



Institutional Animal Care and Use Committee

Policy on Multiple Surgical Procedures

Background

Both the AWA regulations (9 CFR, Part 2, Section 2.31(d)(1)(x)(A) and (B) and Animal Care policy #14) and the *Guide for the Care and Use of Laboratory Animals* (*Guide* p. 30,117) require that no animal assigned to a protocol be used for more than one major survival surgery unless the procedures are included within one protocol, are scientifically justified by the investigator, or are necessary for clinical reasons. Furthermore, the *Guide* states that regardless of classification, multiple surgeries on a single animal should be evaluated to determine their impact on the animal's well-being.

AWA regulations require that survival surgeries be performed using aseptic techniques, and in non-rodent species, the procedure must be done in a dedicated surgical facility. Investigators performing survival surgery must identify where this will take place. Individuals performing these procedures must be appropriately trained to perform them. Survival surgery can be either major or minor.

Major survival surgery penetrates and exposes a body cavity or produces substantial impairment of physical or physiological functions.

Minor survival surgery does not expose a major body cavity and causes little or no physical impairment. Examples include: wound suturing, percutaneous biopsy, lymph node biopsy, laparoscopic oocyte collection, and subcutaneous osmotic mini-pump implantation.

Multiple Surgical Procedures must be approved by the IACUC.

Policy

This policy applies to all research and teaching protocols at Oakland University that involve multiple surgical procedures. The following are points to consider when multiple surgical procedures are performed.

- Survival Surgery is a surgery from which the animal regains consciousness from anesthesia following the procedure.
- Multiple survival surgery is when more than one survival surgery (major or minor) is performed on a single animal.
 - Multiple major survival surgeries are permitted when essential components of a single research protocol in which other methods will not achieve the research goals. They must be scientifically justified by the principal investigator in the protocol and approved by the IACUC. Multiple major survival surgical procedures may be justified if they are related components of a research project, if they

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conserve scarce animal resources, or if they are needed for clinical reasons. Cost savings is not an adequate reason for performing multiple survival surgeries (*Guide* page 30).

- Justification must include an explanation of the need to have an animal undergo multiple major survival surgeries, a description of the procedure(s), the total number of surgeries an animal will undergo, the frequency of the procedure, the period of time between procedures, and the methods used to minimize pain and distress.
- It is recommended that the principal investigator provide references whenever possible.
- If the surgeries are clinically necessary for the health of the animal, then this determination must be made in consultation with the Attending Veterinarian.
- The number of survival surgeries must be limited to the minimum number to achieve the research objectives and must be determined with due consideration to minimizing pain and distress on any one animal. Note: Some procedures categorized as minor may induce substantial postoperative discomfort and should similarly be described and scientifically justified in the protocol if performed multiple times on one animal.
- If multiple major survival surgical procedures are approved by the IACUC, particular attention must be provided by the research staff to animal health and well-being through frequent and continuing evaluations, and the IACUC must evaluate outcomes of multiple surgical procedures.

References

1. *The Guide for the Care and Use of Laboratory Animals*, 8th ed., NRC, ILAR 2011.
2. Augusta University, IACUC Policy Multiple Surgical Procedures 2014.
3. Arizona State University, IACUC Guidelines for Multiple Surgical Procedures 2015.