New feline vaccine brings hope and controversy.

I will always remember the year I moved to Northern California; it was 1987. I remember it so well because that was the same year well know UC Davis veterinarian and researcher Niels Pederson made a major discovery. Feline Immunodeficiency Virus (FIV), the cause of AIDS in cats, was first recognized by Dr. Pederson's group as the cause for unexplained illness and deaths in a group of cats in a Northern California cattery. This was a particularly poignant discovery because at the same time medical researchers on the human side were beginning to understand the real scope of the human AIDS epidemic.

Since that initial discovery in 1987 we have learned much about this dangerous feline virus. Many people (including many veterinarians) wondered initially if this virus could infect people. As the story unfolded, it soon became clear that FIV was not the same virus as HIV and appeared to be an exclusively feline-only virus. Transmitted primarily through deep bite wounds, FIV can infect cats at a relatively young age but symptoms of illness may not show up until years later. Nationwide studies indicate an infection rate in sick or "high risk" cats to be approximately six to nine percent. As the name implies FIV causes illness by compromising the cat's immune system rendering them susceptible to various infections, even from normally innocuous infectious agents. Cats that live outside full or part time and/or come in contact with other outside cats are at an increased risk for contracting FIV. Because biting is the primary mode of transmission, cats that fight a lot are especially at risk. Currently there is no effective treatment for FIV infection, but many of these cats can enjoy a good quality of life through good nutrition, low-stress lifestyles and aggressive infection control.

Until recently, methods for preventing FIV infection focused on keeping cats out of the fighting scene by keeping them inside. This summer a new option became available. A vaccine for FIV was recently licensed and is currently available. Forte Dodge, the company that produces the vaccine, claims that 84% of vaccinated cats will be protected from FIV infection.

As is so often the case in medicine, this new development has been met with both fanfare and controversy. While any veterinarian would welcome a simple, safe method for preventing FIV, it turns out that there are some concerns that may warrant a more cautious approach to this vaccine. To understand these issues of concern we need to understand a little bit about how the cat's system responds to FIV infection and how we diagnose that infection.

When a cat becomes infected by FIV his immune system responds by, among other things, producing antibodies against FIV. Antibodies are protective proteins made by the animal against infectious agents and form one portion of an animal's immune response. In the case of FIV, these antibodies are ineffective at clearing the viral infection, but do act as a marker of infection. Using a simple, quick test these antibodies can be detected in blood of the FIV infected cat. This is the primary diagnostic test veterinarians use for identifying FIV infected cats.

The new FIV vaccine will also cause cats to produce antibodies to FIV and this is where the controversy lies. Some worry that large scale vaccination of the feline population would hamper our ability to accurately identify FIV infected cats. Take for

example the following scenario: An FIV vaccinated outdoor cat becomes ill; is found by a well meaning neighbor who believes the cat to be a stray, and takes the sick cat to a veterinarian for care. The veterinarian appropriately tests the cat for FIV and finds the cat to be positive. The veterinarian, not knowing the vaccination history of this patient, concludes the cat is FIV infected, while in reality the positive result on the test is from FIV vaccination not FIV infection. Care for this cat may vary dramatically depending on its true FIV status.

If we think about it, the problem here is not with the new FIV vaccine but rather with the test we use to diagnose the FIV infection. What we need is test that will be positive only in the truly FIV infected cat. Actually, two such tests currently exist. Unfortunately, knowing what I do about these tests, I suspect they will be both expensive and slow to run, requiring days if not weeks to get results. I checked with our commercial veterinary diagnostic laboratory (one of the largest in the western United States) and they don't run either test at this time.

Like any medical treatment, the use of the new FIV vaccine should be predicated on a careful risk/benefit analysis. If your cat lives totally inside, isolated from any outside venturing cats, then this is not likely a vaccine that your cat needs. If you have a cat that goes outside the house unsupervised and mingles with other outside cats, you may want to consult with your veterinarian about this new product. Bear in mind though that some veterinary hospitals may recommend more traditional modes of preventing FIV infection (limiting contact with other cats) until better diagnostic tests are more readily available.

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