# NON-SURVIVAL SURGERY ON NON-RODENT MAMMALS

**1** **Policy statement**The intent of this policy is to provide guidelines on the performance of non-survival surgery on non-rodent mammals.

**2** **Definitions**

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| **Non-survival surgery** | The animal is euthanised before recovery from anaesthesia. |

**3** **Scope**

This policy applies to all protocols approved by NUS IACUC.

**4** **Guidelines**

4.1 Anaesthesia and surgery must be performed by competent staff with appropriate training and experience. Individuals must be appropriately trained to ensure that good surgical technique is practised e.g. gentle tissue handling, minimal dissection of tissue, appropriate use of instruments, and effective hemostasis. For all surgical procedures on non-rodent mammals, an intra-operative anaesthetic monitoring record must be kept and included with the animal's records. PIs should ensure that the records are kept and maintained for at least three years from the date of completion of the protocol.

4.2 Many factors influence the risk of intraoperative infection and/or sepsis. These include the duration of the procedure, degree of tissue trauma, surgical site, and the environment. Aseptic technique is recommended for non-survival procedures especially for surgeries of long duration. Aseptic technique includes appropriate preparation of the surgical field, use of sterilised instruments, sterile surgical gloves and gowns, head cover, and surgical masks.

4.3 Procedures which are identified as high-risk during protocol review, such as lengthy procedures or gastrointestinal surgery, will be assessed on a case-by-case basis. The IACUC will advise PIs in these instances:

- A clean uncluttered work area, away from break areas and out of the human traffic flow for the pre-procedure, procedure and post-procedure recovery. This can be the same or nearby area;
- A disinfected work surface using appropriate disinfectant. For non-survival surgery areas, at a minimum, alcohol should be used as a sole disinfection if necessary;
- Unexpired anesthetics and analgesics must be used. If volatile (inhaled) anesthetics are used, an appropriate scavenging system must also be used;
- Monitoring of depth of anesthesia with supplementation of anesthetic as necessary to maintain anesthesia;
- Clean lab coat, gown or scrub top, and gloves;
- Animals exposed to hazardous agents or animals with potential for zoonoses i.e. nonhuman primates, will require additional appropriate personal protective equipment;
- Sterile fluid should be used; and

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- Gloves should be changed between prepping the animal and starting surgery.

## 5. References

1. Guide for the Care and Use of Laboratory Animals. National Research Council, 2011.
2. Guidelines on the Care and Use of Animals for Scientific Purposes. National Advisory Committee for Laboratory Animal Research. 2022

## 6 Related documents/SOPs

1. CM SOP 201 Rodent Surgery
2. CM SOP 202 Non-Rodent Surgery (Pre-, Peri-, and Post-Operative Procedures)
3. CM SOP 204 Post operative care for large animals (survival) surgeries

| Revision | Author | IACUC approval date |
|---|---|---|
| Created | Dr Foo Tet Wei, John | 12 August 2013 |
| P212.01. Reviewed to:<br>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<br>2. up to date with current practices<br>Changes made to:<br>1. include "The animal is euthanized before recovery from anaesthesia" as definition of Non-survival surgery; and<br>2. updated to "Anaesthesia and surgery must be performed by competent staff with appropriate training and experience; and<br>3. add "For all surgical procedures on non-rodent mammals, an intra-operative anaesthetic monitoring record must be kept …….for at least three years from the completion of the protocol."; and<br>4. add "Aseptic technique is recommended for non-survival procedures ……preparation of the surgical field, use of sterilised instruments, sterile surgical gloves and gowns, head cover, and surgical masks." | Dr Chew Li Li<br>IACUC | 3 January 2023 |
| P212.02. Update policy format, reworded sections for clarity and corrected typographical and grammatical errors. | Designated IACUC reviewers and Dr Chew Li Li | 21 Apr 2025 |

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