

## Constipation or Megacolon?

This study was conducted to establish a radiographic reference range for the diameter of the colon in normal cats and to assess whether a numeric cutoff value for colon diameter could be defined. Radiographs of 50 cats with no history of GI disease were evaluated to establish a normal reference range for radiographic diameter of the colon. Thirteen cats with constipation and 26 with megacolon were compared with normal cats to characterize the accuracy of the reference range and identify a cutoff for differentiating constipation from megacolon. All radiographs were laterolateral abdominal views that included the lumbar vertebrae, and the measured portion of colon was distended with feces in all cats. There was a significant difference between



abnormal and normal cats for maximum colon diameter, colon diameter at the cranial aspect of the pelvic inlet, and colon diameter ventral to L5. A ratio of maximal-colon diameter to L5 length <1.28 was proposed to be suggestive of a normal colon diameter; a ratio of 1.28:1.48 suggests constipation; and a ratio >1.48 is suggestive of megacolon. All cats with a maximal colon diameter >1.62 times the length of L5 had megacolon and subsequently underwent subtotal colectomy.

### Commentary

Diagnosing constipation and megacolon is important but should not be achieved by radiographs alone. History, examination findings, and response to treatment are

important factors in differentiating the diseases. Cats may have constipation that later progresses to megacolon, either from true disease progression or poor owner compliance in administering medications. Using the measurements from this paper, there is an overlap between patients with constipation and megacolon; the sensitivity (77%) and specificity (85%) are not very high. Therefore, radiographic measurement of the degree of colonic distention may not be an important criterion in making the diagnosis. However, it may be more helpful for the less-experienced clinician.—*Jean Reichle, DVM, MS, DACVR*

### Source

Radiographic diameter of the colon in normal and constipated cats with megacolon. Trevail T, Gunn-Moore D, Carrera I, et al. *VET RADIOL ULTRASOUN* 52:516-520, 2011.

## Managing Tumor Seeding

Tumor seeding, the local spread of viable tumor cells during a medical procedure, has been reported following surgery, biopsy, and image-guided fine-needle aspirations (FNA) or radiofrequency ablation of tumors. In animals, needle-tract seeding is most common for transitional cell carcinomas. Six months after placement of a cardiac pacemaker in a 7-year-old cairn terrier, thoracic radiographs revealed a mass in the left caudal lung lobe. Ultrasound-guided FNA revealed pulmonary carcinoma. The lung lobe was resected and no sign of metastases was found; pulmonary adenocarcinoma was confirmed via histopathology. Twelve months later, the dog was of decent health but the owner reported intermittent episodes of holding up the left forelimb and reluctance to use stairs. A mass was found on the left dorsal aspect of the thorax. Examination revealed mild left-

sided superficial cervical and axillary lymphadenopathy. Computed tomography-guided FNA of the mass was performed and cytology was consistent with pulmonary adenocarcinoma. The dog received palliative analgesic therapy, as surgical resection was not an option. The site of the mass corresponded exactly with the path of the needle during the original FNA. Twelve months later, the mass had enlarged and the dog has continued to receive analgesics.

### Commentary

A definitive diagnosis is essential for designing a cancer treatment protocol and is, with rare exception, required before chemotherapy or radiation therapy. However, for surgery patients, the timing can sometimes be flexible. A preoperative biopsy is indicated when the diagnosis will

help the surgeon plan definitive surgery. Ideally, preoperative biopsy should be performed so the biopsy tract can be surgically removed during the procedure. If this is not possible, the risk-benefit associated with preoperative biopsy should be carefully considered. If the result might not directly impact definitive surgery, it is reasonable to forgo the preoperative biopsy. All tissue removed during definitive surgery should be submitted for histopathology.—*Dennis Bailey, DVM, DACVIM (Oncology)*

### Source

Pulmonary adenocarcinoma seeding along a fine needle aspiration tract in a dog. Warren-Smith CMR, Roe K, de la Puerta B, et al. *VET REC* 169:181, 2011.

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