PETERSON LABORATORY SERVICES, P.A.

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I. GENERAL INFORMATION

Pathologists **Peggy S. Peterson, DO;** **Susan L. Speaks, PhD, MD; Tarek A. Salem**	**539-5363**
Supervisor, Histo/Anatomic Laboratory	**539-5363 (Ext. 139)**
Supervisor, Cytopathology **Erin DeYoung**	**539-5363 (Ext. 168)**

II. EXTENT OF SERVICES

Surgical Pathology is that part of anatomic pathology concerned with the study of tissue and organ samples removed from patients, either by biopsy or through a surgical procedure, in an attempt to obtain diagnosis of a lesion or disease. The pathologist is therefore able to advise the attending physician as to the nature of the disease, the prognosis and the need for additional sampling or exploration.

III. SURGICAL PATHOLOGY

Hours of Operation

The Surgical Pathology Laboratory and Office is open from 8:00 a.m. to 5:00 p.m., Monday through Friday, excluding major holidays. For assistance after hours and/or on weekends, the pathologist on call can be reached through the answering service, (800) 876-5522 or (785) 539-5363.

IV. IMPORTANCE OF APPROPRIATE SPECIMEN COLLECTION AND HANDLING PROCEDURES

A. To ensure that hospital departments and outside sources submitting specimens to the surgical pathology laboratory follow established methods to guard against clerical and/or processing errors.

B. To ensure collection, handling and transport of all specimens is consistent in maintaining tissue integrity and proper patient identification.

C. To provide the pathologists and pathology assistants with pertinent clinical and historical information to aid in the dissection and pathologic diagnosis.

SURGICAL PATHOLOGY REQUISITION FORM

All specimens submitted to the surgical pathology laboratory must be accompanied by a complete, accurate and legible requisition. The requisition MUST contain the following information:

A. Patient's name plate (addressograph), or if hand written, the patient's first and last name

B. Patient's hospital identification number (for hospital admissions), encounter number and/or medical record number

C. Patient's date of birth

D. Date and time specimen was collected

E. Physician's first and last name

F. Additional physician's name/s to receive copies of pathology report. Please include first and last name, address or fax number if result is to be faxed.

G. Clinical information, including clinical history and pre/post-operative diagnosis

H. Specimen source (site and side of body)

I. Location where specimen was collected

J. Billing information, including diagnosis code or "signs and symptoms"

SPECIAL CONSIDERATIONS

It is helpful to include pager/cell numbers if you wish to be contacted with results or a fax number if you wish the report faxed to your office. The reports are also available by internet access for those who request such a service. Internet reporting for clinicians may be set-up by calling (785) 539-5363. Press "5" or dial 152. Please ask for Brandi Butler, Client Representative.

If the specimen is infectious, please note the infection on the requisition. Only surgical and cytology specimens collected by licensed health care providers and/or authorized by law enforcement officers will be accepted for processing in the histology/pathology laboratory.

SPECIMEN LABELING

Specimen containers MUST be labeled with the following information:

A. Patient's first and last name

B. Patient's medical record number and/or hospital number

C. Specimen source to include site and side of body

D. Physician's name

E. Date specimen collected

NOTE: This information may be handwritten or on a generated label attached to the side of the container (not the lid). When each of multiple specimens is to be examined and

diagnosed individually, each specimen must be submitted in a separate, appropriately labeled and identified container.

PACKAGING THE ROUTINE SPECIMEN

Universal precautions are to be exercised in handling and transporting surgical pathology specimens.

A. Except as noted under "Specimens Requiring Special Handling," specimens should be placed in appropriately-sized, tightly sealed, approved containers with ratio of 10% formalin to tissue of at least 10:1.

B. Rinse large specimens with water before placing in formalin. Excess blood or other body fluids dilute formalin's fixative properties.

C. Each container should be labeled with a biohazard/formalin warning label

D. The specimen container should be placed inside a secondary container (i.e. biopsy bag) prior to delivery to the laboratory.

E. The specimen requisition must accompany each specimen, packaged to arrive clean and legible.

NOTE: Proper and timely fixation is a critical step in tissue preparation for diagnosis. The importance of proper fixation cannot be overemphasized. If your facility does not have a supply of formalin, it may be ordered through Peterson Laboratory Services, (785-539-5363, extension 152).

Large specimens (example: placentas, breasts, bowels, kidneys) absorb formalin very slowly. Please refrigerate these specimens after the fixative has been added. Maintain refrigeration until specimen pickup. Refrigeration is particularly critical if the gross exam will be delayed. Cold preservation minimizes autolytic changes which occur at room temperature in large specimens.

Be certain that small specimens are immersed in the formalin. If a specimen adheres to the underside of the lid or side of the container, it may dry out and/or remain unfixed.

Refer to the "Special Handling" section of this manual for processing lymph nodes, bone marrow samples, etc.

SUPPLIES FOR SURGICAL PATHOLOGY

<u>Formalin-filled specimen bottles</u>

- 20 ml HistoPak 10% formalin container
- 40 ml HistoPak 10% formalin container
- 60 ml HistoPak 10% formalin container

<u>Formalin Storage containers</u>

- 5 G formalin "Carboy" containers
- 2.9 G formalin "Carboy" containers

Empty Specimen Transport Containers

- Biopsy bags * Biopsy containers
  - Small * 120 mL * 1000 mL
  - Medium * 240 mL * 64 oz
  - Large * 500 mL * 174 oz

Requisition Forms

SUBMISSION OF SURGICAL SPECIMENS FOR PATHOLOGY EXAM

All surgically removed specimens must be submitted to the pathology laboratory for gross, microscopic evaluation and result report except as noted below.

On the order of the surgeon, the following tissue specimens may be exempted from microscopic examination. These specimens may be discarded or sent to pathology for GROSS ONLY examination. The final decision as to whether a "GROSS ONLY" specimen will be examined microscopically will rest with the pathologist. If the specimen appears abnormal, or if there are unusual clinical features present, the specimen may be examined microscopically.

1. Hardware of any kind
2. Foreign bodies
3. Teeth
4. Therapeutic radioactive sources
5. Normal infant foreskin
6. Tonsils and adenoids collected from patients under the age 14
7. Hernia sacs
8. Bone debridement tissue
9. Tissue for post-plastic procedures

SPECIMEN DELIVERY AND SPECIAL CONSIDERATIONS

Routine Specimens

Routine specimens may be brought directly to the facility laboratory and placed in the surgical/anatomic tray designated for Peterson Laboratory Services. Pick-up times vary depending on location and contracted arrangements.

Every effort should be made to maintain a steady flow to the laboratory. Specimen accumulation compromises tissue integrity, increases the risk of medical error and delays result reports. Special arrangement can be made for those specimens needing immediate attention during after hours.

Specimens too large for routine containers (i.e. limbs) should be double-bagged in the large red biohazard bags and placed in a ridge container. Label the inner bag with

patient's name, hospital number and source of specimen. The specimen should be refrigerated until pick-up.

Frozen Sections

The frozen section, which is performed intraoperatively, is one of the most important procedures that the pathologist performs. When effectively utilized, the frozen section can influence the course of an operation. The purposes of a frozen section are:

1) To establish the presence and nature of a lesion
2) To determine the adequacy of surgical margins
3) To establish whether the tissue obtained contains diagnosable material (even if the exact diagnosis cannot be made on the frozen sample) or whether additional sampling is indicated.

The indication and limitations of frozen section diagnosis vary from organ to organ. Frozen sections may also be performed on tissue sampled from a physician's office, radiology or any other area where the surgeon has a need for a rapid diagnosis. At times, a pathologist may render a gross diagnosis to the operating surgeon for the same purpose. Doing so is considered an operative consult and is charged as such.

All frozen sections are to be scheduled before the procedure. To arrange a frozen section (or if you have questions), please call the Histology/Pathology Department, (785) 539-5363, extension 141. After-hours frozen sections will be handled through the responsible pathologist on-call.

NOTE: All frozen section specimens transported to Peterson Laboratory Services are to be placed fresh (without formalin) in a specimen container labeled with the patient's name, facility number, specimen name and site/side of body.

Any sutures or clips denoting anatomical orientation need to be clearly noted. Specimen requisitions need to be complete as stated above and include O.R. suite and phone number to render frozen section diagnosis to the operating surgeon. When taking a specimen to Peterson Laboratory Services for a "frozen section" you MUST hand it to a pathologist or an employee.

Please inform the staff member that the specimen is a frozen section and the facility from which it originates. The Histology/Pathology Department is located in Building B on the lower level adjacent to the elevator.

SPECIMENS REQUIRING SPECIAL HANDLING

Several types of specimens require special handling and should be submitted to the pathology laboratory **fresh** (without fixative) and in a sterile container. Specimens are transported without fixative to allow special testing if necessary.

These specimens may include:

- Lymph nodes for lymphoma
- Any specimen samples for cytogenetics (i.e. products of conception)
- Lung resection specimens

- Biopsies of tumor with unknown primaries
- Urinary calculi – do not place in formalin, submit dry for analysis
- Extremities (legs, arms, hands) – submit in two red biohazard bags placed in a rigid container big enough to fit the entire specimen (ex. Cardboard box, biohazard container, etc.), taking care not to contaminate environment with blood. Keep the specimen refrigerated if unable to transport immediately. The extremity must be accompanied by a Disposal Form, signed by the patient.
- Fetus or placental tissue for cytogenetics (see Special Procedure)
- Skeletal muscle biopsy for myopathy or neuropathy (see Special Procedure)
- Skin biopsy for immunofluorescence – place in special fixative (Zeus) see special procedure
- Peripheral nerve biopsy
- Liver for quantitative copper or iron – place in 10% formalin unless otherwise directed.

When planning many of the above listed procedures, it is advisable to discuss the case with the pathologist so that appropriate arrangements may be made in advance. The specimens may be brought to Peterson Laboratory or the surgeon may request the pathologist review the specimen on-site. To make arrangement for special procedures during regular hours, please call (785) 539-5363 and ask for the pathologist assigned to clinical services. For your reference, Peterson Laboratory Services distributes a list of pathologist assignments to all hospital laboratories on a quarterly basis. After hours, please contact the pathologist on-call.

BONE MARROW BIOPSIES AND ASPIRATES

Please schedule the collection of bone marrow samples to arrive at Peterson Laboratory Services as early in the day as possible. Many bone marrow biopsy cases include flow cytometry, cytogenetics or other special studies that are forwarded to partner laboratories via Federal Express. Late afternoon procedures (arriving to Peterson Laboratory Services after 2:00 p.m.) may miss shipping deadlines and lose viability for the special studies.

If the specimen will be sent for special studies and out-of-town courier service is needed, please call PLS, extension "0." If possible, please let us know 24 hours in advance so that we may arrange the service.

If you wish Peterson Laboratory to perform the bone marrow biopsy, the pathologist assigned to clinical pathology will perform the procedure. Please call Melissa, (800) 876-5522 or 785-539-5363, extension 141 to schedule a pathologist. The preferred time of collection is 9:00 a.m.

Specimen Requirements:

Unstained slides prepared from spicules from a bone marrow aspiration (Generally 4-10 slides)

Bone marrow cell clot (button) in container of 10% formalin

Bone marrow core biopsy in container of 10% formalin, if applicable

1-2 Stained peripheral blood smear slides

Sodium heparin tube(s) for flow cytometry and/or cytogenetics, if applicable

Results of CBC performed within previous 24 hours

PLS requisition and patient H&P listing current diagnosis

Procedure:

Hint: Pre-label slides and blood tubes before the procedure begins

1. The same day bone marrow is to be collected, make 1-2 peripheral blood smears from blood drawn in an EDTA (purple top) tube.
2. Accompany the physician to the room where the sample will be collected.
3. Physician should aspirate at least 1 mL marrow, if possible, for aspirate smears (see Item 5).
4. If flow cytometry and/or other special studies will be ordered, collect 5 ml from marrow, if possible, and proceed to Option 1 or Option 2 below:

   Option 1: Draw ½ cc of sodium heparin into a syringe, then aspirate marrow into the syringe.

   Option 2: Draw marrow into sterile syringe and quickly transfer at least 4 cc into sodium heparin tube.

5. Using syringe containing marrow collected by physician:

   Option 1: Express marrow into EDTA tube and mix well. Create slides later in laboratory with technique outlined in Item 6 (Aspirate smears). Collect specimen for cell block as outlined in Item 7 (Clot).

   Option 2: Marrow clots quickly, work fast. Express marrow from syringe onto mirror/glass immediately and prepare slides as outlined in Item 6. Depending upon quantity of marrow in the syringe, some of the syringe contents may also be used for Item 7.

6. Pick off the spicules (particles) of marrow that remain on the mirror/glass slide after slanting the mirror/glass slide to remove most of the blood. Make slides by either the squash-pull or wedge method.
7. Put remaining marrow from mirror/glass slide (as well as from syringe if applicable) into the formalin filled, labeled container or bottle to be sent to Peterson Laboratory Services.
8. Ensure each slide is labeled, in pencil, with the patients name and date.

9. Place labeled peripheral smears and bone marrow smears in slide holders. Include a copy of the most recent patient CBC results. Assemble all collected materials/specimens in one bag, and transport to Peterson Laboratory Services.

BREAST BIOPSIES

Routine breast biopsies not requiring frozen section evaluation of margins are placed in 10% formalin with a ratio of formalin to tissue of at least 10:1.

Per American Society of Clinical Oncology (ASCO) and the College of American Pathologists (CAP), specific pre-analytic and analytic variables that can affect test results are required to be recorded on the requisition so the pathologists are able to result out per published guidelines i.e. record the time the specimen was removed from the patient and the time the specimen was placed in preservative. This information can be put on the requisition in the "Fixation Time" section or Peterson Laboratory can provide labels for you to put on the specimen with the required documentation.

As of now, this requirement is for breast tissue only. In the future, the pathologists at Peterson Laboratory foresee it being a requirement on all biopsy specimens.

Breast Biopsy with Mammography Localization

Localizing breast masses and calcifications through radiographic means aids the surgeon in early detection of breast carcinomas. After the suspicious area is removed from the breast, it is taken to the Radiology Department for x-ray imaging. Specific areas of concern are marked with thin wire probes.

After the films are developed (and if the surgeon does not request a frozen section), the formalin-fixed specimen along with copies of the developed films are transported to Peterson Laboratory. It is imperative that copies of the specimen radiograph accompany the specimen to the Pathology Department. The radiographs are utilized by the pathologist as a means of identifying and localizing the area in question for microscopic evaluation. If an original radiographic image is sent, it will be promptly returned.

Mastectomy

Please indicate the type of mastectomy performed (simple, partial, modified radical or radical) on the requisition. The notation should be made under "Contents of Each Container," following the appropriate container number.

FETUS

A live birth is defined by law as "the complete expulsion or extraction from its mother of a product of human conception, irrespective of the duration of pregnancy, which after such expulsion or extraction, breathes or shows any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta attached."

A pre-viable infant is one who, because of gestational age, has minimal expectations of survival even with the best neonatal facilities and personnel (live-born fetuses rarely survive before 24 weeks gestation).

The weight of the infant is not a factor in differentiating between live birth and stillbirth. An infant who weighs 350 grams or less who has a heart beat or shows any other signs of life as defined above, is considered a live birth.

The obstetrician is to be consulted about use of intrapartal fetal monitoring. The obstetrician and pediatrician are to be consulted about resuscitative measures that are to be taken. Only a physician can pronounce an infant's death. The nurse may chart only "apparent ceasing of respirations and cardiac activity."

PROCEDURE FOR LIVE BIRTH (REGARDLESS OF WEIGHT):

A. Care of the infant – ideally rendered by a nursery nurse (the final three activities may be carried out after death).
   1. Prior to delivery, ask the Obstetrician if a Pediatrician needs to be called and clarify which intrapartum monitoring and resuscitative and supportive measures are to be taken
   2. Reasonable comfort measures should always be taken; i.e. wrap the infant in a warm blanket and hold or place on warmer
   3. Monitor signs of life, their decline and point of cessation
   4. Prepare identification bands for the infant
   5. Obtain footprints on glossy white
   6. Weigh and measure

B. Provide emotional support to parents
   1. Carry out activities that will help to create a memory of the infant for the parents (see respective hospital Pre-Viable birth Policy and Procedure)
   2. Arrange for a social work case management consultation
   3. Offer to arrange for, or perform baptism (see respective hospital policy)

C. Make a patient chart for the infant to consist of the following:
   1. Summary sheet. Call admission desk and have infant admitted, just as for any live birth.
   2. Physician Order Sheet. The physician will need to use a Physician Order Sheet to document the event of the birth and the fact of death.
   3. Copy of the Labor and Delivery Summary Sheet with data about the infant completed in its entirety.
   4. Newborn Identification Sheet with infant identification numbers, footprints and the mother's finger print.
   5. Nurses Notes which document the following:
      a. Time of birth
      b. Specific signs of life – heart rate, respiratory effort, movement
      c. Care rendered: e.g. wrapped in warm blanket and given to parents to hold or placed on infant warmer, free flow oxygen provided

d. Progression in decline of signs of life
e. Physician notifications and/or presence
f. Parent interaction with infant
g. "Apparent cessation of signs of life"
h. Weight and length
i. General condition of infant, observed abnormalities
j. Notification of social work case management personnel
k. Parent's decision relative to disposal of the body
l. Time body was sent to laboratory

D. Documentation

1. Complete a Certificate of Live Birth, just as for a full term infant.
2. Certificate of Death must be completed by the physician for an infant disposed of by the parent/s. Bodies sent to a mortuary do not require a Certificate of Death. The Certificate of Death should be handwritten and completed as fully as possible. The hospital medical records department will type the official certificate, obtain physician signature and mail the certificate to the KDHE Office of Vital Statistics.
3. Peterson Laboratory Service Anatomic Pathology requisition form
4. Record of Death form.
5. Patient chart for infant
6. Delivery log entry

E. Disposition of the body

1. In all cases the body must be examined by a pathologist prior to disposal
   a. Place the body in a labeled plastic bag with formalin. If the parents plan to bury the infant themselves, check with pathology personnel to see if formalin may be omitted.
   b. Complete a Peterson Laboratory Anatomic Pathology requisition
   c. Deliver body and requisition to the hospital laboratory

E. Final disposition options

1. Peterson Laboratory Services cannot dispose of a live birth fetus, regardless of weight. The parents must request disposal of the body, or may choose to use a mortuary for burial or cremation. A Record of Death form must be signed by the parents specifying the name of the funeral home.
2. Upon completion of testing, parents may take possession of the body and make their own burial arrangements.

POLICY:

A stillborn (fetal death) is defined as "any complete expulsion or extraction from its mother of a product of human conception the weight of which is in excess of 350 grams,

irrespective of the duration of pregnancy, which is not a live birth." (A 350 gram fetus is approximately 20-22 weeks gestation, 10 inches long and 11 2/3 ounces in weight).

PROCEDURE FOR STILLBIRTH:

Less than 350 grams or less than 20 weeks

A. The products of conception weighing 350 grams or less are classified as tissue under current state law and may be disposed of by one of the following options:
   1. At the discretion of the hospital with the approval of the parents
   2. The parents may choose to use a funeral home for burial or cremation
   3. The parents may also take possession of the products of conception and make burial arrangements without the services of a funeral home

B. The products of conception may be examined by a pathologist. The examination must be ordered by the obstetrician and noted on the mother's patient chart. The products of conception will be double bagged using biohazard bags, covered with formalin and labeled as "products of conception." If the parents are considering personal burial arrangements, call Peterson Laboratory Services to see if formalin can be omitted. Deliver the specimen to the hospital laboratory for transport to Peterson Laboratory Services. **DO NOT USE FORMALIN IF GENETIC STUDIES (I.E. CHROMSOMAL ANALYSIS) ARE ORDERED.**

C. Complete the following forms
   1. Peterson Laboratory Services Anatomic Pathology requisition. If the parents are planning personal burial arrangements, note on the requisition and request the pathologist exam be completed STAT.
   2. Labor & Delivery Summary
   3. Record of Stillbirth/Neonatal Death
   4. If the fetus is intact, a Release of Fetus For Pathological Exam should be completed and included with the Peterson Laboratory Services Anatomic Pathology Requisition.

More than 350 grams/ 20 weeks – Classified as a Reportable Birth

A. Care of the infant – ideally rendered by a nursery nurse
   1. Prior to delivery, assign the mother to a private room for postpartum care
   2. Parents should be encouraged to become involved in planning for labor and delivery, and they should be reassured that they can alter the plan at any time. Being involved can lend a feeling of control in an uncontrollable situation.
   3. Inform the mother and father of post-birth options before active labor begins so that they can begin to think about what they would like to do regarding seeing and holding the baby, naming the baby and baptism.
   4. The nurse caring for the mother during labor should assume the responsibility for receiving the baby at the time of birth. The baby should be handled with the same care and respect as it would have received had the baby been born live.

5. Prepare identification bands for the infant
6. Obtain footprints on glossy white
7. Weigh and measure
8. Fill out a crib card
9. Clip a lock of hair, if possible, and place in a small zip-lock bag.
10. Wrap baby in a warmed blanket when the parents are ready to view/hold the baby.
11. The length of time the body may be held without refrigeration will depend on its condition at birth. The pathologist (if an autopsy has been ordered) or funeral director should be notified if the parents wish to postpone viewing the baby for more than 1-2 hours. Even after refrigeration the baby can be returned to the parents.
12. If no autopsy is ordered and after the parents have viewed the baby, place the blanket-wrapped body in double bagged biohazard bags and refrigerate. Do not use formalin.

B. Provide emotional support to parents

4. Carry out activities that will help to create a memory of the infant for the parents (reference your respective hospital's policies and procedures)
5. Arrange for a social work case management consultation
6. Offer to arrange for, or perform baptism (reference your respective hospital's policy and procedures)

C. Paperwork

1. Complete "Record of Stillbirth/Neonatal Death." Make a copy for the mother's patient chart, a copy for the mortuary and a copy for the pathologist if a pathology examination is ordered. The form will be completed and signed by the person receiving the body.
2. Complete the "Certificate of Stillbirth." Contact your hospital's Health Information Management department.
3. Complete the Labor and Delivery Summary sheet with data about the infant completed in its entirety.
4. Delivery Log entry
5. Identify patient problems and planned nursing interventions
6. Complete all other paperwork as for all postpartum patients

LUNG – OPEN BIOPSY

Care must be taken not to compress the specimen during handling by either surgical or laboratory personnel. A specimen of fresh, inflated lung tissue should be sent to the laboratory on moist gauze, in a sterile container. Please do not immerse the specimen in saline.

MUSCLE BIOPSIES

Tissue obtained for the diagnosis of neuromuscular diseases requires special handling. Typically, separate samples for electron microscopy, light microscopy and special histochemical staining are required. Properly performed, and with clinical correlation, diseases of skeletal muscle can be categorized with greater precision than previously obtainable.

Specimen Collection and Handling:

1. Schedule the biopsy with Peterson Laboratory at least 24 hours prior to surgery.
2. The biopsy site should be a site that is clinically affected, but not severely atrophic or previously needled for electromyography. Avoid fascia and fat.
3. Select muscle bundles approximately 3 cm long x 0.5 cm in diameter.
4. Do not infiltrate muscle with local anesthetic. Avoid trauma or stretching during exercise.
5. Remove at least one additional segment in a similar fashion. Cover muscle biopsies with saline moistened gauze. DO NOT immerse in saline solution.
6. Place the specimen in a sterile transport container labeled with the patient's name, Date of Birth, and site of excision.
7. Call laboratory immediately at (785) 539-5363 for pick-up.

RENAL BIOPSIES

Tissue obtained from biopsy of a native kidney is typically submitted for light microscopy, immunofluorescence and electron microscopy. Light and immunofluorescence testing, done in conjunction, give the best interpretative results.

Biopsies from a transplanted kidney may be submitted. The nephrologist performs these biopsies; however, assistance is available from the surgical pathology laboratory by calling (785) 539-5363, extension 141.

SPECIMEN COLLECTION AND HANDLING:

Biopsy specimens may be obtained by radiology guided percutaneous needle biopsy. A Pathologist will be present at the time of collection to determine if the specimen is adequate and glomeruli are present or if another sample is necessary. A CT Guide Biopsy sheet will be filled out by the Pathologist indicating Adequacy, number of cores placed in Formalin, and number of cores placed in Michel's.

NECESSARY FIXATIVES (Provided in the Arkana kit):

1. Formalin - Light microscopy and Electron microscopy - White top
2. Michel's Fixative - Immunofluorescence transport solution - Blue top

NOTE: All are stable at room temperature. Do not freeze or use dry ice.

METHODOLOGY:

1. Two Separate Cores: Place one in Formalin for Light microscopy and Electron microscopy studies. Place one in Michel's fixative for Immunofluorescence studies.

2. Single core/scant material: The core should either be divided in half for Light and Immunofluorescence or submitted entirely for Light Microscopy.

Note: The Pathologist will place the cores in the appropriate vials or instruct the Technician assisting with the procedure to do so.

PACKAGING FOR TRANSPORT TO ARKANA:

1. Receive the Nephropath shipping box containing the cores from Peterson Laboratory Services or directly from Arkana.
2. Fill out Arkana requisition and make a copy for your file.
4. Include the following in the shipping box: Vials containing cores, Arkana requisition, Patient clinical history, and Patient Demographic sheet.
5. Fill out the provided Nephropath Air bill and secure to the provided FedEx package.
6. Place shipping box into FedEx package.
7. Place FedEx package in FedEx pickup box for pickup.
8. Forward a Peterson Laboratory requisition to be accessioned.

SKIN

Vesiculobullous diseases of the skin require the submission of a sample for light microscopy and immunofluorescence. Please call (785) 539-5363, Histology Department. You will be assisted in obtaining the appropriate media.

LYMPH NODES

Unless otherwise indicated (i.e. culture, immunoperoxidase and molecular studies) lymph nodes may be placed in 10% formalin. If submitting fresh and sterile, please transport to the pathology laboratory as soon as possible. All cases of suspected lymphoma should be submitted fresh for cytometric evaluation. If transport is delayed, please refrigerate promptly.

INFECTIOUS SPECIMENS

Specimens of an infectious nature should be placed in an adequate amount of formalin. The requisition form should indicate the nature of the infection.

RADIOACTIVE SPECIMENS

Radioactive specimens include some breast and lymph node excisions. To ensure that all radiation has dissipated before the specimen is processed, the specimen should be retained at the facility for a 48-hour period after the specimen is removed.

Place the specimen in an appropriately-sized container with sufficient formalin. Place the container in a secondary, 175 oz. container. Label the outside of the container with the date the specimen is ready for transport to Peterson Laboratory.

MEDICAL LEGAL CASES

Medical legal specimens may include-but are not limited to-breast implants, hardware and bullets. Surgical pathology documentation pertaining to medical legal cases should be clearly marked as such. To maintain "chain of custody" of the specimen, O.R. staff should transport the medical legal specimen personally, and present the specimen to a Peterson Laboratory Services pathology department staff member. The specimen should be accompanied by the necessary surgical pathology requisition form as well as an accompanying Chain of Custody form. A pathology laboratory staff member will complete the Chain of Custody form with specimen details. A copy of the form will be returned to the hospital for the patient file.

FORMALIN SPILL CLEANUP PROCEDURE

Small spill (few ml)
Wear a lab coat and gloves. Wipe up the spill with paper toweling and dispose in a red biohazard trash bag. Wash your hands and forearms.

Moderate to large spill (one pint or less)
Only small spills of formalin may be cleaned up without respiratory protection, by qualified personnel.

1. Wear a lab coat and gloves with goggles if there is any chance of a splash
2. Remove any glass with forceps and dispose in a sharps container.
3. Use paper toweling to absorb the spill
4. Wash the spill site with a sponge and water
5. Discard the rinse water in a sink or toilet
6. Carefully check the spill area for leaks into crevices or onto absorbent materials
7. Contaminated items must be wrapped in airtight plastic bags to eliminate odors
8. Dispose of contaminated materials in an appropriate receptacle

After the spill has been cleaned, leave the area to minimize your exposure. The standing period will allow the formalin vapors to dissipate.

Large Spills
For spills greater than one gallon, secure the room containing the spill to minimize exposure. Immediately call HAZMAT at 1-785-357-3261. You will be prompted for your phone number.

SUMMARY

- Biopsy bottles are placed in an orange-striped biohazard bag and the accompanying requisition inserted in the outer pouch provided.
- Larger specimens are placed in an appropriately-sized biopsy bag, and then inserted in a larger biopsy bag with the requisition.
- Only one biopsy bag used in packaging the specimen need carry the required biohazard warning label. Biopsy bags are recycled for future use.

- Rinse large specimens with water before placing in formalin. Excess blood or other body fluids dilute formalin's fixative properties.
- Indicate type of mastectomy performed (simple, partial, modified radical or radical) on the requisition under "Contents of Each Container."
- If biopsy imaging with localizing wire is performed, please send a copy of film with specimen.
- Highest specimen quality is achieved by maintaining the flow of specimens from surgery to the facility laboratory or other pickup site.