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BULLETIN

Medical Advances and Perspectives
in Companion Animal Care

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Using the first and only 3-year feline herpes (rhinotracheitis), calicivirus, and panleukopenia vaccine in your practice

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This bulletin provides key information, including real-time challenge data, about the first and only 3-year herpes, calici, and panleukopenia core feline vaccine approved by the United States Department of Agriculture (USDA). You will also find sample feline vaccination protocols and practical ideas to implement 3-year feline vaccines in practice.

The traditional practice of annual revaccination has come under scrutiny because of immunological data and the observation of injection-site fibrosarcomas in cats.¹ The American Association of Feline Practitioners (AAFP) has updated their guidelines to help veterinarians revise their feline vaccination protocols based on the latest scientific information.^{1,2}



The latest AAFP guidelines recommend that veterinarians evaluate individual patient risk factors to determine how often to give core vaccines and which noncore antigens are needed.^{1,2} Core protocols for all cats should include vaccination against feline rhinotracheitis (herpes) virus (FRV), feline calicivirus (FCV), feline panleukopenia virus (FPV), and rabies virus. These four pathogens pose ubiquitous, severe disease threats.^{1,2}

The AAFP recommends triennial rather than annual FRV, FCV, and FPV revaccination in most cases.^{1,2} This recommendation is based in part on the findings of Scott and Geissinger, which demonstrated long-lasting antibody titers following vaccination with these antigens.^{1,3} However, the AAFP indicated that additional duration of immunity (DOI) studies were needed.² The profession has been waiting for core feline vaccines with 3-year rather than annual labels as additional support for the new 3-year guidelines. The wait is over.

3-year Continuum® Feline HCP supports AAFP guidelines

Continuum Feline HCP (Intervet Inc.)—the first and only 3-year feline FRV, FCV, and FPV multivalent vaccine with real-time supporting challenge data and a corresponding USDA label claim—is now available to veterinarians in the US. Real-time challenge-of-immunity studies remain the gold standard and the only definitive method for establishing vaccine DOI.^{4,5} Vaccine-specific challenge data are preferred. Similar vaccines from different suppliers may vary significantly in DOI conferred based on antigen quality and quantity,



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degree of attenuation, adjuvant used (if any), type of vaccine virus, and manufacturing methods used.^{4,6}

Continuum Feline HCP challenge study protocol

This challenge-of-immunity study followed 9CFR requirements to obtain a USDA-approved vaccine license.⁷ At 8 and 12 weeks of age, all seronegative test cats in the vaccinate groups received a 1 mL dose of Continuum Feline HCP via subcutaneous injection. All cats were strictly isolated for 3 years following second vaccination and then challenged with FCV or sequentially challenged with FRV followed by FPV.

For each viral challenge, a separate group of age-matched, nonvaccinated control cats was also challenged. To demonstrate the severity of the FPV challenge, an additional group of seronegative, 10- to 12-week-old kitten controls was also challenged with FPV because it was expected that the 3-year-old cats would be naturally more immune to challenge.

Challenge study results demonstrate 3-year efficacy

FRV challenge

Following virulent FRV challenge at 3 years of age, vaccinated cats demonstrated a statistically significant reduction in severity of clinical signs associated with FRV infection compared with the nonvaccinated control cats ($P = 0.005$). This result is consistent with reports from other investigators who found that FRV vaccination reduced the severity and duration of clinical signs following FRV challenge.³

FCV challenge

Following virulent FCV challenge, 100% of the nonvaccinated cats exhibited oral ulcers. In contrast, none of the vaccinated cats demonstrated oral lesions, the most prominent pathologic feature of FCV infection. This result is consistent with reports from other investigators who found that FCV vaccination reduced the severity and duration of clinical signs following FCV challenge.³

FPV challenge

Following virulent FPV challenge, 100% of the age-matched nonvaccinated cats and nonvaccinated kittens developed leukopenia (defined by 9CFR as a white blood cell count of < 4000 WBC/mm³).⁷ In contrast, none of the vaccinated cats demonstrated leukopenia, indicating that vaccination provided 100% disease protection following FPV challenge.

The challenge study results demonstrated that the modified live components in Continuum Feline HCP provide protection against virulent FRV, FCV, and FPV challenges in cats 8 weeks of age or older for a minimum of 3 years following second vaccination.



Incorporating Continuum Feline HCP into your practice

Use annual exams to evaluate individual vaccination needs

The AAFP recommends that veterinarians assess the vaccination needs of adult cats at least once a year and modify protocols as necessary based on changes in age, environment, and general health.^{1,2} This is easily done in conjunction with annual wellness exams. Evaluating patient risk factors based on lifestyle and geographic area will help determine if a patient needs noncore antigens, such as *Chlamydia psittaci*, *Bordetella bronchiseptica*, or feline leukemia virus (FeLV).^{1,2}

Simplify your feline vaccination protocols with Continuum Feline HCP

With Continuum Feline HCP providing core protection, it's easy to tailor the sample comprehensive vaccination schedule in Table 1 based on individual risk assessment. This sample protocol applies to previously vaccinated cats living in high-density, multiple-cat environments or primarily outdoor environments with frequent exposure to other unknown cats. Any antigens not needed may be deleted.

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Table 1: Sample Comprehensive Feline Revaccination Protocol*

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
HCP	FeLV	FeLV	HCP	FeLV	FeLV	HCP
Rabies †	Bb	Bb	Rabies	Bb	Bb	Rabies
FeLV	Cp	Cp	FeLV	Cp	Cp	FeLV
Bb	Gia	Gia	Bb	Gia	Gia	Bb
Cp	FIP	FIP	Cp	FIP	FIP	Cp
Gia	FIV	FIV	Gia	FIV	FIV	Gia
FIP			FIP			FIP
FIV			FIV			FIV

* Sample is based on CE Greene protocols for high-risk cats living in high-density or outdoor environments.⁸ Greene's annual core revaccinations have been modified based on AAFP 3-year protocol recommendations and USDA approval of 3-year Continuum Feline HCP. Core antigens appear in boldface.^{1,2,8}

† Rabies intervals used must comply with state and local statutes.^{2,8}

For kittens, administer the initial vaccine doses as specified in Table 2. Then, simply revaccinate every 3 years. Based on patient risk factors, you also may choose to add some of the noncore vaccines listed in Table 1.

Table 2: Sample Core Kitten Protocol with Revaccination Protocol Option*

8 weeks old	12 weeks old	1 year old	2 years old	3 years old	4 years old	5 years old	6 years old	7 years old
HCP	HCP	Rabies		HCP	Rabies		HCP	Rabies
	Rabies							

* Noncore antigens should be added based on individual risk assessment performed by a veterinarian.

KEY

for Tables 1 and 2

HCP

feline herpes (rhinotracheitis), calicivirus, panleukopenia

FeLV

feline leukemia virus

Bb

Bordetella bronchiseptica

Cp

Chlamydia psittaci

Gia

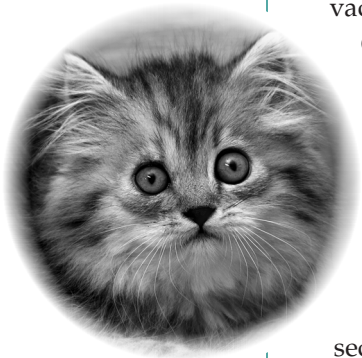
Giardia lamblia

FIP

feline infectious peritonitis

FIV

feline immunodeficiency virus



The complete Continuum vaccine line provides you with more tools to customize protocols. For example, you can select 3-year Continuum Feline HCP-R, which conveniently adds rabies virus protection. Or choose to alternate core feline antigens by using 3-year Continuum Feline HC (FRV, FCV vaccine) and 3-year Continuum Feline P (FPV vaccine) in different years.

Continuum Rabies offers 4-year rabies virus protection and Continuum Feline Cp (*C. psittaci* vaccine) and Continuum Feline Bb (*B. bronchiseptica* vaccine) offer annual noncore protection.

Conclusion

Continuum Feline HCP is the first and only vaccine to provide practitioners with gold-standard challenge data and a corresponding USDA label claim demonstrating a minimum of 3 years' DOI following second vaccination in cats 8 weeks of age or older. Using the Continuum vaccine line enables you to customize vaccination protocols and follow AAFP-recommended 3-year core protocols with the confidence of full legal, ethical, and scientific backing.

Contact your local Intervet distributor or visit our website at www.continuum3.com for additional sample protocols, free implementation tools, and information on Continuum vaccines.

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