tract disease. Both central and peripheral neurologic disease complicates the course of HIV infection of humans, and the same is true of FIV. In some cats

obvious central and peripheral neurologic disease occurs, such as seizures, behaviour changes, anisocoria and paresis.

### Diagnosis

Because FIV produces a persistent infection from which few cats recover, the detection of specific antibodies is adequate for the diagnosis of infection. This is usually done with ELISA testing of serum. Kittens younger than 6 months should not be tested as they may show false positive results due to passively acquired antibodies via colostrum. Vaccinated cats will test positive for FIV antibodies and it is therefore recommended to test them prior to vaccination.

### Treatment

Antiviral therapy with AZT has been shown to result in significant improvement of the clinical syndromes associated with FIV infection.

### Prevention

An inactivated vaccine is available but it is only partially effective under natural conditions. The only truly effective means of preventing disease transmission is to keep cats indoors where they will not encounter other infected cats. Spaying and neutering cats that do go outdoors also limits the spread of FIV by decreasing fighting and roaming behaviour. Cats that are already infected should be kept indoors to reduce the risk to other cats as well as to reduce their exposure to secondary infectious diseases.

**Common clinical signs include stomatitis and opportunistic infections.**

