

The popularity of cats as pets has steadily grown over the last 30 years to where the number of cats owned in the U.S. now exceeds the number of dogs. Many credit this recent upturn in cat ownership to multiple factors such as the cat's adaptability to smaller living spaces, their independent nature, which compliments our ever-busier lifestyles, and a generally healthy constitution. The domestic cat is indeed a remarkably rugged species, easily earning its folkloric reputation of possessing "9 lives". Despite their hardy disposition, cats still face many health issues that continue to frustrate cat lovers and veterinarians alike. In this month's column I'll focus on two of these health problems: Feline Leukemia virus and Feline Immunodeficiency virus-two deadly viral infections that claim countless feline lives each year.

First some abbreviations. Feline Leukemia virus is usually shortened to FeLV, and Feline Immunodeficiency virus to FIV. While these viruses are distinctly different they have some similarities in how they infect cats and cause disease. FeLV was first described in the early 1970s and was named "leukemia virus" because of its association with the disease leukemia-a disorder caused by cancerous white blood cells. In the 25 years since its discovery, FeLV has been found to cause many additional debilitating illnesses of cats. FIV is a relative newcomer to the feline health scene. In the late 1980's a well-known veterinarian from the U.C. Davis School of Veterinary Medicine, Dr. Niels Pedersen, was asked to evaluate a mysterious ailment causing unexplained deaths at a northern California cattery (a cat breeding facility). Eventually Dr. Pedersen and his research team identified FIV as the cause of the mystery illness. Since their discovery both of these viruses have been found to infect cats worldwide.

Veterinarians diagnose these viral infections using blood tests that are simple, fast, and quite reliable. An initial "positive" result is usually followed up with additional testing for confirmation.

Veterinary researchers believe cats become infected with FeLV in a number of ways. Many cats, sadly, are infected before birth; acquiring the virus from their FeLV infected mothers while still in the uterus. A kitten can also acquire the virus from its mother via the mother's milk. Other routes of FeLV infection are through direct cat to cat transmission via saliva, urine or stool. Therefore, cat fights, and the sharing of litter pans and food/water bowls are common routes for infection. Once infected, most cats show only mild symptoms like fever or poor appetite that are short lived and return to apparent good health in a few days to weeks. Many of these cats will harbor the virus in their systems for months to years, only later developing various illnesses such as lymphoma (lymph cancer), anemia (low red blood cell number), or immune dysfunction, to name just a few. Some cats can mount a successful immune response and clear the virus from their system, though there is debate whether these cats completely eliminate the virus infection

Routes of infection for FIV seem to be more limited. FIV is a more fragile virus than FeLV and most believe that transmission occurs via deep bite wounds during catfights. In-utero infection of unborn kittens does not appear to occur with FIV. Like FeLV, Initial infection with FIV is often associated with a brief, mild illness that in some cases is not even noticed by the owner. Some time later, often years later, the FIV infected cat will develop various illnesses as a result of immune dysfunction.

I'm often asked what are the symptoms of FeLV or FIV infection. Unfortunately there are no specific symptoms, in fact some infected cats can look completely healthy for years. I recommend that any cat showing persistent malaise, loss of appetite, weight loss, fever, vomiting, diarrhea, or recurrent infections should be tested for these two viruses. In addition, anytime a new cat is introduced into a household of cats I recommend screening the new cat for FeLV and FIV. This is especially important if the new cat is a stray cat with an unknown health background. Remember, FeLV and FIV infected cats can "look" very healthy.

Sadly there is no treatment for FeLV or FIV infection. Once a cat becomes ill we try to control the symptoms through general supportive care and stress reduction. Some exciting work is being done using a drug called Interferon, but there is still debate about its effectiveness. Obviously, our best recourse is to prevent these infections from occurring.

Preventing FeLV and FIV infections is centered on reducing the risk factors in your cat's life. The main risk factor for these viral infections is exposure to outside and/or stray cats. There is little debate that the highest risk cat for FeLV and FIV infection is the non-neutered male cat, living outside, in a high cat population area. That's not to say that spayed female and neutered male cats living outside are at no risk, but their lifestyles are a bit less risky. Your cat's best defense against FeLV and FIV-and for that matter infectious disease of any kind-is to live exclusively indoors. This is becoming increasingly common in cat owning households in our practice. If your cat goes outside, even for short times, talk with your veterinarian about immunization for FeLV. Unfortunately, there is no vaccine currently available for FIV.

While FeLV and FIV continue to claim many feline lives, some veterinarians (myself included) feel that the frequency of diagnosis (particularly for FeLV) has dropped in recent years. We hope this anecdotal observation is in fact true and will be proven in future epidemiological studies. Hopefully, the ongoing efforts to educate pet owners about the lifestyle risks for FeLV and FIV, combined with the development and use of effective treatments and vaccines will help save many cat's lives.