

# Anatomic Pathology Specimen Collection

## ROUTINE

Tissue specimens for pathology are generally submitted in 10% neutral buffered formalin. Never allow the specimen to air dry; place in fixative as soon as possible. Certain studies such as cultures, flow cytometry, cytogenetics, etc., may require fresh tissue. If there is any doubt about how the specimen should be handled, DO NOT place the specimen in fixative (see #2 below).

- A. Remember to properly label the container, not the lid. Ensure the container lid is affixed properly and tightened. Seal the specimen container inside a specimen bag. Place the paperwork in the outside pocket. Submit only one patient's specimen(s) and requisition per bag.
- B. If there is any doubt about how the specimen should be handled, DO NOT place the specimen in any fixative. Wrap the specimen in a saline moistened gauze pad. Store it in an airtight container in the refrigerator. Contact Pathology for handling instructions.

## FROZEN SECTIONS

- A. Notify the Pathology Office or page the pathologist on service.
- B. Submit specimens, fresh, in a labeled container. Do not place specimens in fixative.
- C. Deliver specimens and completed requisition directly to lab personnel. Never leave a specimen for frozen section diagnosis on the counter unattended.

## STAT/RUSH SPECIMENS

- A. Notify the pathologist on the surgical service. After hours, contact the anatomic pathologist on-call.
- B. On the requisition indicate "STAT" or "Rush" and include a beeper number or telephone number to which results can be called.

## SPECIAL SPECIMEN HANDLING PROCEDURES

LABORATORY/PATHOLOGY SHOULD BE CONTACTED WHEN SPECIMENS REQUIRE SPECIAL HANDLING. SPECIMENS THAT MAY REQUIRE SPECIAL PROCESSING INCLUDE:

- Bone marrow biopsies
- Breast biopsies
- Specimens needing cytogenetic testing
- Heart biopsies
- Kidney biopsies
- Nerve/muscle biopsies
- Testicular biopsy for assessment of spermatogenesis
- Tissue for electron microscopy (EM)
- Flow cytometry specimens
- Lymph node or other tissue biopsies for evaluation for lymphoma
- Tissues for culture
- Tissues for gout
- Tissues for copper or iron analysis

# Electron Microscopy Testing

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## **Immunofluorescence, Immunoperoxidase, FISH or ISH**

Specimens to be tested by these methods require special handling. Please contact your providing laboratory.

### ***For questions call:***

Central Laboratory EM, M-F, 8am-4pm, 801-507-2171

Utah Valley, M-F, 8am-4pm, 801-357-2364

### ***Weekends and after hours:***

Call the on-call anatomic pathologist or the Central Laboratory EM Technician on-call pager, 801-249-4230

# Flow Cytometry Testing

## Leukemia/Lymphoma/Phenotyping

**Test Code: FLOWLL** - This test is for immunophenotypic evaluation of suspected leukemias and lymphomas including CLL. This test is for new diagnoses and for follow up evaluations for minimal residual disease. The panel markers evaluated will be determined by reported clinical indication and at pathologist discretion.

| Specimen Type                                    | Acceptable Specimen                                    | Transport Temperature   | Paper Work (required)   |
|--|--|---|---|
| Bone Marrow Bx<br>Peripheral Blood<br>Body Fluid | Sodium Heparin (48 hrs) *<br>or EDTA (24 hrs)          | Ambient   | PB & BM Bx Requisition<br>***   |
| Lymph Node<br>Other Hematopoietic Tissue         | RPMI *<br>Saline                                       | Ambient<br>**   | Histology Requisition<br>***  |
| NOTE:  | * Preferred: Anticoagulant or<br>tissue culture medium | ** Frozen or fixed tissues<br>(e.g. formalin) are not<br>acceptable | *** Clinical History, Differential<br>Diagnosis, Account Number are<br>required |

**Test code: CD3CD4** - CD3 with CD4 testing is to evaluate HIV infected individuals, to monitor immune system function, for initiating prophylaxis for opportunistic infections, and to monitor PML in MS patients (T cells).

| Specimen Type                   | Acceptable Specimen                        | Transport Temperature | Paper Work (required)                |
|---------------------------------|--|-----------------------|--------------------------------------|
| Peripheral Blood<br>Body Fluids | Sodium Heparin (48 hrs) *<br>EDTA (24 hrs) | Ambient               | Concurrent WBC % Lymph %<br>required |

**Test code: CD4CD8** - CD4 with CD8 testing is similar to CD3/CD4 testing but also includes a CD4:CD8 ratio (T cells).

| Specimen Type                   | Acceptable Specimen                        | Transport Temperature | Paper Work (required)                |
|---------------------------------|--|-----------------------|--------------------------------------|
| Peripheral Blood<br>Body Fluids | Sodium Heparin (48 hrs) *<br>EDTA (24 hrs) | Ambient               | Concurrent WBC % Lymph %<br>required |

**Test code: FLOWBL** - CD4 with CD8 testing is similar to CD3 /CD4 testing but also includes a CD4:CD8 ratio (T cells) on BAL fluid to help characterize sarcoidosis.

| Specimen Type | Acceptable Specimen | Transport Temperature | Paper Work (required) |
|---------------|---------------------|-----------------------|-----------------------|
| BAL           | BAL fluid           | Refrigerated          | None required         |

# Flow Cytometry Testing

**Test code: IMMDEF** - Immunodeficiency testing is recommended for evaluating immunodeficiency in adults. It characterizes the different subsets of lymphocytes (T cells, B cells, and NK cells).

| Specimen Type                   | Acceptable Specimen                        | Transport Temperature | Paper Work (required)                |
|---------------------------------|--|-----------------------|--------------------------------------|
| Peripheral Blood<br>Body Fluids | Sodium Heparin (48 hrs) *<br>EDTA (24 hrs) | Ambient               | Concurrent WBC % Lymph %<br>required |

**Test code: TLYM** - T cell lymphocyte testing is ordered for acute organ rejection episodes for patients being treated with OKT3 or ATGAM.

| Specimen Type                   | Acceptable Specimen                        | Transport Temperature | Paper Work (required)                |
|---------------------------------|--|-----------------------|--------------------------------------|
| Peripheral Blood<br>Body Fluids | Sodium Heparin (48 hrs) *<br>EDTA (24 hrs) | Ambient               | Concurrent WBC % Lymph %<br>required |

**Test code: STEM** - Stem cell testing monitors CD34 positive stem cells from peripheral blood for stem cell transplants.

| Specimen Type     | Acceptable Specimen | Transport Temperature | Paper Work (required)                |
|-------------------|---------------------|-----------------------|--------------------------------------|
| Peripheral Blood  | EDTA (within 4 hrs) | Ambient               | Concurrent WBC % Lymph %<br>required |
| Apheresis Product |                     | Ambient               | Concurrent WBC % Lymph %<br>required |

**Test code: BCELLP** - B cell panel is for monitoring patients on Rituximab (anti-CD20) therapy.

| Specimen Type                   | Acceptable Specimen                        | Transport Temperature | Paper Work (required)                |
|---------------------------------|--|-----------------------|--------------------------------------|
| Peripheral Blood<br>Body Fluids | Sodium Heparin (48 hrs) *<br>EDTA (24 hrs) | Ambient               | Concurrent WBC % Lymph %<br>required |

**Test code: B24HLA**: The presence of the HLA-B27 antigen is strongly associated with ankylosing spondylitis and related disorders.

| Specimen Type    | Acceptable Specimen                        | Transport Temperature | Paper Work (required) |
|------------------|--|-----------------------|-----------------------|
| Peripheral Blood | Sodium Heparin (48 hrs) *<br>EDTA (24 hrs) | Ambient               | None Required         |

\*Preferred: Anticoagulant or tissue culture medium

Please call Flow Cytometry with any questions, **801-507-2276** or **801-507-2217**.

# Anatomic Pathology

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The following information for Pathology tissue specimens does not apply to pediatric specimens. Please call the Primary Children's Pathology Office for proper handling and submission of pediatric specimens, M-F, 8am-5pm, 801-662-2150.

## CONTACT INFORMATION

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|-------------------------------|--|
| Central Region Pathology      | 801-507-7970                           |
| Logan Regional Hospital       | 435-716-5203                           |
| Cedar City Hospital           | 435-868-5090                           |
| Dixie Regional Medical Center | 435-251-2208                           |
| Utah Valley Hospital          | 801-357-2364                           |
| McKay-Dee Hospital            | 801-387-7338, after hours 801-387-7366 |