This study evaluated anesthetic death risk for 3546 dogs and cats. The relationship between anesthetic death and American Society of Anesthesiologists (ASA) physical classification status, species, age, nature of procedure, anesthetic protocol, and use of a combination morphine–bupivacaine epidural was analyzed. Induction regimens were placed into 4 categories: ketamine, thiopental, propofol, and other. Maintenance regimens included 2 groups of patients: those that received isoflurane and those that did not. The overall death rate was 1.35%, with rates in healthy animals (ASA status 1 or 2) at 0.12% and in sick animals at 2.90%, 7.58%, and 17.33% for ASA categories 3, 4, and 5, respectively. The main factor increasing the risk for anesthetic death was poor health. Species, age, and nature of procedure did not affect risk. Use of a combination morphine–bupivacaine epidural apparently increased the tendency for anesthetic death, although this finding was not statistically significant. Risk for anesthetic death at the study hospital was similar to that reported internationally. Patients with a high ASA status should be closely monitored by trained staff.

Commentary
This article was thoughtfully designed and the large case load is one of its strengths. The incidence of death for ASA 1 and 2 cases (0.12%) was similar to that in previous studies and continued to show a 10-fold increase over human anesthesia-related deaths. However, it was unclear why the authors excluded the 10 cases that were euthanized. Surprisingly, age did not increase likelihood for anesthetic death, but age is still a concern for anesthetists, as degenerative changes can occur with age in all organs, thus making general anesthesia more risky and complications more likely.—Paula F. Moon-Masat, DVM, DACVA

Source