Alberta Health Services

Laboratory Bulletin

Date: **October 20, 2011**

To: **South Zone – West: Pathologists, Histopathology Department Staff, Laboratory Office Staff, Internal Medicine Physicians, General Surgeons, ENT Surgeons and Radiologists**

From: **AHS Laboratory Services – South Zone (West)**

Re: **LB-30-11 Collection and Handling of Specimens Submitted for the Primary Diagnosis of Suspected Tissue Based Lymphoma**

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Key Messages:

Review the process for collection and handling of specimens submitted for suspected tissue based lymphoma.

Why this is important:

To ensure that good quality tissue is obtained for histopathologic assessment and special studies. Suboptimal specimens can easily result in an inaccurate diagnosis.

Action Required:

1. Readily accessible enlarged lymph nodes and/or other masses where lymphoma is suspected (primary diagnosis); an open excisional biopsy performed by a surgeon is always preferable.

   The tissue should be intact, measure at lease 1.0 cm in size and be submitted fresh on saline soaked gauze to the laboratory for "lymphoma studies".

   The histopathology laboratory cannot handle tissue specimens in a sterile manner. If culture or other microbiology studies are required, an additional sample needs to be collected by the clinician at the time of biopsy and submitted direct to microbiology using the appropriate test protocol.

2. For deep enlarged lymph nodes and/or other masses not easily biopsied in an open manner where lymphoma is suspected (primary diagnosis), eg. retroperitoneum, thorax, very sick patients, very old patients, recurrent lymphoma, a needle core biopsy may be performed. In this situation, FNA is not considered an equivalent procedure.

   Most of these cases will be done in Radiology. A cytotechnologist needs to be present to assess the suitability and quality of the specimen. If lymphoma is suspected, if at all possible, extra tissue needs to be obtained for flow cytometry. If this is not possible, part of the original specimen may be used if large enough.

   Unless there is no other alternative, fine needle aspiration (FNA) is strongly discouraged in these clinical settings.

3. In other situations where lymphoma is suspected eg. head and neck region, GI tract, skin, etc. please contact the duty pathologist to make special arrangements before small incisional biopsies are performed.

- For the above 3 scenarios, the most important aim of the procedure is to obtain good quality tissue fixed in formalin for routine Histopathological processing and examination. In most cases it is also possible to obtain extra fresh unfixed tissue for flow cytometry. If the latter can not be achieved, it is almost always possible to perform accurate immunophenotyping using tissue immunohistochemistry.

4. In the investigation of a superficial mass eg. head and neck region, soft tissue where the diagnosis is uncertain, fine needle aspiration (FNA) is useful and frequently performed. If the rapid assessment identifies any type of lymphoid tissue, then a sample should be submitted for flow cytometry as well. If the latter is diagnostic of lymphoma, a follow-up excisional biopsy is still required. However, the flow cytometry does not need to be repeated.

    - For all samples, suboptimal biopsies will be reported as non-diagnostic, requiring a repeat procedure.

5. Diagnostic work-up of lymphoid malignancies requires the use of a variety of expensive ancillary studies. It is a complex, sub-specialized practice area and requires assessment of nodal architecture, best seen with nodal excision, for accurate diagnosis.

The above reflects the practice and recommendations of the Cross Cancer Institute in Edmonton, Tom Baker Cancer Centre in Calgary (Dr. Y. Auer) and the B.C. Cancer Agency in Vancouver (Dr. M. Hayes).

Inquiries and feedback may be directed to:
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This bulletin has been reviewed and approved by
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