



NCSU CANINE/FELINE PARR ASSAY SUBMISSION FORM

Phone: 919 513 1925 / cvmoncodiagnosticlab@ncsu.edu

Patient Information

Clinic / Information

Animal Name _____

Owner Last Name _____

Species (circle one): Canine Feline

Breed _____

Age _____

Sex: FI _____ FS _____ MI _____ MC _____

Clinic Name _____

Clinic Address _____

Phone _____ Fax _____

Email _____ **(required)*

Clinician _____

Billing information (If different from Clinic Information)

Billing Name _____

Billing Address _____

Phone _____

Contact Email _____

(Results and invoices will be sent via Email only)

** (required)*

SAMPLE TYPE

DATE COLLECTED

Aspirate: site _____

Blood (EDTA) _____

Bone Marrow (EDTA) _____

CSF _____

Other _____

Results will be completed within 7 - 10 business days after the sample is received at the lab

*(There may be times when we are short-staffed or the University is closed and we cannot receive samples. If this is the case, there will be a message to that effect.)

We do not prefer in person sample drop offs. In case of emergency or an exception, please call the lab and provide at least 4 – 6 hours' notice before drop off.



NCSU CANINE/FELINE PARR SAMPLE SUBMISSION GUIDE

SAMPLE TYPE:

What type of sample to submit: Submit a sample that represents the disease process and is sufficiently cellular.

<u>Presenting complaint</u>	<u>Best sample to submit</u>	<u>Form of sample</u>
Lymphadenopathy	Lymph node aspirate	Slides
Lymphocytosis	Blood	EDTA
Suspect bone marrow disorder	Bone marrow aspirate	Slides/EDTA
Mass	Aspirate	Slides
Effusion w/ cells	Fluid	Slides or fluid
CSF w/ cells	CSF	Slides or fluid

Please send sufficient sample to ensure accurate results:

Slides (Minimum 0.5 – 1-inch smear)

Blood & Body Fluids (Minimum 500 µl)

Formalin fixed samples for PARR: 3-4 25 micron sections in a 1.5ml Eppendorf tube or equivalent-**NOT ON A SLIDE**). Formalin fixation can degrade DNA, therefore, PARR may not provide pertinent information in approximately 10% of these cases.

(Note about low cellularity samples: Some samples (e.g. CSF) may not have enough cells to run PARR. In some cases, we can determine this prior to starting the assays. However, often we do not know until we have completed the assay and analyzed results. In these cases, as it costs us same amount to run as a sample with enough cells, you will be charged for the non-diagnostic sample.)

****HISTORY** (IMPORTANT!!!!)**

1) Signs or symptoms leading to test request (check all that apply)

___ Lymphadenopathy (include most recent cytology report if available)

___ Splenomegaly ___ Hepatomegaly

___ Lymphocytosis; lymphocyte *number* _____ (include most recent CBC/cytology report if available)

___ Other peripheral blood abnormality (include most recent CBC/cytology report if available)

___ Bone marrow abnormality (include most recent cytology report if available)

___ Mass; location _____ (include most recent cytology report if available)

___ Effusion/fluid containing suspicious cells; *pleural* ___ *peritoneal* ___ *CSF* ___ *other* _____

2) Other signs and/or additional history or concurrent conditions including any treatment.

3) Is this patient an ehrlichiosis suspect? ___ No ___ Suspect ___ Confirmed



PRICES:

PARR assay:

LN/mass FNA, BM, effusions, blood: \$125 /sample.

Formalin-fixed (FFPE) samples - \$125 + \$45 = \$170 (as additional processing is required for FFPE samples).

Additional samples from the same patient at the same time, **\$55/ sample.**

SAMPLE SHIPMENT INSTRUCTIONS: (Please use FED EX, UPS or DHL)

Send overnight for morning delivery to:

**North Carolina State University, CVM
K9/ Feline Oncology Diagnostic Lab
1060 William Moore Drive
Research Building, Room #330C
Raleigh NC 27607**

**Questions:
Phone: 919-513-1925
cvmoncodiagnosticlab@ncsu.edu**

How to send a sample:

Send **blood & body with a cold pack** (do not freeze blood) for overnight delivery. Do not send for Saturday/Sunday or holiday delivery.

*Send by **FED EX, UPS, or DHL**. Do not send US postal, as the delivery will be to the main mail office on campus and can take a day or two to reach us. Samples collected on Fridays may be refrigerated over the weekend and sent out the following Monday morning.

If possible, please email or call the Laboratory (919-513-1925) prior to sending a sample. If no one answers the phone, leave a message

PARR Information:

PARR is a PCR-based assay to determine if a population of cells is the result of the clonal expansion of B or T cells, which usually, but not always, implies lymphoid neoplasia. The test utilizes genomic DNA and PCR primers that are specific to the canine V(D)J splice junctions of B and T cell receptor gene segments in lymphocytes. Because a clonal

expansion of a population of neoplastic lymphocytes can be PARR positive for both B and T cell rearrangements, PARR should be used with caution for the lineage assignment of canine lymphoma. Additionally, PARR should never be used as the sole assay to determine if a dog has lymphoma or leukemia. Instead, PARR can be one of the tests used to interpret difficult cases in addition to cytology, immunocytochemistry, flow cytometry, history, and clinical signs. The main advantage of PARR is the ability to differentiate a monoclonal/oligoclonal or neoplastic lymphoid proliferation from a reactive and polyclonal or pseudo-clonal proliferation. The PARR assay can be run on fresh lymph node aspirates, bone marrow aspirates, cellular effusions, blood, cells scraped from cellular cytology slides, formalin fixed tissues (25 micron sections), and fresh frozen tissues (25 micron sections kept at -80 degrees).