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# Minor Surgery: How Much Is Too Much?

John Brown's research involved the study of lymph node activity as it related to inhaled allergens. He was specifically looking at macrophage-lymphocyte interactions. His standard procedure was to inject radiolabeled lymphocytes into a dog, expose the animal to various allergens, and then surgically remove one of the mandibular lymph nodes. Almost invariably, the dog would recover without incident. Dogs, with their relatively large lymph nodes, made an ideal model for Brown. Because the surgery was relatively easy, had never caused any adverse aftereffects, and did not invade a body cavity, the Great Eastern University IACUC did not classify it as a major surgical procedure. Brown would perform this procedure twice on any one dog, and then arrange for the dog's adoption.

Hearing about Brown's use of dogs, Steven Johnson, also of Great Eastern, approached Brown and asked him if he could have some of the dogs for his own studies after Brown was finished with them. Johnson's research also required two recovery surgical procedures. Both involved the removal of part of the pinna (ear), and of course, had IACUC approval. Brown was not enthused about this idea, so he asked the Attending Veterinarian (AV) for an opinion. The AV felt that the dogs had gone through enough, even though the surgeries were not considered "major" under existing regulations and guidelines. Johnson was not upset, and he offered to see that the dogs were put up for adoption after his study was completed. Even though the dogs would undergo a total of four surgical procedures, none of them was truly major, and if past history was any guideline, they would all recover without incident. Why, said Johnson, should you have to use more dogs than necessary?

To reach a final decision, Brown and Johnson agreed to present their arguments to the IACUC. How do you think the IACUC should resolve this problem?

## Ask for Clarification

Mary Ellen Goldberg, VMT

The question at hand is quite straightforward. Why should you have to use more dogs than necessary? However, there are several issues to address before the IACUC could give approval.

Even though the removal of mandibular lymph nodes would not be considered major surgery, it would be necessary to document that no adverse effects such as postoperative infection, drainage, or disfigurement have affected the dogs, and that in the process of the study each dog has not endured the burden of a lengthy recovery process. In addition, before the Committee allows Johnson to use these dogs, he should provide evidence, or at least a rationale, that the injection of radiolabeled cells, allergen exposure, and lymph node excision wouldn't affect the ear surgeries.

If Johnson was truly interested in reducing the number of dogs used for research, he could examine the possibility of combining both surgeries, the lymph node removal and the partial excision of the pinna, thereby eliminating the need for a recovery from four procedures.

Any personnel with experience in a veterinary practice would probably not see a problem with transferring the dogs from one protocol to another. Certain dogs, in their lifetime, typically undergo procedures ranging from cosmetic otoplasty (ear cropping), aural hematoma

repair, and amputation (partial or complete) due to injury or neoplasia and procedures such as partial or total ear canal ablation. All of these procedures are more invasive than the proposed study.

A note of interest for any IACUC would be to ascertain why neither Brown nor the AV was in favor of transferring the dogs to Johnson. Although neither would probably articulate the problem, there is the distinct possibility that one researcher didn't want to be associated with the other.

Regarding the issue of adoption, Carbone<sup>1</sup> offers insight into this policy for laboratory animals. He points out that "[b]oth the Animal Welfare Act and the *Guide for the Care and Use of Laboratory Animals* are silent on the topic", illustrating that no mandated laws have been applied to this topic. He shows that adoption programs are expensive and labor-intensive. The research institution has to be willing to accept both of these costs. At least one university on the internet includes on its website an animal adoption record requiring that users fill out a form and sign a waiver of legal liability for the university. A specific issue in this case would be for the IACUC, with input from the Office of Environmental Health and Safety, to determine if the dogs are good candidates for adoption despite their exposure to the radiolabeling agent.

In conclusion, with no additional information being provided apart from the situation presented, the IACUC would most likely decide that the dogs had gone through enough from the first study and decide in favor of Brown and the AV.

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### Reference

1. Carbone, L. Adoption of research animals. *AWIC Newslett.* 7 (1996/1997). <http://www.nal.usda.gov/awic/newsletters/v7n3/7n3carbo.htm>.