



University of Michigan Policy for End-Stage Illness and Humane Endpoints

Compliance with all governing regulations involving humane care and use of animals in research is mandatory at the University of Michigan. Legal, ethical, and regulatory guidelines obligate all personnel involved with research protocols utilizing animals to ensure that animal pain, distress, and suffering is minimized. Therefore, the Institutional Animal Care & Use Committee (IACUC) highly discourages death-as-an endpoint studies.

The IACUC and the Unit for Laboratory Animal Medicine (ULAM) veterinary staff require investigators to humanely euthanize all identified moribund animals rather than allowing them to die spontaneously. Euthanasia methods must be in compliance with the current AVMA Guidelines on Euthanasia. If euthanasia prior to actual death would invalidate the experiment, investigators may receive IACUC approval after sound scientific and ethical justification is provided. Inconvenience is not reasonable justification.

The husbandry staff performs a health status check of all animals daily. However, investigators are obligated to make every effort to identify and humanely euthanize moribund animals. Once animals display moribund signs they must be euthanized by the end of the business day unless otherwise arranged with the ULAM veterinary staff.

Humane endpoints are criteria used to end experimental studies in individual animals in order to avoid or terminate unrelieved pain and/or distress. Once a humane endpoint is reached, the animal should be immediately euthanized or treated as outlined in the protocol.

End-stage illness is defined as signs of a debilitating physical state where death is imminent and treatment ineffectual. Animals exhibiting severe signs of morbidity or a moribund state would constitute end-stage illness. It is the responsibility of the investigative staff to monitor and assess the health status of their animals and to determine the stage of illness and agree to perform euthanasia when necessary. The following lists will aid investigators and laboratory personnel in identifying morbid and moribund animals. If there is any question or concern about judging the condition of animal subjects, please contact the ULAM veterinary staff immediately by calling (734) 764-0277.

To summarize, all investigators and laboratory personnel utilizing animals in research need to be cognizant of the well-being of their animals. The health and well-being of research animals should be monitored at least daily. If an animal is found moribund or has reached a humane endpoint, it must be treated or euthanized as outlined in the approved protocol. Alternatives to proposing death-as-an-endpoint studies are mandated except in specific circumstances where scientific and ethical justification is provided. Any questions or comments should be directed to the Animal Care & Use Office at (734) 763-8028.

References the following ULAM Guidelines: [*Tumor Monitoring System and End-Stage Illness Scoring System*](#)