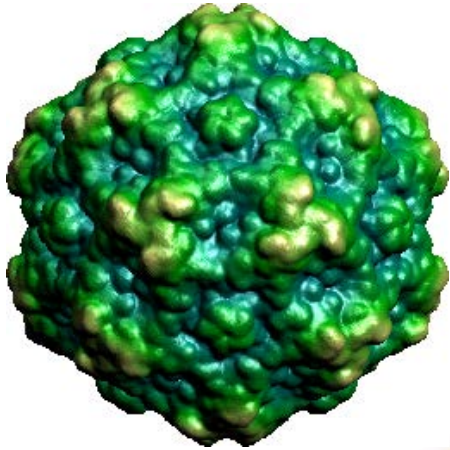


Vaccination Protocols



Presented by

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THE UNIVERSITY OF
SYDNEY

Overview

- Vaccines – core, non-core, live, dead
- Vaccination guidelines
for shelters
during FPV outbreaks
best practice
- Pregnant cats





Core vaccines: F3

1. Feline calicivirus (Cat 'flu)
2. Feline herpesvirus (Cat 'flu)
3. Feline parvovirus (feline enteritis, panleukopenia virus)

Vaccine types – “live” or “killed”:

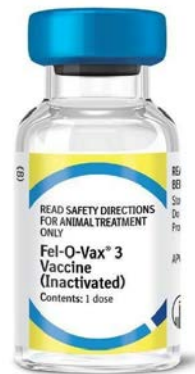
Modified live virus (MLV) vaccines A.K.A. attenuated vaccines

- are ‘infectious’
- contain whole virus
- vaccine virus can replicate
- doesn’t cause signs of disease
- faster & longer immunity



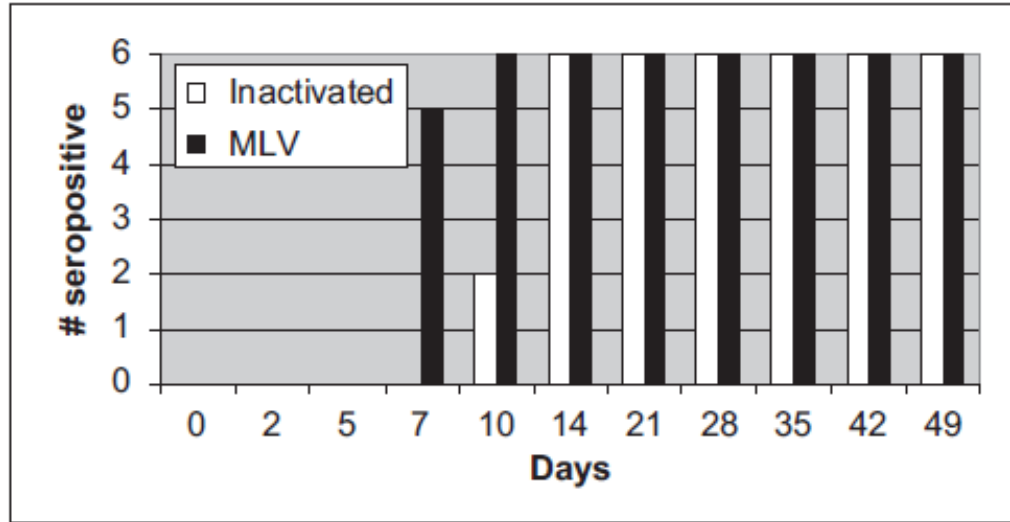
Inactivated vaccines (Killed vaccines)

- are non-infectious
- contain part of a virus
- cannot replicate
- need help to stimulate the immune system (added adjuvant)





Onset of immunity is faster with **MLV (live) vaccines**



- 2 groups of unvaccinated seronegative cats (6 cats/group)
- Each group were vaccinated with a MLV or inactivated FPV vaccine
- Antibody titres were measured 7, 10, 14....49 days after vaccination
- 5/6 cats in MLV vaccine group, & 0/6 cats in killed vaccine group had protective antibody levels 7 days after vaccination.



WSAVA
Global Veterinary Community

**Vaccination
Guidelines
Group**



- International cat vaccination guidelines
- Developed by expert panels
veterinary immunologists
veterinary virologists
small animal/feline specialists
shelter medicine specialists
- Free to download:

<https://www.wsava.org/guidelines/vaccination-guidelines>

<https://catvets.com/guidelines/practice-guidelines/feline-vaccination-guidelines>



**Vaccination
Guidelines
Group**

GUIDELINES FOR THE VACCINATION OF DOGS AND CATS

COMPILED BY THE VACCINATION GUIDELINES GROUP (VGG)
OF THE WORLD SMALL ANIMAL VETERINARY ASSOCIATION (WSAVA)

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SPECIAL ARTICLE

2013 AAFP Feline Vaccination Advisory Panel Report



Relevance: This Report was developed by the Feline Vaccination Advisory Panel of the American Association of Feline Practitioners (AAFP) to provide practical recommendations to help clinicians select appropriate vaccination schedules for their feline patients based on risk assessment. The recommendations rely on published data as much as possible, as well as consensus of a multidisciplinary panel of experts in immunology, infectious diseases, internal medicine and clinical practice.

Introduction

The AAFP produced the first organization-driven vaccination guidelines in 1998. These were updated in 2000 and again in 2006.¹ Each version has offered a comprehensive review of the literature and has provided recommendations for vaccine protocols based on known science along with some extrapolation between studies and between species when feline studies were not available. This Report has used the same criteria.

The practicing veterinarian is in the best position to determine how to put these Guidelines into practice for an individual patient. The veterinarian should undertake a clinical risk/benefit assessment for each animal and discuss recommended vaccination schedules with the owner so that they can make an informed choice. The assessment should include discussion on the likelihood of exposure, the health and lifestyle of the animal, and the risks related to vaccination.

The Advisory Panel recognizes that situations differ in different countries, and that every country will have slightly different issues and priorities; thus these Guidelines will not necessarily be applicable to every country and the practitioner must interpret accordingly.

The three international panels that have produced feline vaccination guidelines (AAFP, World Small Animal Veterinary Association and European Advisory Board on Cat Diseases) recommend that an annual health examination be performed irrespective

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The AAFP welcomes endorsement of these guidelines by the International Society of Feline Medicine (ISFM).

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Why do kittens need multiple vaccinations?



- Colostrum = the first secretion from the mammary glands after giving birth, rich in antibodies (Ab)
- Colostrum ingested by kittens protects them against infections that the queen has had or has been vaccinated against
- Maternal antibody concentrations in the kitten's blood decline over time and are usually gone by 16 to 20 weeks of age



Antibody titre



Maternal Ab

Maternal antibodies (MAB) neutralize FPV vaccines

Immunity gap: period when level of MAB is too low to protect kitten from FPV infection, but still high enough to neutralize the vaccine

Protection

Interference

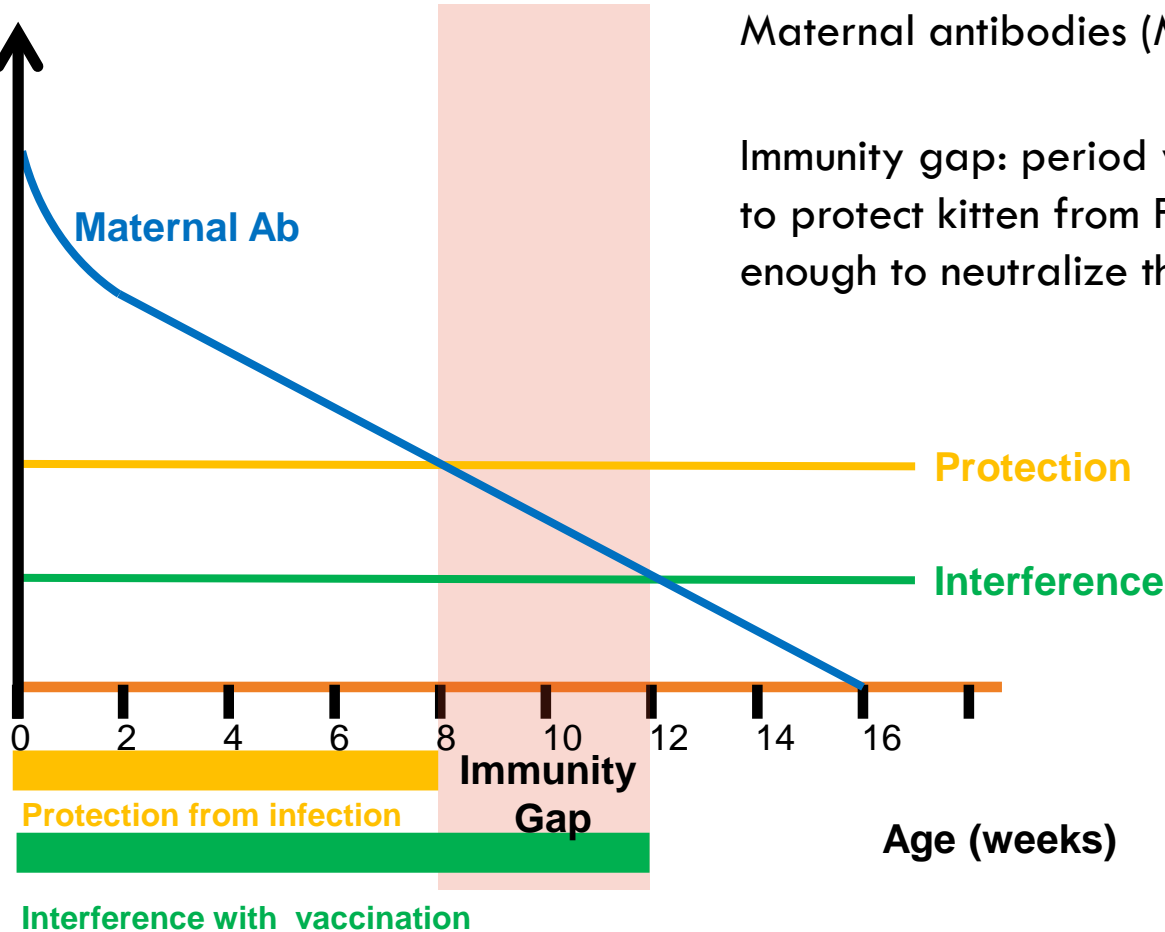
0 2 4 6 8 10 12 14 16

Immunity
Gap

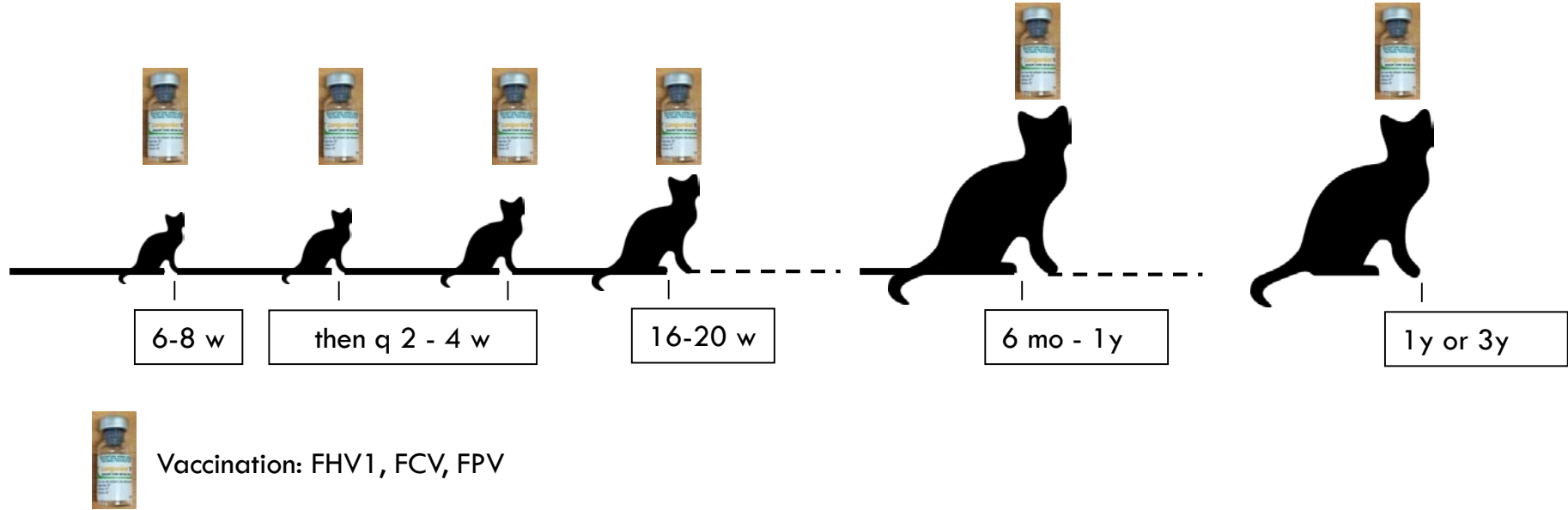
Protection from infection

Age (weeks)

Interference with vaccination



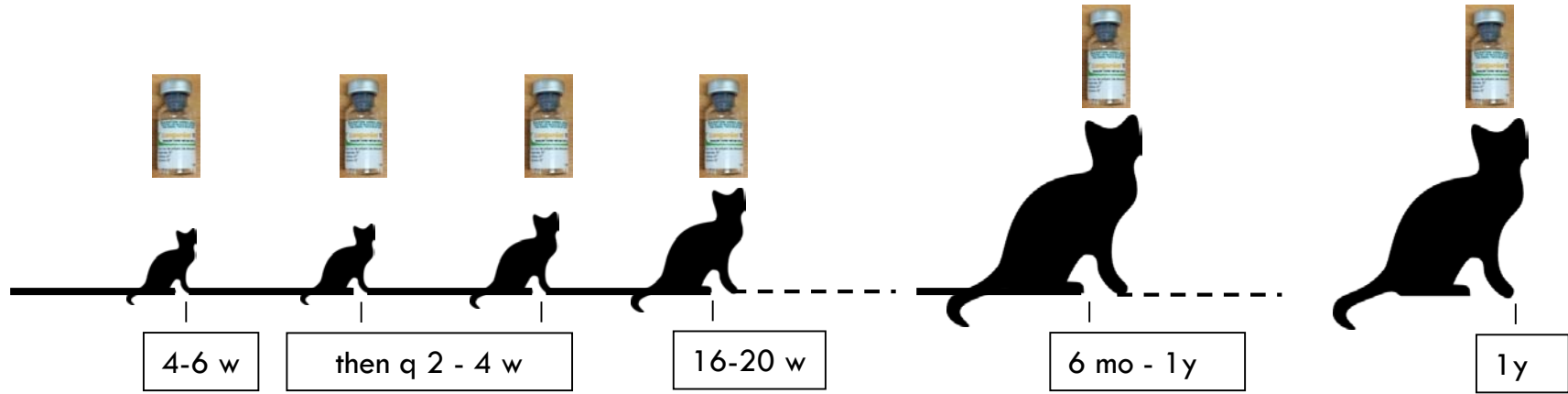
WSAVA F3 vaccination guidelines – for non-shelter pet cats



- Annual booster forward from 1 y to 6 months of age
- 1 y – 3y re-vaccination interval depending on individual cat risk



WSAVA F3 vaccination guidelines – for shelters



Vaccination: FHV1, FCV, FPV

- Always use MLV (live) vaccines (non-pregnant cats)
- First booster vaccine at 6 months
- Then annual boosters if still in shelter
- In FPV outbreaks start at **four** weeks in **ALL** kittens & vaccinate every **two** weeks

How many F3 vaccinations does an adult cat need?

Modified live virus (MLV) vaccines A.K.A. attenuated vaccines

Recommended:

- 2 doses given 2 to 4 weeks apart

Minimum effective dose:

- A single vaccination is usually adequate

e.g. TNR cats

Inactivated vaccines (Killed vaccines)

Recommended:

- 2 doses given 2 to 4 weeks apart

Minimum effective dose:

- 2 doses given 2 to 4 weeks apart



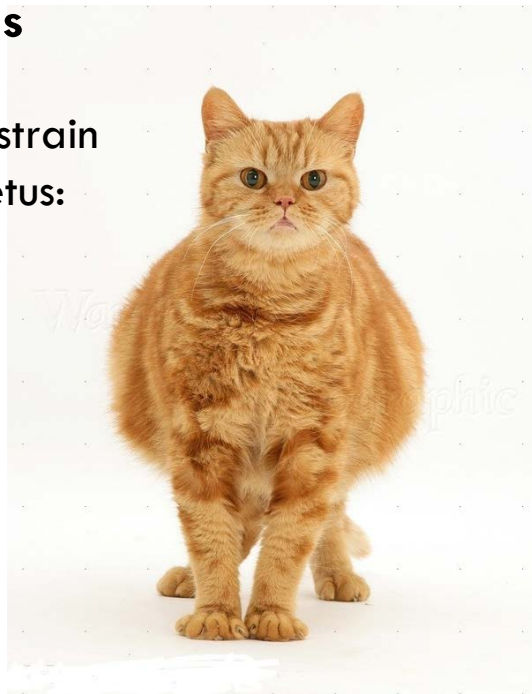
Vaccination: FHV1, FCV, FPV

Is it safe to vaccinate pregnant cats?

- In general, vaccination of pregnant cats should be avoided if possible & cats should be vaccinated before pregnancy or after

Modified live virus (MLV) vaccines A.K.A. attenuated vaccines

- Feline parvovirus vaccine strain replicates in embryo/foetus:
 - foetal death
 - brain malformation
 - (shaky kittens)



Inactivated vaccines (Killed vaccines)

- Do not cause birth defects



Vaccination of pregnant cats in shelters



- Inactivated vaccine?
 - 2 vaccines at least 2 weeks apart
- Avoid live vaccines if possible
- Panleukopenia outbreak – failure to vaccinate with MLV vaccines may result in loss of queen + her kittens

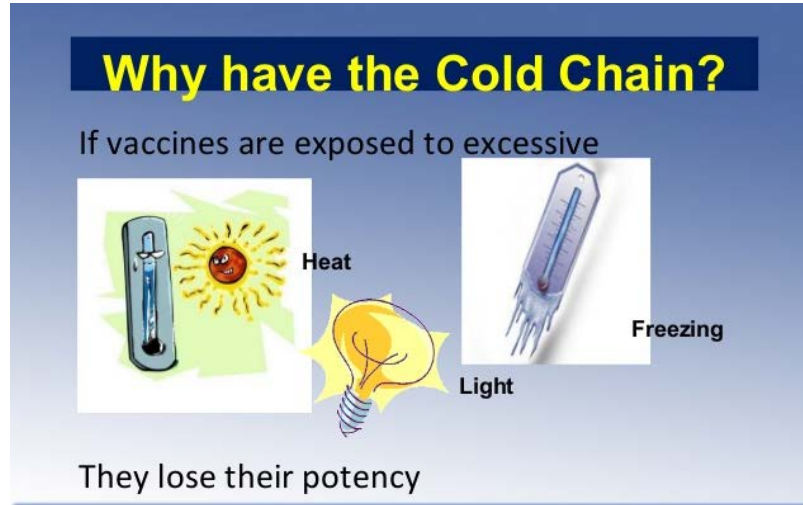
Is it safe to vaccinate kittens younger than 4 weeks?



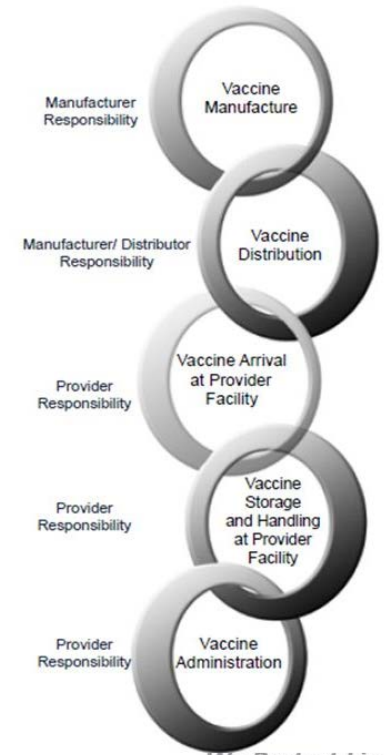
- MLV feline parvovirus vaccines can cause brain malformations in kittens < 4 weeks

Practical Tips for Using MLV (Live) Vaccines

- They must be kept cold! (4°C)

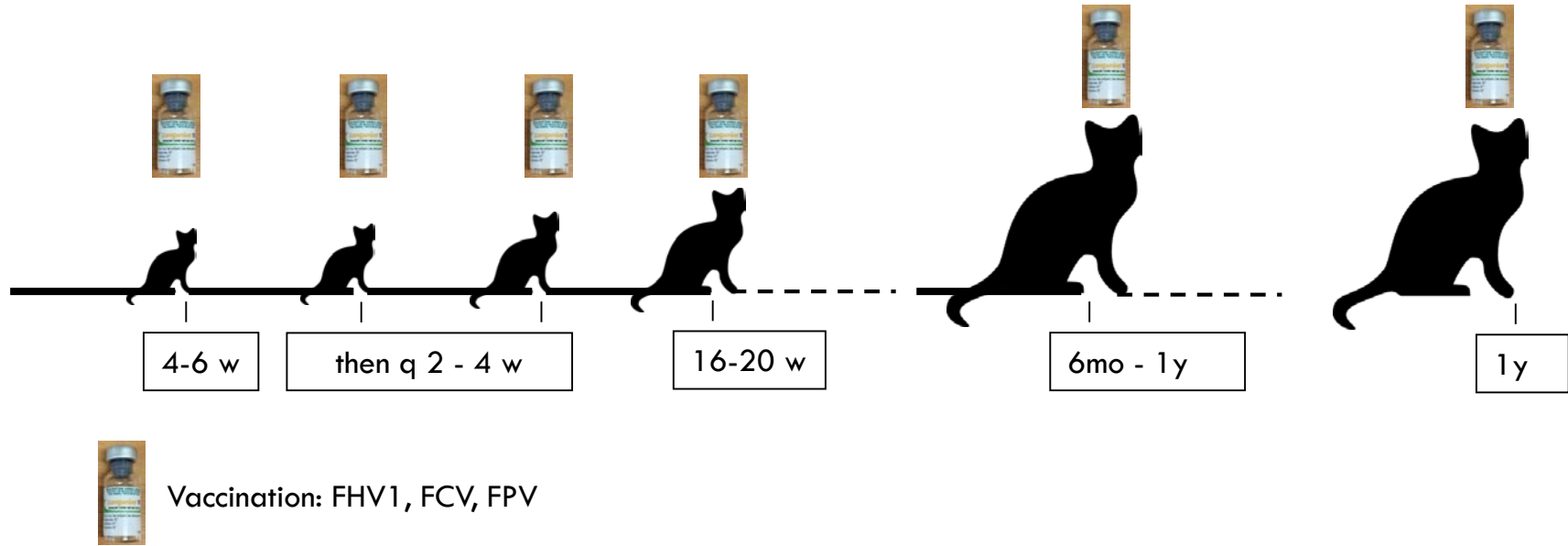


- Diluted vaccines don't work!



We Protect Lives.

WSAVA vaccination guidelines – for shelters



- **My shelter can't afford to provide best practice – what can we do?**
 - assess risk of disease in your shelter currently
 - If disease risk low – start at 6 w of age, use 3 to 4 week vaccination interval
 - cats > 6 months - 1 MLV vaccination may be adequate

