ASSESSMENT

- Conduct an assessment of specimen management needs that begins when the need for obtaining a specimen is identified; include
  - personnel to be notified
  - requirements for specimen collection and handling
  - method of transfer
  - requirements for containment
  - method of preservation
  - transport needs
  - disposition of the specimen
  - documentation

- Contract with a third party when on-site pathology, laboratory, or courier services are not available and the need for these services is identified.

- Before surgery, assess the cultural and personal preferences of the patient to determine special needs for collecting, handling, or disposing of specimens.

- Assess and plan specimen management among surgical team members during the preoperative briefing for the operative or other invasive procedure.

- Identify and confirm the sites of specimens to be collected.

*Conducting an assessment that begins when the need for obtaining a specimen is identified may help to improve efficiency and ensure identified needs are met.*

USING PHOTOGRAPHS FOR SITE IDENTIFICATION

- When using photographs for site identification of dermatologic lesion specimens:
  - Circle the biopsy site with a surgical marker before taking the photograph to help distinguish the biopsy site from other cutaneous lesions in the biopsy site area.
  - Use photographs that are in focus and taken from a distance that allows for accurate identification of the biopsy site.
  - Take close up photographs if helpful for identifying nearby cutaneous lesions or skin surface changes in the biopsy site area.
  - Take additional photographs from a greater distance for identification of anatomic landmarks.
  - Include anatomic landmarks such as the lip, ear, nose, or eyebrow, or a ruler or other measuring device showing the distance to the anatomical landmarks.
  - Label the photographs and display them in the procedure room.

**Accurate preoperative identification of the site from which specimens are to be collected may help prevent wrong site surgery.**
BREAST SPECIMENS

- Collect and handle breast specimens in a manner that protects and preserves the integrity of the specimen.
- Collect and handle breast specimens in a manner that ensures the time between excision and fixation is less than one hour.
- Keep excised breast specimens moist until transfer from the sterile field, and do not place them on dry, absorbent surfaces or materials.
- Record the times of excision and fixation of breast cancer specimens.

Specimens of breast tissue to be examined for cancer should be collected and handled in a manner that preserves the molecular and genetic signatures of the specimen. Long delays between excision and fixation of the specimen may result in a decreased ability to detect breast biomarkers in samples.

AMPUTATED DIGITS

- Preoperatively:
  - Dress the wound with sterile saline-moistened gauze.
  - Gently wrap the amputated digit in saline-moistened gauze and place it into an impervious lidded or sealable container.
  - Place the sealed container in a bag of ice water, keeping warm ischemic time to a minimum.
  - Replace the ice and water mixture every four hours or sooner as needed to maintain a target temperature of 39.2° F ± 3.6° F (4° C ± 2° C).

- Intraoperatively:
  - Fill a sterile irrigation basin with ice.
  - Cover the basin with a sterile plastic adhesive drape to provide a barrier.
  - Place a moist, sterile towel on top of the plastic barrier to the unsterile ice.
  - Prep the amputated digit and place it on the moist towel for preliminary debridement and dissection.

- Postoperatively:
  - Check the temperature of the replanted digit every hour by taping a temperature probe to the pulp of the replanted digit.
  - Notify the surgeon if the temperature drops more than 3.6° F (2° C) from the previous reading.
  - Monitor the replanted digit for engorgement.

Amputated digits to be reimplanted should be collected and handled in a manner that protects and preserves the integrity of the specimen and increases the potential for replantation survival.
AMPUTATED LIMBS

- Handle the limb as gently as possible to avoid crushing or contaminating the tissue.
- Retain any fragments of tissue to provide tissue for skin, nerve, or bone grafting.
- Wrap the limb in sterile gauze moistened with saline, then wrap the limb again in plastic and place it in an insulating chest containing crushed ice and water.
- Prevent direct contact of the limb with ice to minimize cell damage that may hinder replantation.
- Cannulate the most proximal artery of the cooled limb with an 18-gauge cannula, infusing 1 L of tissue perfusion fluid at a temperature of 50° F (10° C) and 120 cm hydrostatic pressure.
- Leave the infusion running continuously to help ensure a complete washout of stagnant blood from the amputated limb.

*Functional recovery of the replanted limb is dependent on reduced ischemia time and rapid revascularization. Cooling of the amputated limb is beneficial for maintaining optimal muscle viability.*

FORENSIC SPECIMENS

- Don personal protective equipment and handle all potential evidence with gloved hands.
- Keep evidence from each wound separate.
- Cut along the seams or around bullet or stab wound holes when removing clothing from the patient.
- Collect, preserve, and secure fabric or other debris removed from the wound.
- Contain and document physical evidence, such as pills or other items found in clothing.
- Handle clothing as little as possible and avoid shaking clothing.
- Collect and secure the transfer sheet from the preoperative stretcher.
- Do not handle bullets with metal instruments and use instruments with rubber shods if possible.
- Handle bullets, bullet fragments, knives, or other projectiles or penetrating devices as little as possible and do not wipe them.
- Place rinsed bullets, bullet fragments, knives, or other projectiles or penetrating devices in a nonmetal container and sealed evidence envelope.
- Place collected body fluids and tissue into dry containers and preserve them according to the facility or health care organization’s policy and procedure.
- Place each item into a separate designated and sealed envelope or paper bag labeled with the patient’s identification, collection date and time, and name of the collector.
- Submit all evidence collected according to local and state law enforcement regulations.
- Complete the documentation to establish the chain of custody and the identification of persons in possession of the evidence from the point of evidence removal to the point of evidence examination.
- Document informational evidence and, if possible, use photographs to document wounds and other potential evidence.

*Collect and handle forensic specimens in a manner that preserves and protects the condition of the evidence and verifies that the evidence has been in secure possession at all times.*
EXPLANTED ORTHOPEDIC HARDWARE AND MEDICAL DEVICES

• Collect, handle, decontaminate, label, package, and document explanted orthopedic hardware to be returned to the patient according to the facility or health care organization policies and procedures.

• Report explanted medical devices that are subject to medical device tracking regulation to the manufacturer.

• Report deaths related to an implanted medical device to both the US Food and Drug Administration (FDA) and the manufacturer.

• Report serious injury related to an implanted medical device to the device manufacturer.

Hospitals and other health care facilities that implant medical devices are considered final distributors. Final distributors are subject to medical device tracking requirements and are responsible for providing information to the manufacturer about explanted devices.

TRANSFER AND CONTAINMENT

• Use forceps or other instruments to place radioactive specimens that have been removed from the patient into sealed containers.

• When a radioactive seed is retrieved, place the seed immediately in a sealed specimen container and label the container with
  - patient and specimen identifiers
  - the date and time the specimen was collected
  - the name of the isotope

• Document on the pathology requisition slip the presence of a radioactive seed and also communicate this verbally to pathology personnel at the time of specimen delivery.

Occupational doses of radiation must be maintained as low as is reasonable achievable. Labeling requirements are dependent on the amount of radioactive material in the specimen.

RADIOACTIVE SPECIMENS

• Collect and handle radioactive specimens according to facility or health care organization policy and procedure and local, state, and federal regulations.

• Use standard precautions when handling radioactive specimens.

• Ensure containers are leak proof, puncture resistant, and of the correct size to fully secure the specimen and preservative fluids.

• Pass specimens off the sterile field as soon as possible.

• Secure, identify, and monitor specimens kept on the sterile field before transfer.

• Verify patient and specimen identification before transfer of specimens from the sterile field.

• Use a “write down, read back” technique when verbally verifying the specimen with the surgeon.

• Do not crush, twist, or otherwise damage the integrity of the tissue during the transfer process.

• Contain and label the specimen after transfer from the sterile field.

Containment of the specimen should be completed in a manner that protects and secures the specimen and prevents exposure of health care personnel to blood, body fluids, or other potentially infectious materials.
PRESERVATION

- Confirm the use of preservatives or chemical additives for tissue preservation with the physician. Alternatives to formalin may be used for tissue fixation or preservation.

- Dispense and store formalin in an area other than the OR or procedure room.

- In locations where formalin is used,
  - post signs warning of formaldehyde use
  - have eyewash stations available within the immediate area
  - have ventilation systems with adequate capacity to maintain levels below the permissible exposure limits

- Wear personal protective equipment including face and eye shields, gloves, and other protective garments when handling formalin.

- Fully immerse specimens in a ratio of fixative volume to specimen volume determined by the pathologist or receiving pathology laboratory personnel.

- Dispose of specimens and chemicals used for preservation of specimens according to local, state, and federal regulations.

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LABELING

- Confirm identification of the patient using two unique identifiers (eg, patient name and medical record number) at the time the specimen is removed from the patient and placed into the container, according to facility or health care organization policy.

- Confirm specimen identification verbally between the surgeon and the perioperative RN circulator, using a “read back” verification method.

- Confirm and document specimen identification; include
  - facility or health care organization-defined unique patient identifier
  - originating source of the specimen including laterality, if applicable
  - type of tissue
  - clinical diagnosis
  - additional pertinent clinical information

- Affix identification labels to the container not the lid.

- Label specimens to communicate chemical preservative and biohazard information.

- Confirm the specimen identification and labeling with surgical team members during the debriefing at the end of the operative or other invasive procedure. Include in the confirmation
  - visual confirmation that the specimen is in the container
  - verification that the patient information on the label and requisition are correct and legible
  - verification that the number and type of specimens are correct, including laterality as applicable
  - verification that the specimens have been correctly fixed, as applicable
  - confirmation of other pertinent information

- Misidentification of a specimen, its margins, or other information (location of suture tags) could result in errors, a delay in diagnosis or treatment, or the need for additional procedures.

Preserve specimens in a manner that protects the integrity of the specimen and prevents exposure of health care personnel to chemicals, blood, body fluids, or other potentially infectious materials.
DISPOSITION OF SPECIMENS

• Develop policies and procedures for
  - reporting pathology results to the physician
  - verifying that laboratory test or pathology report results are added to the patient’s record

• Include the following in documentation related to specimen management:
  - patient identification
  - specimen identification
  - additional information pertinent to the specimen or source (location of suture tags)
  - pathology examination required (gross only, frozen section)
  - final disposition of tissue and explanted devices
  - requests for special handling (return of explanted orthopedic hardware)
  - physician identification and contact information
  - perioperative RN identification

Using “write down, read back” process to confirm the communication provided minimizes the risk of communication errors. Nursing activities related to specimen management should be documented in a manner consistent with facility or health care organization policies and procedures and regulatory and accrediting agency requirements.

Policies and procedures for disposition of specimens should be established in accordance with local, state, and federal regulations by a multidisciplinary team that includes pathology laboratory representatives, facility or health care organization physicians, and perioperative RNs.

TRANSPORT

• Verify the patient and specimen information with transport personnel at each point of exchange.

• Store specimens that will not be transported to the pathology laboratory immediately in a manner that maintains specimen integrity for examination.

• Maintain specimen temperature in temporary storage (refrigerator) or devices used for transport at a temperature established in accordance with local, state, and federal regulations and by a multidisciplinary team.

• Transport specimens in a manner that helps ensure confidentiality of personal health information and minimizes visibility of the specimen.

Specimens should be transported in a manner that protects the integrity of the specimen; prevents exposure of health care personnel to chemicals, blood, body fluids, or other potentially infectious materials; and maintains the confidentiality of protected patient information.

• Identify tissues or other specimens that require only gross identification or disposal
• Documenting removal and disposition of specimens that are excluded from submission to the pathologist for examination

DOCUMENTATION