Treating Feline Bronchial Disease
Management of idiopathic bronchial disease in cats is challenging. Oral glucocorticoid therapy is routinely used but may be contraindicated in some cats with certain concurrent illnesses. Further complicating the use of oral glucocorticoids is the difficulty in administration. On the other hand, inhalant glucocorticoids maximize local efficacy and minimize systemic bioavailability. In this randomized, crossover study, the authors compared the endocrine and immunologic effects of glucocorticoids in 1 group of cats receiving 3 different treatment protocols separated by a 1-month washout period. Cats received placebo, oral glucocorticoids (prednisone 10 mg/day), and inhaled glucocorticoids (flunisolide 250 µg Q 12 H by means of a spacer). Drugs were administered for 14 days with samples collected before and after the treatment period. Oral glucocorticoids were shown to cause a mild-to-moderate increase in food intake. Significant differences between treatments were not found for serum immunoglobulin concentrations or cytokine profiles. Early-morning serum cortisol concentrations were lower with inhaled glucocorticoids than with placebo. Overall, there was no significant difference between pre- and posttreatment urine cortisol concentrations UC:C). However, a significant difference between pre- and posttreatment UC:C was noted with inhaled glucocorticoids. Peak cortisol concentrations of corticotrophin were lower when cats were receiving inhaled glucocorticoids but not when they were receiving placebo or oral glucocorticoids. A lower total percentage of T and B cells was found in the oral glucocorticoid group but not with inhaled glucocorticoids. In this study, inhaled glucocorticoids were found to suppress the hypothalamic-pituitary-adrenocortical axis (HPAA) but had little effect on the immune system.

COMMENTARY: This is a very interesting study, but with the small study population (only 6 healthy cats were studied) it is difficult to generalize this information to all cats. The research does provide evidence that inhaled glucocorticoids in healthy cats can suppress the HPAA, but the apparent effects on the adaptive immune system are minimal. This paper is worth reading if you are interested in learning about advanced tests that evaluate the immune system; however, it is unlikely that these tests will be utilized in clinical practice.—Chris Wong, DVM