

Humane Endpoints Policy

UCAR Approved 4/19/23

Purpose

The purpose of this policy is to establish standard humane endpoints that apply to all activities involving live animals at the University of Rochester, unless otherwise described and scientifically justified in the approved UCAR protocol.

Overview

The **Guide for the Care and Use of Laboratory Animals, 8th Edition** defines *humane endpoint* as “the point at which pain or distress in an experimental animal is prevented, terminated, or relieved.” UCAR expects researchers to consider and describe the potential for pain and distress in their studies and describe them in their protocols. The protocol must include precise definitions of the humane endpoints, their assessment criteria, frequency of observation, training of personnel, and the required intervention when endpoints are met. Studies with death as an endpoint (i.e., euthanasia is not scientifically permissible) are not approved by the UCAR unless this endpoint is scientifically justified in the animal use protocol. When considering a death-as-an-endpoint study, surrogates for imminent moribundity must be considered, and scientific justification must be provided if surrogate endpoints cannot be used.

Standard Euthanasia Criteria

Animals experiencing one or more of the criteria listed below must be euthanized unless otherwise described in the UCAR-approved protocol. Deviations from these standard euthanasia criteria or the endpoints outlined in the protocol are expected to be rare occurrences and must involve consultation with DCM veterinarians.

1. Prolonged inability to obtain food or water
 - a. UCAR recommends a proactive approach to supporting at-risk, frail animals by providing easily accessible, highly nutritious, soft diet (e.g. gels) before loss of body condition or dehydration occurs.
2. [Body condition score](#) <2 or >4 on a 5-point scale
3. Weight loss
 - a. In adults, compared to pre-study weight or age-matched controls:
 - i. >10% weight loss triggers increased monitoring and supportive care or other intervention
 - ii. >20% weight loss is a euthanasia endpoint
 - b. Juveniles: Failure to maintain normal growth weight trends for species and strain
4. Pain or distress that is unresponsive to treatment
 - a. General signs of pain/distress across species include: hunched/abnormal posture, guarding or lameness, unkempt appearance, reduced activity, dull mentation (mental activity), reduced food & water intake, social isolation, self-mutilation, aggression, vocalization, facial grimace, restlessness, and elevated heart rate & respiratory rate
 - b. Additional relevant species-specific indicators of pain should be outlined in the protocol
5. Moribund state (imminent death) characterized by lack of righting reflex, unresponsiveness, cold to touch
6. Respiratory distress
7. Tumor burden meeting endpoints based on the [Tumor Burden Scoring Policy](#)

References:

1. National Research Council. 2011. *Guide for the Care and Use of Laboratory Animals* (8th ed.). Washington, DC: The National Academies Press. <https://doi.org/10.17226/12910>.
2. National Research Council. 2009. *Recognition and Alleviation of Pain in Laboratory Animals*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/12526>.