

CONFIDENTIAL

MULTIPLE SURVIVAL SURGERIES

Basis:

NACLAR Guidelines 2022, pg 79

Animals may not be used in Multiple Survival Surgeries (MSS) unless:

- a. there is a scientific justification (e.g. related components of the same study) provided by the PI, and approved by the IACUC;
- b. the MSS is required for a routine veterinary procedure or to protect the health and well-being of the animal, as determined by the AV;
- c. under other special circumstances which have been approved by the IACUC; and
- d. the provisions of repeated use of animals in experiments as follow are not breached.
 - i. none of the procedures are likely to cause the animals pain or distress; or
 - ii. the second and subsequent studies are non-survival studies, or produce little or no pain or biological stress to the animals (e.g. modifying diet, taking a succession of blood samples, repeated non-invasive recording procedures
 - iii. animals that are used in more than one experiment must be permitted to recover fully from the first experiment before the subsequent experiments is performed.

Subsequent to approval of MSS, the IACUC should ensure that there is sufficient ongoing oversight of the project.

Guide for the Care and Use of Laboratory Animals, p. 30: multiple surgical procedures on a single animal should be evaluated to determine their impact on the animal's well-being. Multiple major surgical procedures on a single animal are acceptable only if they are (1) included in and essential components of a single research project or protocol, (2) scientifically justified by the investigator, or (3) necessary for clinical reasons. Conservation of scarce animal resources may justify the conduct of multiple major surgeries on a single animal, but the application of such a practice on a single animal used in separate protocols is discouraged and should be reviewed critically by the IACUC... If multiple survival surgery is approved, the IACUC should pay particular attention to animal well-being through continuing evaluation of outcomes. Cost savings alone is not an adequate reason for performing multiple major survival surgical procedures.

Guidelines:

When more than one surgical procedure is to be performed, the animal must have recovered to good general health before the next procedure. Every effort should be made to reduce the total number of procedures and the IACUC must be informed specifically, and provide approval, for more than one procedure. The number of survival surgeries performed must be limited to the minimum number necessary to achieve the research objectives and must be determined with due consideration for minimizing the pain and distress experienced by any one animal.

Whenever possible, all operative procedures should be done at one time to minimize postoperative discomfort and distress to the animal. Cost or convenience is not considered to be adequate justification for the conduct of multiple survival surgeries.

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Emergency multiple surgeries may be done to correct complications due to previous surgical procedures or as part of the process of providing veterinary care; however, these must be done in consultation with an CM veterinarian. Euthanasia should be considered as a humane alternative to surgical repair in these cases if the animal is in poor health or suffering pain or distress that cannot be alleviated.

Revision	Author	IACUC approval date
Last reviewed	Dr Foo Tet Wei, John	16 August 2013
P211.01. Reviewed to:	Dr Chew Li Li	3 January 2023
1. ensure policies are in compliance with the NACLAR Guidelines 2022 and the updated Animals and Birds (Care and Use of Animals for Scientific Purposes) Rules 2004; and	IACUC	
2. up-to-date with current practices		
Changes made under:		
1. "Basis" to update to "NACLAR Guidelines, 2022, pg 79...." and "Guide for the Care and Use of Laboratory Animals, p. 30...."; and		
2. "Guidelines" to update to "When more than one surgical procedure is to be performed, the animal must have recovered to good general health IACUC must be informed specifically, and provide approval, for more than one procedure."		