



Dr. Norman Ackerman



Dr. Norman Ackerman served the University of Florida, College of Veterinary Medicine with distinction as Professor of Radiology from 1979 to 1994. A concerned teacher of veterinary students and residents of all disciplines, Dr. Ackerman also reached the veterinary scientific community through his writing. His numerous clinically pertinent publications are still today a vital part of the veterinary literature; therefore, it is appropriate this site perpetuates Dr. Ackerman's dedication to teaching. This site is presented in recognition of Dr. Norman Ackerman and his contributions to the field of veterinary diagnostic imaging.

Sponsorship of the display supports the Dr. Norman Ackerman Memorial Fund, dedicated to the teaching of diagnostic imaging residents at the University of Florida College of Veterinary Medicine.

NORMAN ACKERMAN MEMORIAL

RADIOGRAPHY CASE CHALLENGE

- Abdominal series
- 7 years-old, female spayed, Domestic Shorthair cat

SIGNALMENT

- 7 years-old, female spayed, Domestic Shorthair cat
- History of chronic pancreatitis;
- Acute onset of vomiting
- You ordered abdominal radiographs



Right lateral

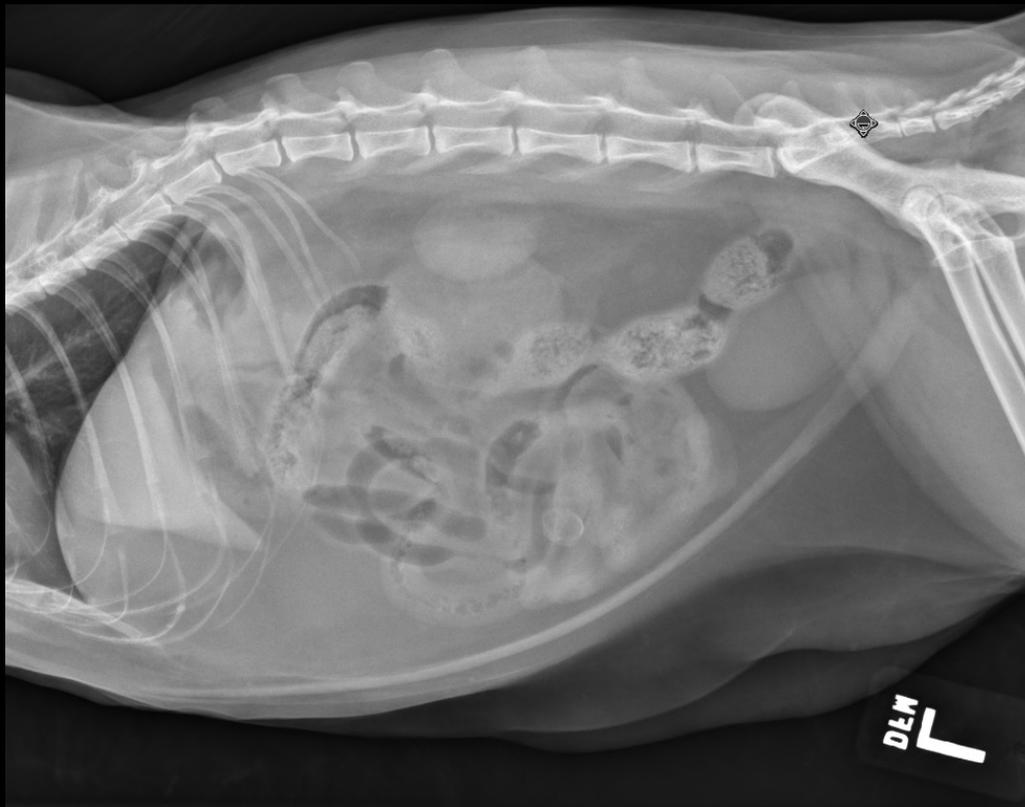


Left lateral



Ventrodorsal

What are your radiographic findings?



Radiographic findings

- The left kidney is mildly small, measuring approximately 2.1 times the length of the L2 vertebral body on the ventrodorsal projection, and has irregular margins.
- The right kidney is within normal limits for size and margination; however, a less than 2 mm, angular mineral opacity is present within the right renal pelvis.
- Within the left mid-ventral abdomen, only seen on the lateral projections, there is an approximately 1.2 cm in diameter, round, faint mineral opacity, with a central lucent region.
- Heterogenous soft tissue to mineral opaque material is seen within several small intestinal segments. The small intestines are normal for size.
- Incidentally, only 6 lumbar vertebral bodies are present, and there are multiple fused sacral and caudal vertebral segments.

Main radiographic findings

- The left kidney (LK) is mildly small, measuring approximately 2.1 times the length of the L2 vertebral body on the ventrodorsal projection, and has irregular margins.

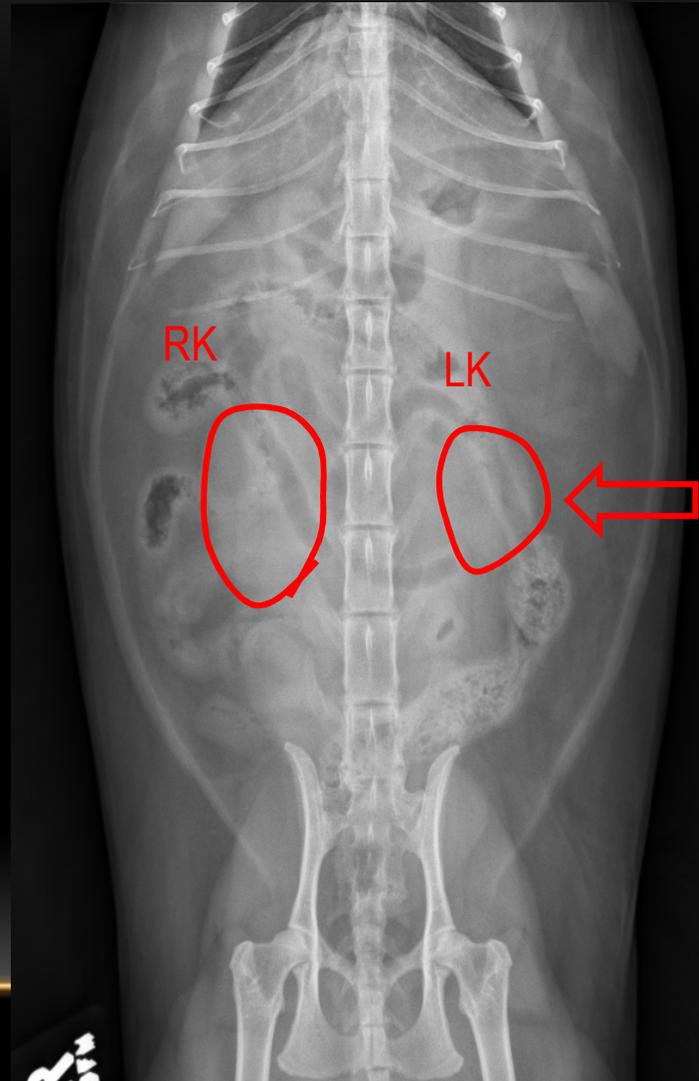


Main radiographic findings

- The left kidney (LK) is mildly small, measuring approximately 2.1 times the length of the L2 vertebral body on the ventrodorsal projection, and has irregular margins (arrow).

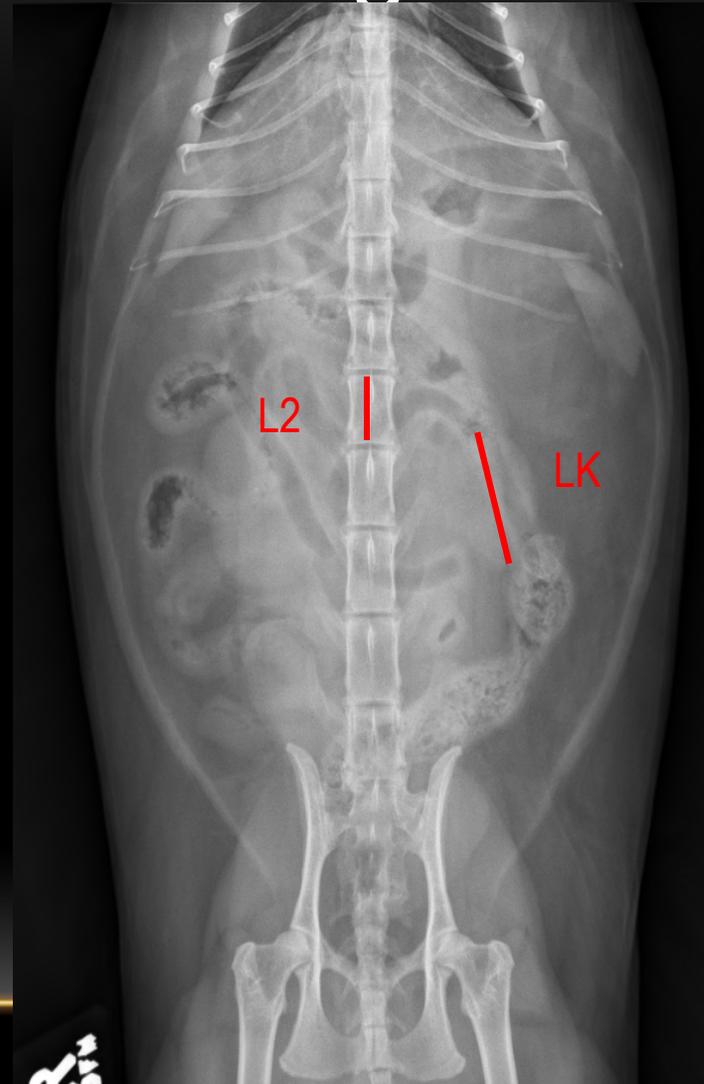
RK = right kidney

LK = Left kidney



Main radiographic findings

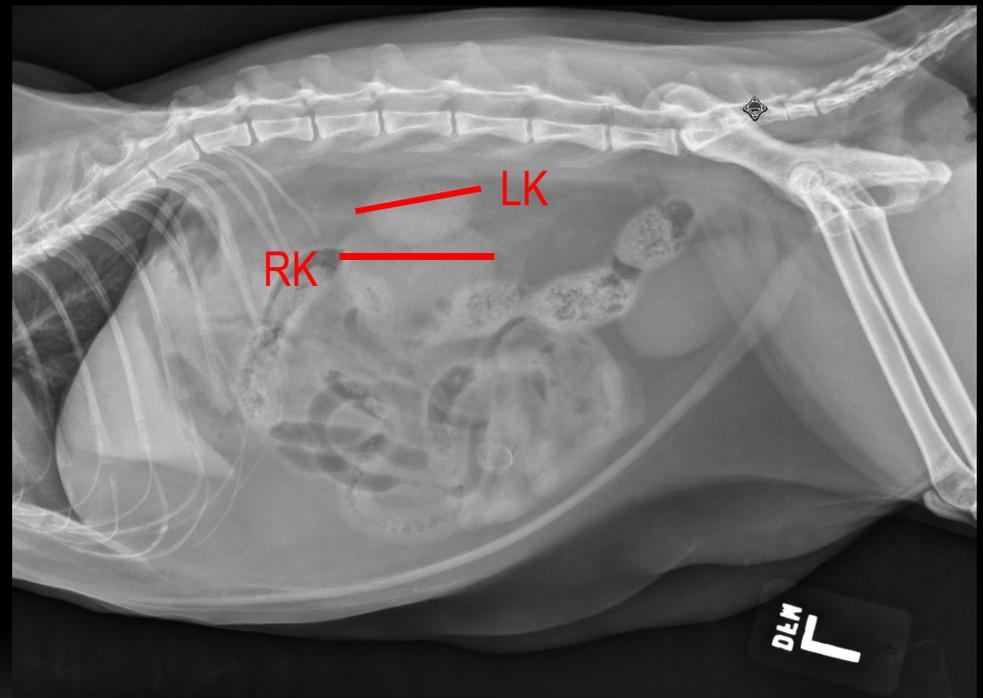
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Main radiographic findings

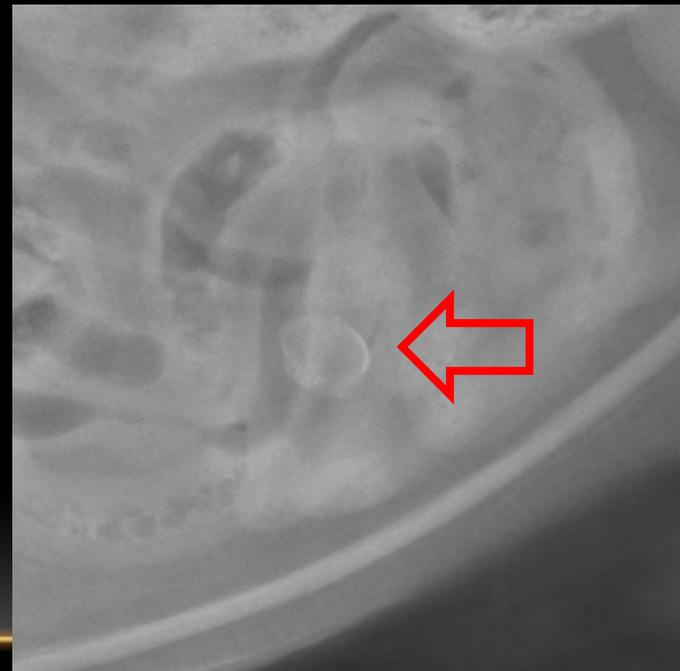
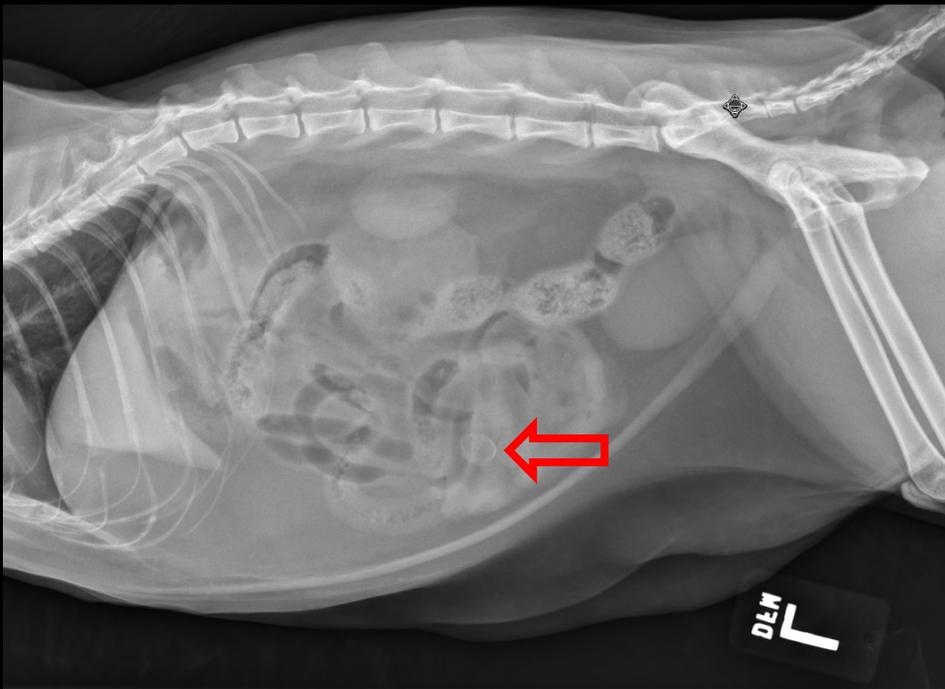
- The left kidney (LK) is mildly small, measuring approximately 2.1 times the length of the L2 vertebral body on the ventrodorsal projection, and has irregular margins.
- The renal asymmetry is also noted on the lateral projections

RK = right kidney
LK = Left kidney



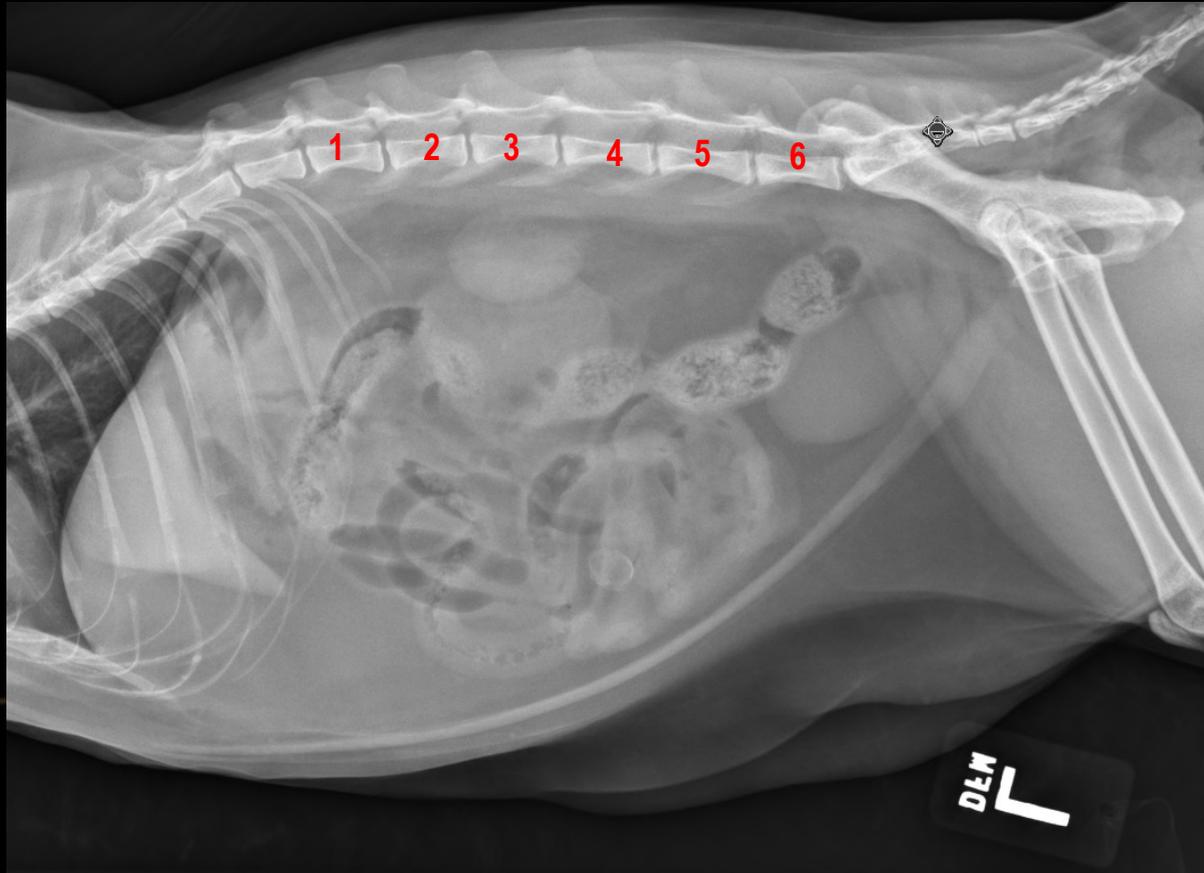
Main radiographic findings

- Within the left mid-ventral abdomen, only seen on the lateral projections, there is an approximately 1.2 cm in diameter, round, faint mineral opacity, with a central lucent region. (arrows).

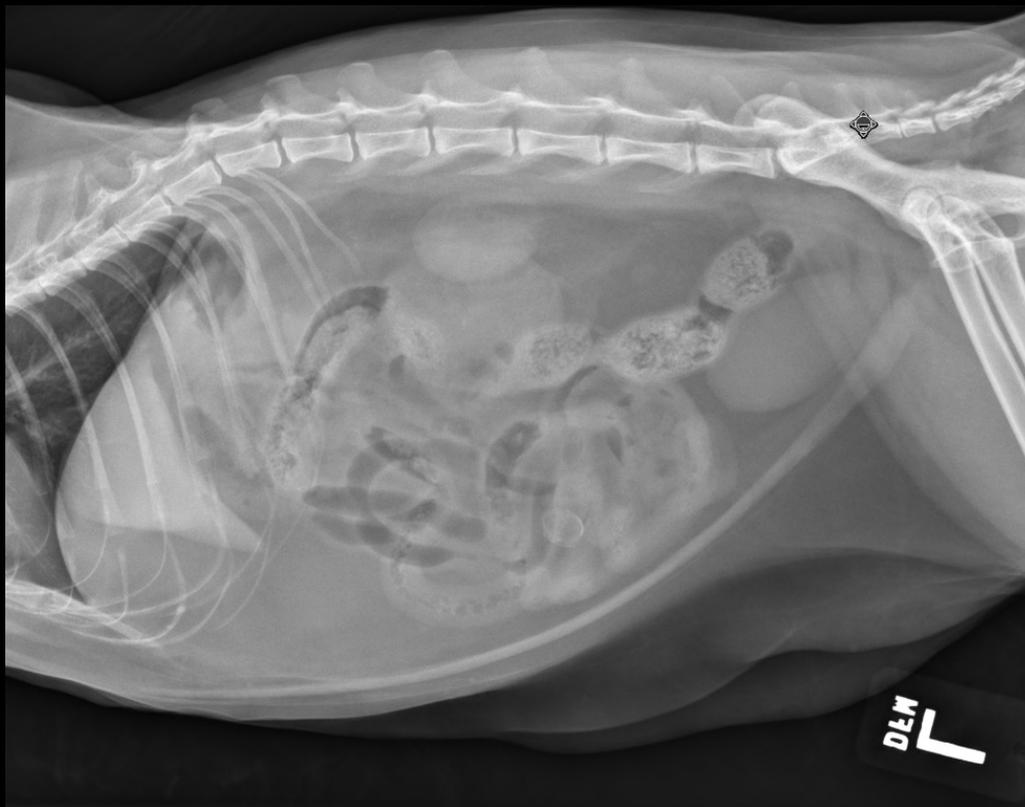


Main radiographic findings

- Only 6 lumbar vertebral bodies are present, and there are multiple fused sacral and caudal vertebral segments.



What is your conclusion?

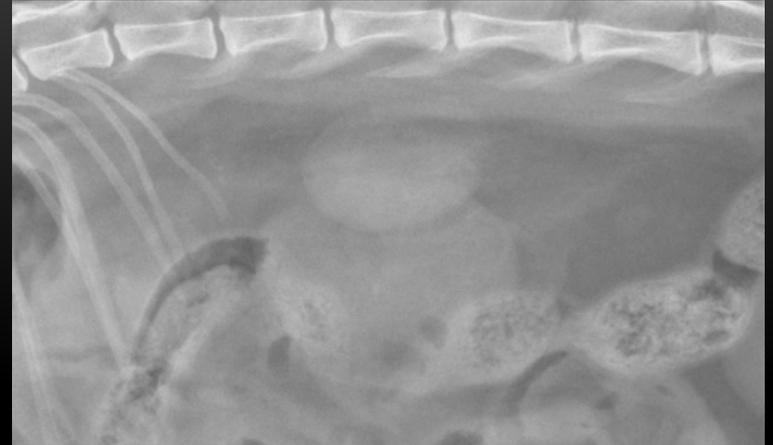


What is your conclusion?

- 1. Chronic left renal disease, and possible right nephrolithiasis or diverticular mineralization.
- 2. Ventral abdominal Bates body (fat nodular necrosis).

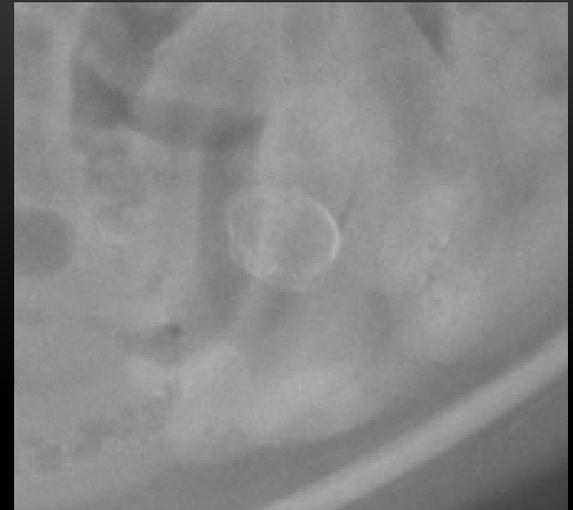


TAKE HOME MESSAGE 1



- Different than in dogs, previous researchers published in cats stated that the normal renal length ranges between 1.9-3.2 times the length of the body of the second lumbar vertebra (L2), which is measured on the ventrodorsal projection (Shiroma et al., 1999).

TAKE HOME MESSAGE 2



- Focal mineralized circular to oval soft tissue nodule/mass, with eggshell-like rim, can be found in the abdomen, not associated with any organ. These focal lesions are not common, however it is more frequently seen in cats than dogs. These are usually known as Bates bodies or fat nodular necrosis. Their etiology is unknown, but it is likely to be related to dystrophic mineralization of necrotic mesenteric fat, secondary to inflammation or ischemia. These are considered incidental findings (Schwarz et al., 2000).

REFERENCES

- Schwarz T, Morandi F, Gnudi G, Wisner E, Paterson C, Sullivan M, Johnston P. **Nodular fat necrosis in the feline and canine abdomen.** Vet Radiol Ultrasound. 2000 Jul-Aug;41(4):335-9.
- Shiroma JT, Gabriel JK, Carter RL, Scruggs SL, Stubbs PW. **Effect of reproductive status on feline renal size.** Vet Radiol Ultrasound. 1999 May-Jun;40(3):242-5.

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