of the equipment and positioning for ultrasound and cross-sectional imaging would be helpful.

Overall, *Radiology of Rodents, Rabbits, and Ferrets: An Atlas of Normal Anatomy and Positioning* will be a valuable resource for the general and laboratory animal practitioner, as well as exotic and radiology specialists. The atlas is well designed and easy to use. The images are clear, the captions complete and concise, and the anatomic detail is thorough, without being overwhelming. The text will be best used accompanied by a chart of normal values (for example, adrenal and kidney length), and as a supplement and companion to medical, surgical, and radiology texts.

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Abstracts

Adkesson MJ, Zdziarski JM, Little SE: Atoxoplasmosis in tanagers. J Zoo Wildl Med 36(2): 265-272, 2005

Atoxoplasma species (extraintestinal *Isospora* species) are coccidian parasites that infect a variety of passerine species. Birds with atoxoplasmosis may present with a variety of nonspecific clinical signs. Canaries and finches may exhibit diarrhea, decreased activity, and weight loss. In canaries, morbidity and mortality is highest in 2- to 9-month-old birds, with morbidity rates approaching 80%. Adults are often asymptomatic. *Atoxoplasma* infections are diagnosed through a number of different tests, including histopathologic examination of tissue samples, buffy coat smears, impression smears of organs, transmission electron microscopy, and polymerase chain reaction (PCR) analysis. Diagnosis is difficult in clinically healthy birds. The authors studied the prevalence of this parasite in the tanager collection at the Chicago Zoological Society/Brookfield Zoo. In addition, a survey form was sent to 57 institutions to investigate tanager deaths that were consistent with *Atoxoplasma* infection. A PCR assay was used to test blood, feces, or tissue samples in 88 individual birds, representing 18 species. Twenty-three of 60 (38.3%) blood samples from clinically healthy birds were positive for *Atoxoplasma*, and 1 of 6 (16.7%) fecal samples was positive. Nineteen of 32 (59.4%) tissue samples from deceased birds tested positive. The prevalence for all birds tested was 45.5%. The authors recommend the use of a PCR assay to test any tanager showing nonspecific signs of illness. Treatment of affected birds is difficult, and the infection is often not eliminated. Atoxoplasmosis is a well-known clinical problem in Bali mynahs (*Leucospar rothschildi*), and treatment with either toltrazuril or sulfachlorpyrazine is currently recommended. The authors make a number of husbandry recommendations to reduce the potential for fecal-oral and vertical transmission of this parasite.

Cray C, Bonda M: Application of IFA serology to the diagnosis of chlamydophilosis in a pet store. AAV Clinical Forum: June-August:7-9, 2005

A blue-headed pionus (*Pionus menstruus*) in a pet store was definitively diagnosed with chlamydophilosis through histology and immunoperoxidase staining of tissues. Subsequently, a comparative study of serologic assays for antibody was conducted in 16 other birds from the same facility. Species studied included Amazon parrot, macaw, cockatiel, Quaker parakeet, cockatoo, toucan, pionus, and lovebird. Seven of 16 (43.7%) were positive for immunofluorescent antibody (IFA); 2 of 16 (12.5%) were both IFA and elementary body agglutination (EBA) positive. The birds with nonacute presentations were more likely to be IFA positive than EBA positive, and these titers were long-lasting. In some clinical cases, decreasing titers were associated with positive response to treatment with doxycycline. The EBA test is believed to detect primarily early-forming immunoglobulin (Ig) M isotype antibody. In contrast, the complement fixation test has been reported to detect primarily IgG isotype antibody, which generally occurs 10 to 14 days after infection. The IFA test is also believed to reflect IgG titers and thus has increased value in nonacute, subclinical infections. The author states that a diagnosis of chlamydophilosis is best made through a combination of different test procedures, including hematology, serum chemistries, serum protein electrophoresis, culture, polymerase chain reaction, and others.

DeSouza RAM, Deconto I, Lange RR, et al: Comparison of therapeutic protocols used for shell wound repair in red-eared sliders. Exotic DVM 7(3):53-57, 2005

Four red-eared sliders (*Trachemys scripa elegans*) were used in this study. Each animal was preanesthetized with fentanyl, and anesthesia was induced with propofol. Five lesions measuring 10 mm in diameter and 4 mm in depth were created in the carapace of each turtle. One of five topical treatments was applied to one of five experimentally created lesions. In this manner, all five topical treatments were evaluated in all four turtles. The order of the topical treatments was rotated among individual turtles to avoid results being affected by varying regenerative capacities of different sites on the carapace. Treatment was continued for 7 months. Treatments administered included (1) daily topical administration of povidine iodine until the lesion formed scar tissue; (2) single application of rapid-polymerizing resin over a glass slide, which remained in place until the end of the study; (3) a cyanomethacrylate and cellulose acetate medical tape (Micropore; 3M, St. Paul, MN USA) bandage changed once weekly; (4) ointment I (composed of bismuth subgalate, sulfonamide, iodine, magnesium silicate hydroxide, and cod liver oil) applied once every 3 days; and (5) ointment II (same as ointment I but also including zinc oxide and boric acid) applied once every 3 days. Treatment with ointments I and II allowed rapid re-epithelialization and keratinization without formation of a bone sequestrum, and the same degree of radiopacity throughout the study. Treatment 3 produced relatively soft scar tissue and radiographs showed bony reabsorption. Treatment 2 did not result in a sequestrum, but there was no re-epitheliazation or keratinization during the 7 months of treatment. Povidine iodine induced the most significant sequestrum formation throughout the treatment, and subsequently allowed greater regeneration of bone, epithelium, and keratin than the other treatments. It appears that sequestrum formation is associated with greater bone regeneration, whereas rapid reepitheliazation and keratinization may retard the formation of underlying bone.

Gibbs SEJ, Ellis AE, Mead DG, et al: West Nile virus detection in the organs of naturally infected blue jays (*Cyanocitta cristata*). J Wild Dis 41(2):354-362, 2005

Blue jays are members of the Corvid family and, as such, may be indicator species for West Nile virus (WNV) activity. The objectives of this study were to describe the gross and microscopic pathology associated with natural WNV infection in blue jays and to determine the most appropriate tissues to be used for different diagnostic techniques in this species. Initial screening by virus isolation indicated that 36 of 59 blue jay bodies submitted to the Southeastern Cooperative Wildlife Disease Study were positive for WNV. From this larger group, 20 positive and 5 negative birds were chosen to compare virus detection techniques. Splenomegaly and poor body condition were the most consistent gross necropsy findings in positive birds. The most consistent histopathologic findings were mononuclear leukocytosis in tissues of WNV-positive birds and epicarditis/myocarditis. One lesion commonly noted in the blue jays was the presence of numerous large mononuclear cells in blood. Brain, heart, and lung had the highest viral titers, and WNV antigen was most often detected by immunohistochemistry in heart, kidney, liver, and lung. Viral antigen in blue jay brains was not easily detected by immunohistochemistry. Nested reverse transcriptase polymerase chain reaction was the most sensitive diagnostic test in this study regardless of tissue studied. Submission of multiple tissues including heart, kidney, liver, or lung is recommended for diagnosis.

Hernandez-Divers SJ, Stahl SJ, Stedman NL, et al: Renal evaluation in the healthy green iguana (*Iguana iguana*): assessment of plasma biochemistry, glomerular filtration rate, and endoscopic biopsy. J Zoo Wild Med 36(2):155-168, 2005

Plasma biochemistry, iohexol clearance, endoscopic renal evaluation, and biopsy were performed in 23 clinically healthy 2-year-old green iguanas. Biochemistry values obtained in this study were considered within normal limits based on previously published data. The authors reviewed literature that confirmed that urea and creatinine are considered poor indicators of renal disease because of their low production and variable excretion in most reptiles. In green iguanas, calcium:phosphorus ratios appear to be a reliable indicator of severe renal disease when the ratio decreases to <1. After the intravenous injection of 75 mg/kg iohexol into the caudal tail vein, serial blood collections were performed, resulting in iohexol clearance graphs for each lizard. The mean glomerular filtration rate (GFR) was determined to be 16.56 ± 3.9 mL/kg/hr. Endoscopic techniques for renal evaluation and biopsy are described