###### Purpose

To provide a procedure for the processing of a lymph node through the standard lymph node protocol.

1. **Principle**

###### To take imprints, submit fresh lymphoid tissue for as many special studies as possible, and submit a representative section for permanent section so that a diagnosis can be made microscopically by a Pathologist.

###### Equipment

* Ruler
* Forceps
* Scalpel

1. **Safety**

* **PPE** should be worn.
* **FORMALIN** is a known carcinogen.

1. **Supplies and Reagents**

* 4 Charged (+) Glass Slides
* RPMI Tissue Culture Media- Flow Cytometry
* Tissue Culture Media (sterile)- Cytogenetics
* Small Clear Plastic Jars
* **10% NEUTRAL BUFFERED FORMALIN** (pH range 6.9 – 7.2)
* Aqueous Buffered Zinc Formalin (Z-Fix)

1. **Quality Control**

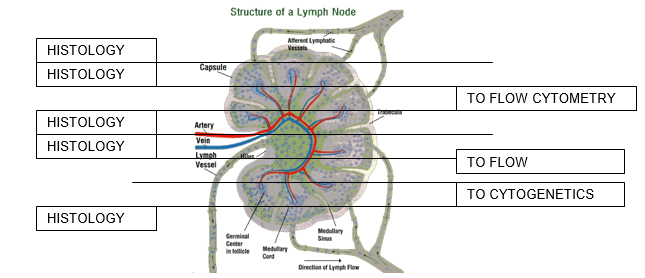
All remaining tissue should be retained.

1. **Limitations/ Notes**

The following may influence the validity of test results:

The specimen should be received fresh so that imprints can be made and tissue can be procured for special studies

1. **Procedure**
2. The specimen will be received fresh.
3. Describe and measure the specimen which will consist of one or more lymph nodes or a portion of lymphoid tissue (3 dimensions – cm.).
4. Serially section the specimen perpendicular to the long axis of the node at 2 mm intervals.
5. Examine and describe the cut surfaces (color and consistency, noting nodularity or necrosis).
6. Imprints should be done on the fresh tissue for FISH (4 + slides) studies. Make thin, even imprints for FISH, taking care to not overlay the imprints, as cell clusters or clumped regions can hinder analysis. If the cut surfaces vary, different areas should be represented on the imprints. The FISH imprints will be picked up by the Cytogenetics Lab. If specific FISH tests are to be performed, the pathologist assigned to the case should notify Cytogenetics directly.
7. Submit tissue for routine histology (highest priority), flow cytometry (RPMI tissue culture media), and cytogenetics (sterile tissue culture media). The pieces for flow cytometry and cytogenetics should be about 0.5 cm and taken from non-necrotic areas.
8. If there is enough tissue, submit the first block in zinc buffered formalin (Z-Fix) and the rest in formalin; if not enough, omit the Z-Fix and submit in formalin.
9. Store any remaining tissue in formalin.
10. If there is not enough tissue for all studies, consult the pathologist assigned to the case. The priority should be formalin, imprints, flow cytometry, cytogenetics, and z-fixative. The priority may vary depending on the preference of the pathologist assigned to the case.
11. Do not overpack the cassette(s) with tissue. Tissue sections should not be more than 1.5 x 1.0 x 0.2 cm.
12. In the pathology report, include a detailed description of the special studies that are submitted related to the lymphoma workup protocol.
13. The Z-Fix block and all formalin blocks should be fixed for a **minimum** of 6-8 hours. Longer fixation is preferable and if grossed earlier in the day should be placed on the latest available large processor. If grossed later in the day and 6-8 hours of fixation cannot be attained, hold the specimen to be processed next day, making sure the case is assigned to the appropriate pathologist.



1. **References**

Hruban RH, Westra, WH, Phelps, PH, & Isacson, C: Surgical Pathology Dissection An Illustrated Guide, New York, NY, Springer-Verlag Inc., 1996.

Lester, SC: Manual of Surgical Pathology, New York, NY, Churchill

Livingstone, 2001.

1. **Authorized Reviewers**

* Medical Director, Anatomic Pathology
* Chief, Surgical Pathology

##### Document Control

##### Location of Master: Master electronic file stored on the Beaumont Laboratory server under

S:\AP\_Grossing\_Manual

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##### Document History

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| Signature | Date | **Revision #** |  | **Related Documents**  **Reviewed/**  **Updated** |
| Prepared by: *Anne Tranchida, PA(ASCP)* | 1/20/2009 | **r00** |  |  |
| Approved by: *Ali-Reza Armin, MD* | 10/24/2009 | **r00** |  |  |
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| *Ali-Reza Armin, MD* | 10/20/2011 | **r00** |  |  |
| *Ali-Reza Armin,MD* | 10/03/2013 | **r00** |  |  |
| *Zhenhong H. Qu, MD* | 04/11/2015 | **r00** |  |  |
| *Kurt Bernacki, MD* | 10/27/2017 | **r00** |  |  |
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| *Kurt Bernacki, MD* | 10/20/2021 | **r01** |  |  |
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