CP FIV / FeLV FLOW CHARTS

The following FIV and FeLV test result flow charts should be used as guidance for the management of cats in CP care and interpretation of test results.

There may be situations not covered, or requiring a different procedure, in which case, the CP representative or vet should contact the Veterinary department at the NCC.

In general, confirmation of positive screening test results in CP cats

FIV confirmation in apparently healthy cats:
- Kittens under six months of age – PCR test at Langford Veterinary Diagnostics, Bristol, using an EDTA sample
- Adults – IFA test at Veterinary Diagnostic Services, Glasgow, using a heparin or serum sample

FeLV confirmation in apparently healthy cats
- We would not recommend PCR testing, but prefer that heparin AND EDTA samples are sent to Veterinary Diagnostic Services, Glasgow for virus isolation.

Although many confirmatory laboratories like to do an ELISA test as well, CP does not recommend this, as an in-house screening test will have already been performed. CP can consent to this if the laboratory wishes to perform a repeat screening test free of charge for their own comparative purposes, but the charity does not see a need to pay for it.
1. FIV SCREENING TEST POSITIVE
   Adult cats older than six months

Healthy domestic cat

- Confirm with IFA test (eg Glasgow)
  - IFA Negative
    - Rehome as FIV negative
  - IFA Positive
    - Suited to indoor life and home can be found
      - Rehome as FIV Positive
    - Not suited to indoor life or suitable home can’t be found
      - Euthanasia (NB. Ensure to adhere to Stray Policy)

Not healthy or true feral

- Euthanasia (NB. Ensure to adhere to Stray Policy)

KEY

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
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<tbody>
<tr>
<td>FIV</td>
<td>Feline Immunodeficiency Virus</td>
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<tr>
<td>Glasgow</td>
<td>Specific, specialist external laboratory</td>
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<tr>
<td>IFA</td>
<td>Immunofluorescent antibody test</td>
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THIS FLOW CHART IS FOR GUIDANCE ONLY
2 FIV SCREENING TEST NEGATIVE
Adult cats older than six months

Healthy

Rehome as FIV negative

Sick and still suspicious of FIV

Domestic

IFA test confirmation (eg Glasgow)

IFA test negative

Look for and treat other causes of illness

IFA test positive

Euthanasia

Euthanasia if not fit to release

Feral

Euthanasia if not fit to release

KEY

FIV = Feline Immunodeficiency Virus
Glasgow = specific, specialist external laboratory
PCR = polymerase chain reaction test

THIS FLOW CHART IS FOR GUIDANCE ONLY
3 FIV SCREENING TEST POSITIVE
Kittens aged eight weeks old – six months old
It is estimated that up to about a third of a litter of kittens from an FIV positive queen will be infected.

Healthy (usually) and not feral or feral younger than 12 weeks old that can be socialised

Separate from mother and confirm with PCR at Bristol to check whether true positive or just carrying the mother’s antibodies.

PCR Negative

If healthy, rehome as FIV negative, advising that the kitten was (suspected if not known) born to an FIV positive mother. Antibodies against this virus were found on a screening test, but a test for DNA in the bloodstream was negative. These antibodies were likely from the mother passed over in the milk. If desired, new owners may wish to discuss performing a further (IFA) test at six to seven months old with their vet (once all milk antibodies have waned)

Give Handout 1

PCR Positive

Home as FIV positive

Feral older than 12 weeks old

Euthanasia (NB. Ensure to adhere to Stray Policy)

KEY

FIV = Feline Immunodeficiency Virus

IFA = Immunofluorescent antibody test

Bristol = specific, specialist external laboratory

PCR = polymerase chain reaction test

THIS FLOW CHART IS FOR GUIDANCE ONLY
4 FIV SCREENING TEST NEGATIVE
Kittens aged eight weeks old – six months old
It is estimated that over two thirds of a litter of kittens from an FIV positive queen will be negative

If mother and any other in-contacts were FIV negative or unknown

Home as FIV negative

If mother or in-contact was FIV positive

Home as FIV negative but advise that mother or in-contact was positive (if known) and recommend speak to vet. Give Handout 2

KEY
FIV = Feline Immunodeficiency Virus

THIS FLOW CHART IS FOR GUIDANCE ONLY
5 FeLV SCREENING TEST POSITIVE (adult or kitten)

Healthy and domestic

Sick with FeLV or healthy feral

Confirm with VI (Glasgow)

VI positive

A cat of any age who's exposure history is unknown OR any cat that is younger than six months old - euthanasia (NB. Ensure to adhere to Stray Policy)

Negative

Older than six months old AND if certain the 1st exposure to FeLV was only very recent

Contact CP veterinary department

KEY

FeLV = Feline Leukaemia Virus
VI = virus isolation test
Glasgow = specific, specialist external laboratory
Transiently = temporarily

THIS FLOW CHART IS FOR GUIDANCE ONLY
6 FeLV SCREENING TEST NEGATIVE (adult or kitten)

Healthy

If feral, or not known to have had recent contact with FeLV positive cat

Home as FeLV negative

If not feral and known to have had recent contact with an FeLV positive cat

Separate from FeLV positive and other cats and keep in isolation

Wait one month after exposure to FeLV

VI (Glasgow)

Positive

Euthanasia (NB, Ensure to adhere to Stray Policy)

Negative

Home as negative but explain had been in contact with an FeLV positive cat.

Unhealthy and still suspicious

VI (Glasgow)

VI negative

Look for and treat other cause of illness

VI positive

Euthanasia (NB Ensure to adhere to Stray Policy)

**KEY**

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7 FIV/FELV confirmatory blood tests

When to confirm screen test FIV/FeLV results

Unless the cat is showing characteristic signs of FeLV or FIV, or is a feral cat over 12 weeks old, all positive screening test results for FIV/FeLV should be confirmed at a reliable external laboratory. We currently recommend using University of Glasgow for FIV in adults (IFA test) and for FeLV in all cats (VI test) and Bristol laboratory for FIV in kittens (PCR test).

If a screening test is negative, but the vet is suspicious of the result as the cat is showing signs of FIV/FeLV, confirmation should be sought via a reliable external test.

Recommended FIV/FeLV confirmatory blood tests at external laboratories

- Immunofluorescent Assay (IFA) test – An IFA test will detect antibodies (produced by the cat in response to the virus) against FIV. It is a more sensitive test and therefore more accurate than in-house test kits
- Polymerase Chain Reaction (PCR) test – the PCR test looks for genetic material and is especially useful in kittens born of FIV positive queens
- Virus isolation (VI) – A VI test grows the FeLV virus, to identify whether it is present

Details of confirmatory laboratories

Submission forms and further details can be found on the following websites:

University of Glasgow http://www.gla.ac.uk/schools/vet/cad

University of Bristol http://www.langfordvets.co.uk/diagnostic_laboratories.htm

FIV testing

Adult cats

Screening test kits detect FIV antibodies which develop four to six weeks after infection. For adult cats which test positive for FIV on a screening test, the guidance is to then send the blood to the University of Glasgow Laboratory for confirmation by IFA.

An IFA test also detects FIV antibodies. If an IFA test confirms that the cat is FIV positive, no further tests are required and the cat can be rehomed as positive if healthy and suited to an available indoor home.
Kittens

Kittens born to an FIV-positive mother can have maternal FIV antibodies until they are five to six months old, meaning if they were tested younger than six months of age using a screening test, it is likely that they would show positive results. Because the PCR test looks for actual genetic material, it is very useful in the diagnosis of infection in young kittens which may have maternally-derived antibodies, but which do not actually have FIV. For kittens that test positive on a screening test, a blood sample should be sent to the University of Bristol Laboratory for confirmation with a PCR test.

FeLV testing

Screening test kits detect free FeLV antigen found in the cat’s plasma. If a healthy cat or kitten tests positive for FeLV on a screening test, the guidance is to then send the blood to the University of Glasgow Laboratory for confirmation by VI.

A PCR test for FeLV is available at some laboratories. PCR results must be interpreted with care because the PCR test detects FeLV genetic material and this may still be present in cats which have been transiently (briefly) infected with FeLV and then go on to recover, and so it can be difficult to interpret positive FeLV PCR results.

Unlike tests for FIV, FeLV tests are not affected by maternally-derived antibodies, so they can be used for cats of any age.

More information on FIV/FeLV, including blood testing recommendations can be found on The Cat Group’s website: www.thecatgroup.org.uk
FIV and FeLV handouts and information sheets

Handout 1

For owners taking on a kitten initially testing FIV antibody positive and subsequently testing FIV DNA negative on a confirmatory test

Testing for FIV in kittens can be complicated. Veterinary practice screening test kits detect antibodies to FIV, so a positive result means that antibodies to FIV have been detected. In adult cats this positive antibody result means that the cat is infected with the FIV virus. However, in kittens this may only mean that they have some of their infected mother's antibodies from the milk, but not the virus itself. In fact, only around one third of kittens born of FIV positive mothers are FIV positive themselves. Therefore a Cats Protection kitten testing positive (for antibodies) on a screening test kit has a special (PCR) test done at a reliable external laboratory to identify whether there is any actual virus present or not.

This kitten tested positive on a screening test, but negative on the PCR test. This indicates that the kitten did have antibodies, likely from its (FIV positive) mother passed over in the milk, but fortunately is most likely to be FIV negative itself. If you wish, a further test (IFA) can be performed at six to seven months of age. Speak with your own vet if you wish to explore this option.

Should you or your vet require further information on FIV diagnostic testing, please contact the NCC Veterinary Department on 01825 741 991 and see the Cats Protection Veterinary Guide ‘FIV and FeLV’.

Handout 2

For owners taking on an FIV negative kitten from an FIV positive mother

Feline Immunodeficiency Virus (FIV) positive mother, but kitten tested negative

This kitten’s mother was FIV positive. Fortunately only one third of kittens born to FIV positive queens are FIV positive themselves. This kitten has tested negative on a veterinary practice screening test.

For more information please refer to Cats Protection’s Veterinary Guide ‘FIV and FeLV.’