Humane Experimental Endpoints

The Guide for Care and Use of Laboratory Animals (8th Edition) defines the humane endpoint as the point at which pain or distress in an experimental animal is prevented, terminated, or relieved. The use of humane endpoints contributes to refinement by providing an alternative to experimental endpoints that result in unrelieved or severe animal pain and distress, including death.

The PI, who has precise knowledge of both the objectives of the study and the proposed model, is required to identify, explain, and include a study endpoint that is both humane and scientifically sound. The PI is also required to define the criteria for humane intervention for the study, listing how often the animals will be monitored to evaluate if they have reached the humane endpoint, and provide information on training of personnel performing the assessment.

When evaluating humane endpoints, the following specific sequela should be considered:

1. The procedure should not interfere with the ability of the animal to ambulate, eat, drink, urinate and defecate.

2. The procedure should not result in a net weight loss of more than 20% of the body weight.

3. The procedure should be ended if the investigator has conclusive evidence that untreated organ failure has occurred, and the animal exhibits signs associated with the failure of the organ system.

4. Animals should be euthanatized if unrelated health conditions develop that make their experimental use of no value to the investigator.

5. Obvious signs of illness should serve as alternatives to death as an experimental endpoint.

The IACUC defines the moribund condition as a severely debilitated state that precedes imminent death. The use of death as an endpoint requires strong scientific justification in the Protocol and full committee review and approval by the IACUC.