Getting at the Root of Feline Tooth Problems
Multiple idiopathic root resorption (MIRR) is a rare but serious condition in humans that is similar to feline osteoclastic resorptive lesions (FORLs). Both MIRR and FORLs share such features as involvement of multiple teeth and subgingival resorption of the cementoenamel junction (CEJ) and alveolar bone. The etiopathogenesis is not clear for either disease. This study was done to establish changes in the surface microanatomy of the tooth in late-stage FORLs and to determine whether their location has a surface bias. The 22 teeth used in the study were extracted from 12 cats with advanced FORLs. The teeth were prepared for scanning electron microscopy studies to analyze the surface features of enamel and cementum. Resorption was seen in the coronal root at the CEJ in 95% of the teeth, and focal resorption of intact enamel was observed in 14% of teeth. The main lesion was on the buccal surface in 55% of the teeth. The presence of focal lesions at the CEJ suggests that this is where resorption starts and implies that local factors in the oral microenvironment play a role in the etiopathogenesis of this condition.

COMMENTARY: It has been estimated that as many as 75% of cats that present with dental disease have FORLs, but despite intense research we still don't know the cause or the best preventive recommendations. Because cats may provide a good animal model for a similar human disease, more avenues of research may soon become available.—Patricia Thomblison, DVM, MS