

CLINICAL IMMUNOLOGY SUBMISSION FORM

2009 (revised 10-22-09)

Colorado State University

Patient information

Clinic information- NO ABBREVIATIONS PLEASE

Owner's last name _____

Patient's name _____

Clinic Record # _____

Species*/Breed _____

Year of birth _____

Sex FI FS MI MC

*Canine or Feline only

Clinic Name _____

Clinic Address _____

phone _____ fax _____

email _____

clinician _____

<u>Sample type</u>	<u>Site</u>	<u>Date sample taken</u>	<u>Check for test to run</u>	
Aspirate	_____	_____	<input type="checkbox"/> PARR <input type="checkbox"/> Flow cytometry	<input type="checkbox"/> Cytology review (must include additional unstained slides)
Bone Marrow	_____	_____	<input type="checkbox"/> PARR <input type="checkbox"/> Flow cytometry	<input type="checkbox"/> Cytology review (must include additional unstained slides)
Biopsy	_____	_____	<input type="checkbox"/> PARR <input type="checkbox"/> Flow cytometry	<input type="checkbox"/> Cytology review (must include additional unstained slides)
Cavity fluid	_____	_____	<input type="checkbox"/> PARR <input type="checkbox"/> Flow cytometry	<input type="checkbox"/> Cytology review (must include additional unstained slides)
CSF	_____	_____	<input type="checkbox"/> PARR <input type="checkbox"/> Flow cytometry	<input type="checkbox"/> Cytology review (must include additional unstained slides)
Other	_____	_____	<input type="checkbox"/> PARR <input type="checkbox"/> Flow cytometry	<input type="checkbox"/> Cytology review (must include additional unstained slides)
Blood	_____	_____	<input type="checkbox"/> PARR <input type="checkbox"/> Flow cytometry	<input type="checkbox"/> CBC to be done at CSU (please include extra purple top of sample & blood smear) <input type="checkbox"/> CBC has already been done within 2 days & is included or will be faxed

For flow cytometry of peripheral blood a CBC MUST be done - check one!

HISTORY!!!! (very important!!!)

1) LYMPHOID NEOPLASIA HAS BEEN CONFIRMED BY CYTOLOGY OR HISTOLOGY: Yes No

If yes, please include a copy of the cytology/histology report.

Circle diagnosis if neoplasia is confirmed: Myeloma Leukemia Plasmacytoma
 Lymphoma – multicentric GI Cutaneous Mediastinal CNS

2) Signs or symptoms leading to suspicion of lymphoid neoplasia (please check all that apply)

- Lymphadenopathy (either peripheral or internal) or splenomegaly
- Mass location _____
- Lymphocytosis
- Effusion/fluid containing suspicious cells (pleural peritoneal CSF other _____)
- Hypercalcemia
- Hyperglobulinemia
- Peripheral cytopenia, including IMHA (bone marrow is the best sample in these cases)
- Other peripheral blood abnormality

Other, including additional history or concurrent conditions

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

PARR - \$105 (starting July 1st) Cytology - \$33
 Flow cytometry - \$105 (starting July 1st) CBC/blood film review – \$32.50
 PARR + Flow cytometry - \$170

Clinical Immunology
 Veterinary Diagnostic Laboratory
 300 West Drake Street
 Fort Collins, CO 80523

Test Questions?
 970-491-1170
 email anne.avery@colostate.edu
 Billing questions? 970-297-1281

CSU CLINICAL IMMUNOLOGY-GUIDE TO SUBMISSION

<u>Presenting complaint</u>	<u>Best site</u>	<u>Best test</u>
Lymphoma, confirmed, need a phenotype	Lymph node	Flow cytometry
Lymphoma suspect, equivocal histology/ cytology	Lymph node	PARR
Lymphocytosis or leukemia	Peripheral blood	Flow cytometry
Rare suspicious cells in peripheral blood, no lymphocytosis	Peripheral blood	PARR
Splenomegaly, equivocal histology/ cytology	Spleen	PARR
Mass or aspirate with cells of unclear origin	Mass	Flow cytometry if cellular, PARR if not
Peripheral cytopenia, suspicious cells in marrow	Bone marrow	PARR
Lymphocyte rich effusion	Effusion fluid	Flow cytometry
Lymphocyte rich CSF	CSF	PARR

PARR assay

How to take a sample: Aspirate the mass or node, and squirt the sample into the bottom of an EDTA tube with no additional saline. **SLIDES, STAINED OR UNSTAINED**, can also be submitted, but they should be cellular. Biopsies can also be put into an EDTA tube. **NO FORMALIN FIXED SAMPLES!** Marrow and cavity fluids can be placed directly into EDTA tubes.

How to send a sample: No special shipping required for aspirates or slides. Older samples are fine. If blood samples will be delayed by > 1 week, make smears and send these.

Sensitivity and specificity: Dogs; overall 80% sensitive, 94% specific. Cats; estimated sensitivity 65%. No data yet on specificity.

NOTE ABOUT LOW CELLULARITY SAMPLES: We estimate we need a minimum of **50,000 cells TOTAL** to have sufficient DNA for a diagnostic PARR assay. Some samples, particularly CSFs, have too little DNA for analysis. Consider your total cell count before submitting. We have to carry out the entire assay in order to determine if the sample is diagnostic, so we charge for the test even when the result is non-diagnostic.

Flow cytometry (Cells in fluid suspension only)

How to take a sample*: Draw blood or cavity fluid into EDTA, and then immediately refrigerate. If you are having us do the CBC for blood please include at least an extra 500µl. For aspirates, RPMI, DMEM or similar cell culture media with 10% fetal bovine serum is ideal. This can usually be found in a University setting. In practices where this is not available, put 0.5 to 1 ml of saline (LRS, Norm R) into a red top tube, then aspirate the mass or node several times, squirting the contents into the saline. Rinse the syringe with the saline to increase yield. It is essential to add protein to these samples. This can be accomplished by adding serum from a patient of the same species to the tube such that the serum comprises approximately 10% of the volume. Protein should also be added to cavity fluids.

How to send a sample: Send samples OVERNIGHT that are 48 hours old or less with a cold pack.* * Do not send for Saturday or holiday receipt (please call and check with us if you have questions). If you are sending peripheral blood, and it is possible to send a second tube for a CBC, this is helpful. Please also include a dried blood smear made when the sample is freshly drawn.

NOTE ABOUT NON-DIAGNOSTIC SAMPLES: We perform a viability test before carrying out the flow cytometry assay. If the sample is greater than 65% dead, we will generally not perform flow cytometry, and you will not be charged for the viability test.

* Need at least 500 µl.

**See attached FedEx instructions.

FEDERAL EXPRESS SPECIMEN PICK-UP

COLORADO STATE UNIVERSITY DIAGNOSTIC LABORATORY

In response to the need for fast and convenient sample transport, the Colorado State University Diagnostic Laboratory in Fort Collins has established overnight delivery service directly to the Diagnostic Laboratory through Federal Express. This new service will insure timely delivery of your specimens at a competitive rate due to a volume agreement with the university and Federal Express and endorsement by the State of Colorado. To utilize this service, just follow these steps:

1. Pack your specimens as usual. If your specimen needs a coolant, use a frozen ice pack but do not use dry ice.
2. Call Federal Express toll free at 1-800-238-5355 or 1-800-GO FEDEX to request a pick-up. Some remote areas have pick-ups earlier in the day to insure next-day delivery so be sure to ask when your specimens should be ready for pick-up.
3. Tell the customer service agent you are sending your specimens to account **#1870-8327-3** and that you will need a diagnostic specimen pack and airbill for your sample (if necessary). **Be sure to request Standard Overnight service and check off "Recipient Box" for Payment. Also be sure and record the weight on the form.**

The cost will be added to your accession's test charges and will be reflected on your sales service invoice and statement.

You may request either Saturday pick-up (for Monday delivery) or Saturday delivery (with Friday pick-up). Samples picked-up Friday without a special request of Saturday deliver will arrive on Monday morning. **Please be aware that there will be an additional \$10.00 charge added to your sales service invoice for either Saturday pick-up or delivery. If it is necessary to send flow cytometry samples over the weekend (we discourage this), they must be delivered on Saturday so they can be refrigerated.**

Lab packs are available at no charge by calling 1-800-GO FEDEX and pre-printed airbills are available by calling the **CSU Diagnostic Lab** at 970-491-1281.

FedEx address:

**CSU D-Lab
300 West Drake Rd. Rm E-100
Fort Collins, CO 80526**