



A. PURPOSE

To clarify the requirements for performing surgery.

B. GUIDELINES

Federal regulations specify the need for all individuals performing surgery on animals to be adequately trained. In addition, federal regulations specify where certain surgical procedures can occur. Surgical procedures performed on animals are classified non-survival or survival. Survival surgery is further classified as major or minor.

The IACUC and the Attending Veterinarian (or designee) are responsible for assessing surgical proficiency and approving all surgical facilities or locations. The Attending Veterinarian (or designee) is responsible for identifying surgery as major or minor, which may affect the training required and/or the surgical facility or location that can be used.

Surgical training

All individuals intending to perform surgery must complete the requirements listed below. Upon completion of all the required components, an individual is certified to perform approved surgical procedures without supervision.

- **General Aseptic Surgery Training:** All personnel performing surgery must complete and pass the online CITI course "Aseptic Surgery".
- **Species-specific Surgery Training:** Personnel must also complete species-specific surgery training before they can perform the surgical procedures approved in the IACUC protocol.
 - **Small animal (rodent, bat, bird, frog, etc.):**
 - All individuals performing rodent surgery must complete the General Rodent Surgical Training (GRST) course.
 - Hands on training in laboratory-specific surgical techniques is provided by the PI (or designee) or through the University Animal Care training program.
 - **Large animal (rabbit, ferret, cat, non-human primate, dog, pig, ruminant, horse, etc.):** UAC veterinary care staff must be involved in surgeries performed on regulated large animal species. The level of UAC veterinary involvement (surgical assistance, monitoring anesthesia, immediate availability for emergency care, etc.) is determined during the **required** pre-procedure planning and is dependent on the surgeon's experience level and proficiency.
- **Additional Training:** The need for this is assessed during the IACUC protocol/amendment review process, e.g. when a protocol amendment substantially changes the surgical procedures in the protocol. The IACUC and/or Attending Veterinarian (or designee) may also require retraining when a lack of understanding or insufficient training for approved surgical procedures is identified through other mechanisms.
- **Documentation of PI training:** Documentation of the surgical training provided by the PI laboratory to each individual surgeon must be maintained and available during IACUC inspections and post-approval monitoring visits. Surgical proficiency is assessed by the PI (or designee) and the IACUC post-approval monitoring program.
- **Exemptions:** DVMs, visiting scientists with extensive and documented animal surgery experience, and MDs with advanced training applicable to the surgical procedures being performed may request exemption from surgical training requirements. All exemption requests are reviewed by the Attending Veterinarian (or designee) prior to approval.



Surgical facilities or locations

Acceptable surgical facilities or locations are dependent on the species used and the type of surgery performed. In all cases, surgery must only occur in the facilities or locations approved by the IACUC and the Attending Veterinarian (or designee). As guidance, the IACUC generally approves the following locations by species:

Large animal species (rabbit, ferret, cat, dog, pig, ruminant, horse, non-human primate, etc.):

- Major survival surgical procedures must be conducted in rooms specifically dedicated as a surgical suite by the AV.
- Non-survival and minor survival surgical procedures must be conducted in a dedicated surgical suite, when possible. Exemptions to perform these categories of procedures elsewhere are only allowed if justified by the PI and approved by the IACUC and the Attending Veterinarian (or designee).

Small animal species (rodent, bat, bird, frog, etc.):

- Non-survival and major or minor survival surgery may be performed in an investigator laboratory. However, the location must conform to all applicable federal regulations and guidelines and is subject to IACUC pre-inspection prior to approval.

C. REFERENCES, MATERIALS, AND/OR ADDITIONAL INFORMATION

• DEFINITIONS:

- **Surgery:** A procedure that involves cutting into the body, suturing or otherwise physically changing or altering body tissues or organs.
 - **Survival surgery:** The animal is anesthetized, undergoes a major or minor surgical procedure and wakes from anesthesia. Anesthesia for a non-surgical procedure is not considered survival surgery.
 - **Major survival surgery:** This type of surgery penetrates and exposes a body cavity, produces a substantial impairment of physical or physiological function, or involves extensive tissue dissection or transection (e.g., laparotomy, thoracotomy).
 - **Minor survival surgery:** This type of surgery does not expose a body cavity and causes no or only temporary impairment (e.g., peripheral vessel cannulation, percutaneous biopsy, routine agricultural procedures).
 - **Non-survival surgery:** The animal is anesthetized, undergoes a major or minor surgical procedure and is euthanized without waking from anesthesia. Anesthesia for a non-surgical procedure, followed by immediate euthanasia while under anesthesia, is not considered non-survival surgery.
- **JUSTIFICATION:** The University of Arizona is registered as an animal research facility with the USDA, is PHS assured and accredited by the Association for Assessment and Accreditation of Laboratory Animal Care International (AAALAC).