

**University of Texas at Austin**

**Institutional Animal Care and Use Committee**

**IACUC Informational Document # 4.7**

|                       |                                   |         |     |
|-----------------------|-----------------------------------|---------|-----|
| TITLE                 | Multiple Major Survival Surgeries |         |     |
| Date of Last Revision | N/A                               | Version | 1.0 |

Multiple survival surgeries means that more than one survival surgery (major or minor) is performed on a single animal. Multiple major survival surgeries must be scientifically justified in an animal use protocol and approved by the IACUC.

|  | <b>Minor Survival Surgery</b>  | <b>Major Survival Surgery</b>   |
|--|--|---|
| <b>Definition (per <a href="#">the Guide, pg. 117</a>)</b> | Does not expose a body cavity and causes little or no physical impairment  | Penetrates and exposes a body cavity, produces substantial impairment of physical or physiologic functions, or involves extensive tissue dissection or transection  |
| <b>Examples</b>  | <ul style="list-style-type: none"> <li>Jugular catheterizations and other peripheral vascular cutdown procedures (not done to create injury)</li> <li>Rodent craniotomy with small burrs/drills to implant cannula or electrode (not create significant lesions)</li> <li>Castration</li> <li>Subcutaneous implantation of microchip, osmotic pump, hormone implants, tumor cells, etc.</li> <li>Intrathymic injections, mammary fat pad implantation</li> <li>Cranial implant repair</li> </ul> | <ul style="list-style-type: none"> <li>Peripheral vascular surgery or occlusion that leads to significant ischemic damage</li> <li>Peripheral nerve surgery that leads to paresis/paralysis of limbs, loss of bladder function, etc.</li> <li>Abdominal surgery to manipulate internal organs, vessels or nerves</li> <li>Primate and rabbit craniotomies</li> <li>Rodent craniotomy to create optical window or allow large array implantation</li> <li>Ovariectomy</li> <li>Surgical oocyte harvest</li> <li>Embryo transfer</li> <li>Abdominal implantation of transponder or osmotic pump</li> <li>Orthotopic tumor implantation in/on abdominal organs if surgical incision required</li> <li>Decerebration</li> <li>Lung or thymus surgery</li> <li>Traumatic brain injury</li> </ul> |

Laparoscopic surgeries and some procedures associated with neuroscience research (e.g., craniotomy, neurectomy) may be classified as major or minor surgery depending on their impact on the animal.

A veterinarian or the IACUC can assist with evaluating whether any procedure is deemed major or minor on a case-by-case basis ([the Guide, pg. 117-118](#)).

According to the Animal Welfare Act, no animal assigned to a proposal is to be used in more than one major survival surgery unless the multiple surgeries are required to meet the objective of a single animal study activity. If an animal must be used for more than one major survival surgery, justification must be provided in the animal use protocol and approved by the Institutional Animal Care and Use Committee (IACUC) ([AWA Section 2143\(a\)\(3\)\(D,E\)](#)).

However, an animal that has a major surgery as part of a facility's veterinary care program (unrelated to research), or as an emergency surgery, may still be used in a research proposal that requires a major survival surgery. An approved research proposal is not required for routine veterinary care or animal husbandry that involves surgery ([USDA Animal Care Resource Guide](#)).