Karelma Frontera-Acevedo, DVM, PhD, DACVP *
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Signalment and Clinical History

- Female, adult, impressa tortoise (*Manouria impressa*)
- Two weeks of lethargy and anorexia
  - Feeding tube placed four days before death
- Found dead
Gross Findings

• Pancreas, liver, spleen, and kidney were pale
  • All organs sent for histopathologic examination
Morphologic Diagnosis

• Moderate multifocal lymphocytic heterophilic hepatitis with intranuclear coccidia, granulomas, and lipidosis

• Multisystemic coccidiosis
Other Organs...
Intranuclear coccidia

- Multisystemic disease in captive tortoises
  - Cause of death in many reported cases
  - More severe in pancreas

- Life cycle and ecology unknown

**Intranuclear coccidia**

- Can be diagnosed ante mortem by PCR/qPCR
  - Tortoise had tested positive
  - Can use fresh, frozen, FFPE, and environmental samples

- Procedure performed at UF
  - Zoo Medicine Infectious Disease laboratory
  - Based on consensus sequence of 18S rRNA

- Family *Eimeriidae*
  - Identifying sporulated stages

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UGA Zoo and Exotic Animal Pathology Service
Infectious Diseases Laboratory
Department of Pathology

UF Zoo Medicine Infectious Disease Laboratory
Dr. James Wellehan

Zoo Atlanta, staff, and veterinarians involved
Drs. Sam Rivera, Hayley Murphy, Kate Leach

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Questions?