Major and Minor Surgery:

Major survival surgery is defined as the penetration and exposure of a body cavity or the production of substantial impairment of physical or physiologic functions (such as laparotomy, thoracotomy, craniotomy, joint replacement, and limb amputation).

Minor survival surgery does not expose a body cavity and causes little or no physical impairment (for example, wound suturing, peripheral-vessel cannulation, routine farm-animal procedures such as castration, dehorning, and repair of prolapses, and most procedures routinely done on an "outpatient" basis in veterinary clinical practice). Minor procedures are often performed under less-stringent conditions than major procedures but still require aseptic technique and instruments and appropriate application of anesthesia and analgesia. Although laparoscopic procedures are often performed on an "outpatient" basis, appropriate aseptic technique is necessary if a body cavity is penetrated.

A. Multiple Major Surgical Procedures (General): Multiple major survival surgical procedures on a single animal are discouraged but may be permitted if scientifically justified by the user and approved by the IACUC. Please reference Guide for the Care and Use of Laboratory Animals, (National Research Council, 8th edition, 2011) for further help on this topic. (http://www.aaalac.org/resources/theguide.cfm)

1. Examples of acceptable justification for multiple surgeries include:
   a) the presence of related components of a research project,
   b) the conservation of scarce animal resources,
   c) clinical teaching purposes.

2. The principal investigator (PI) must provide clear documentation of the following items to the IACUC:
   a) the background literature, which adequately supports the need for multiple procedures and the potential significance of findings gleaned from these surgeries,
   b) the number of major surgeries proposed, which will be the absolute minimum required to obtain the necessary data,
c) a statement that the PI is committed to working closely with the veterinary staff to minimize the level of possible distress caused to the animal by each procedure.

B. **Major Mammalian Non-Rodent Survival Surgery:** Non-rodent survival surgery must be performed in the surgical suite in the local campus laboratory animal resource center, unless an exception is approved by the IACUC. Investigators must provide trained personnel to continuously observe the animal(s) until the time when the animals regain the righting reflex. Animals must be observed (and annotations made in the clinical record) for any complications that may arise for at least 5 days post-operatively (or longer if complications arise). All complications must be discussed immediately with the LARC veterinary staff. When external sutures, staples or clips are placed in an animal, they will be removed within 10-14 days of the surgery. Strict adherence to aseptic technique must be followed for all survival surgery procedures.

C. **Rodent Survival Surgery:** Survival surgery performed on rodents may be performed within a procedural laboratory instead of the laboratory animal resource center surgical suite. Investigators shall follow the guidelines for Survival Surgery in Rodents (Policy #8). Investigators must provide trained personnel to observe the animal(s) continuously, until the time when the animals regain the righting reflex.

D. **Multiple Major Surgical Procedures for Frogs:** Survival surgery to harvest oocytes is described in Frog Oocyte Harvest Policy (Policy #18).

E. **Use of Expired Materials:** Any use of expired materials must comply with the policy on Use of Non-pharmaceutical Grade Compounds (Policy #21).