

DIAGNOSTIC SCHEMATIC FOR FELINE LEUKAEMIA (FeLV)

STEP1 – EARLY SIGNS OF FeLV DUE TO COMPLAINT FROM CAT OWNER

Early signs (also known as prodromic signs) of Feline Leukaemia (FeLV) are not specific to the disease⁽¹⁾.

These early signs are the usual complaints from the cat owner when he/she brings her cat to the veterinary clinic:

1. Intermittent and persistent loss of appetite.
2. Progressive weight loss.
3. Chronic poor skin and coat condition.
4. Abnormal urination with or without pain.
5. Superficial lumps.
6. Pale mucous membranes.
7. Persistent fever.
8. Persistent diarrhoea.
9. Persistent neurological conditions (abnormal vocalization, hyperesthesia, and paresis progressing to paralysis).
10. A variety of persistent eye conditions (uveitis, conjunctivitis, keratitis), respiratory conditions (rhinitis) and/or buccal conditions (stomatitis, gingivitis).

The key words are “**persistent**” and “**chronic**”. Hence, during medical examination, the veterinarian must confirm that these signs are on going for at least one week or more.

STEP 2 – APPRECIATION OF THE EPIDEMIOLOGY

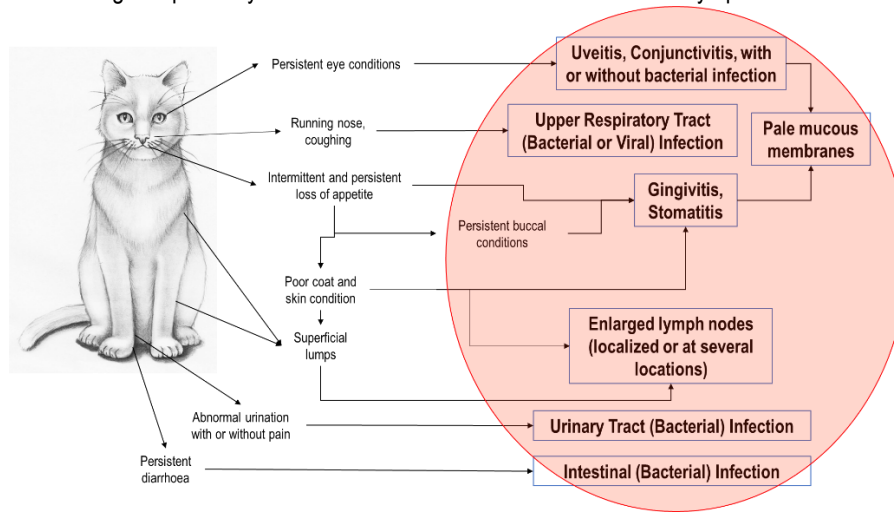
Any ONE of the above complains from the cat owner points to a high possibility of FeLV infection when supported with the following epidemiological considerations:

1. **The prevalence of FeLV is >5%**. The global prevalence of FeLV is around 15% while that of FIV is around 20%..
2. **The owner has several cats living in the same household**. A cat with FeLV sheds a large quantity of the virus in its saliva, as well as in other bodily fluids such as nasal secretions, urine and feces. However, FeLV is not a highly contagious virus, and transmission generally requires a prolonged period of close contact between infected and susceptible cats.
3. **The cat was purchased or adopted from a source that is not free from FeLV**. If the breeding farms and pet shops from which the cats came are not regularly tested to be free from FeLV, the risk of such a cat coming down with FeLV is high. Cat rescue shelters have a high prevalence (up to 33% in the U.S.) of FeLV cats because these cats are, unfortunately, abandoned by the owners. However, responsible cat rescue shelters will make aware to owners of the FeLV status of any cats that are adopted.
4. **There are stray cats in the neighbourhood**.

CATS OF ALL AGES CAN BE INFECTED WITH FELINE LEUKAEMIA.
AGE IS THEREFORE **NOT** AN EPIDEMIOLOGICAL CONSIDERATION.

STEP 3 – MEDICAL EXAMINATION

Diagnostic chart following complains by the cat owner must be made to localize the symptoms and formulate a prognosis:



STEP 4 – LABORATORY ANALYSIS

A. Complete Blood Count or CBC

A complete blood count is made with 2 objectives in mind:

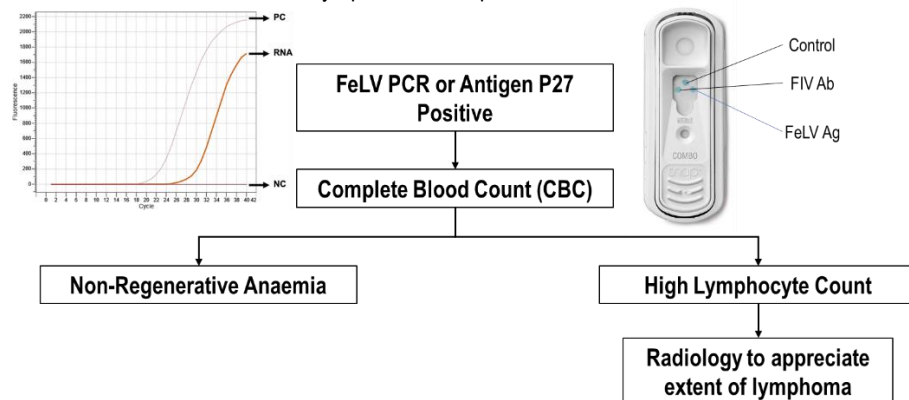
1. Prognosis
2. Focal treatment

B. FeLV PCR or Rapid ELISA Antigen p27

If FeLV PCR and/or rapid ELISA Antigen p27 test are/is negative, these tests are/is repeated in one week's time. If these tests are again negative, then the cat is not FeLV positive.

C. Radiology

Radiology is recommended if FeLV-induced lymphoma is suspected.



D. Differential Diagnosis

The principal differential diagnosis is made for cats with anemia, especially severe anemia where HCT <12%. A review⁽²⁾ can be found in the "REFERENCES" section.

- Acute blood loss / hemorrhage.
- Feline hemolytic mycoplasma or FHM.
- Immune mediated hemolytic anemia or IMHA.
- Iron and/or vitamin B-complex deficiency.
- Chronic renal failure resulting in no production of erythropoietin.

SUMMARY IN SCHEMATIC

Early signs of FeLV infection:

1. Intermittent and persistent loss of appetite.
2. Progressive weight loss.
3. Chronic poor skin and coat condition.
4. Abnormal urination with or without pain.
5. Superficial lumps.
6. Pale mucous membranes.
7. Persistent fever.
8. Persistent diarrhoea.
9. Persistent neurological conditions (abnormal vocalization, hyperesthesia, and paresis progressing to paralysis).
10. A variety of persistent eye conditions (uveitis, conjunctivitis, keratitis), respiratory conditions (rhinitis) and/or buccal conditions (stomatitis, gingivitis).



Medical Examination:

1. Uveitis, conjunctivitis with or without bacterial infection.
2. Upper respiratory tract inflammation that could be viral or bacterial.
3. Gingivitis, stomatitis, if chronic can lead to periodontitis.
4. Enlarged lymph nodes, localized or disseminated.
5. Urinary tract (viral or bacterial) infection
6. Intestinal tract (viral or bacterial) infection



Laboratory Test:

1. Confirmatory test for FeLV based on either ELISA p27 antigen test or pro-viral DNA PCR test.
2. Complete Blood Count (CBC)
3. Radiology if lymphoma is suspected



Differential Diagnosis:

1. Feline Immunodeficiency Virus (FIV)
2. Feline Haemolytic Mycoplasma (FHM)
3. Immune Mediated Haemolytic Anaemia (IMHA)

REFERENCES

- (1) Cornell University, College of Veterinary Medicine. <https://www.vet.cornell.edu/departments-centers-and-institutes/cornell-feline-health-center/health-information/feline-health-topics/feline-leukemia-virus>
- (2) Séverine Tasker (2006). *The differential diagnosis of feline anemia*. World Small Animal Veterinary Association World Congress Proceedings 2006. <https://www.vin.com/apputil/content/defaultadv1.aspx?id=3859015&pid=11223>