

# A Brief Note on Lymphocyte Specimen

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## Description

Significant strides have been made in flow cytometric cytogenetic and molecular techniques in diagnosing and prognosticating hematolymphoid malignancies as outlined in the recent WHO classification of tumours of hematopoietic and lymphoid tissues. Tissue biopsies acquire from patients with a suspected diagnosis of hematolymphoid malignancy should thus be handled in such a way that all necessary information may be gained for diagnostic and prognostic purposes. In general if the biopsy is acquired from a lymphoid site the tissue should be handled as a lymphomatous specimen until proven otherwise since these are irreplaceable specimens and they should be triaged appropriately. If the biopsy is from an extra nodal site and a diagnosis of a hematolymphoid malignancy is the primary concern such biopsies should also be handled as a lymphomatous specimen. When in doubt it is always better to process the sample as a lymphomatous specimen to ensure that all appropriate testing has been instituted for diagnostic and prognostic purposes.

Fresh tissues that are frozen section room with a history of a hematolymphoid malignancy for lymphoma for lymphoma work up or similarly are accessioned and handled like lymph nodes, tonsils or adenoids and thymus and extra nodal or non-lymphoid tissues. Once the specimen is transmitted to hematopathology the tissue is sorted for diagnostic and prognostic commitments. On the basis of the quantity of tissue acquired one may have to prioritize the triaging of the sample. Adequate well fixed and well sectioned tissue for histopathologic views is always the first priority since histopathology remains the mainstay of diagnosis. The amount of tissue placed in the cassette should be less than the size of a nickel and no thicker than 3 mm. Ideally tissues are fixed in non-buffered formalin to

preserve immunoreactivity for possible indicated immunohistochemical staining and in B5 fixative to enhance cytological details. Depending on the amount of tissue and clinical history tissue may then be triaged for cytogenetic studies. The nature of the tissue biopsy determines the amount of tissue necessary for FCI. A touch preparation made of portion of the tissue to be considered for processing for FCI to assess for suitability. 6 preparations are recommended. 2 are wrights stained to ensure adequacy of specimen. The rest of the stainless touch preparations may be stationary and conceivably used for FCI testing the tissue in small petri dish with a scalpel against a fine mesh. Lymphoid site being evaluated for a hematolymphoid malignancy and is primarily performed to determine the adequacy of the specimen and to determine the adequacy of the specimen and to confirm the presence of lymphoid tissue. Reactive lymph nodes typically demonstrate a polymorphic population, composed primarily of small lymphocytes intermingled with a mixture of intermediate sized lymphocytes scattered larger forms, occasional plasma cells and histiocytes. On the basis of the nature of the reactive process, infrequent neutrophils and eosinophils may also be observed. A lymphomatous process such as a non-hodgkins lymphoma may be suspected if the touch phenomenon demonstrates a cellular specimen composed of a monomorphous population of lymphoid cells. However, NHL cells are a heterogeneous group of disorders and some subtypes are composed of a polymorphous population.

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