



Diagnostic Exercise

From The Davis-Thompson Foundation*

Case #: **257**; Month: **March**; Year: **2025**
Question Sheet

Contributors: Jonathan C Behlen¹, Clinson Lui¹, Sarah White¹, Shannon Reed¹, Travis Mays², Raquel Rech¹. ¹College of Veterinary Medicine and Biomedical Sciences, Texas A&M University, College Station, TX 77843, USA
²Texas A&M Veterinary Medical Diagnostic Laboratory, Texas A&M University, College Station, TX 77843, USA.

Corresponding author: rech@cvm.tamu.edu

Clinical History: A 2-year-old male alpaca was presented to the Texas A&M Large Animal Teaching Hospital with bradycardia, arrhythmia, dehydration, severe azotemia (BUN 260 mg/dl, creatinine 14.93 mg/dl), hyperphosphatemia (13.4 mg/dl), hypermagnesemia (3.4 mg/dl), mild hypokalemia (4.0 mg/dl), leukocytosis (32,500/ μ l) with neutrophilia (28,600/ μ l), acidemia, and low body condition score. The patient was placed on supportive treatment, but due to poor prognosis, the owner elected for euthanasia.

Gross Findings: Both kidneys were mottled pale tan to red (**Fig 1**). On cut surface, the cortices were pale and contained linear white areas (**Fig 2**).

Gross and Histological Images:



Figure 1

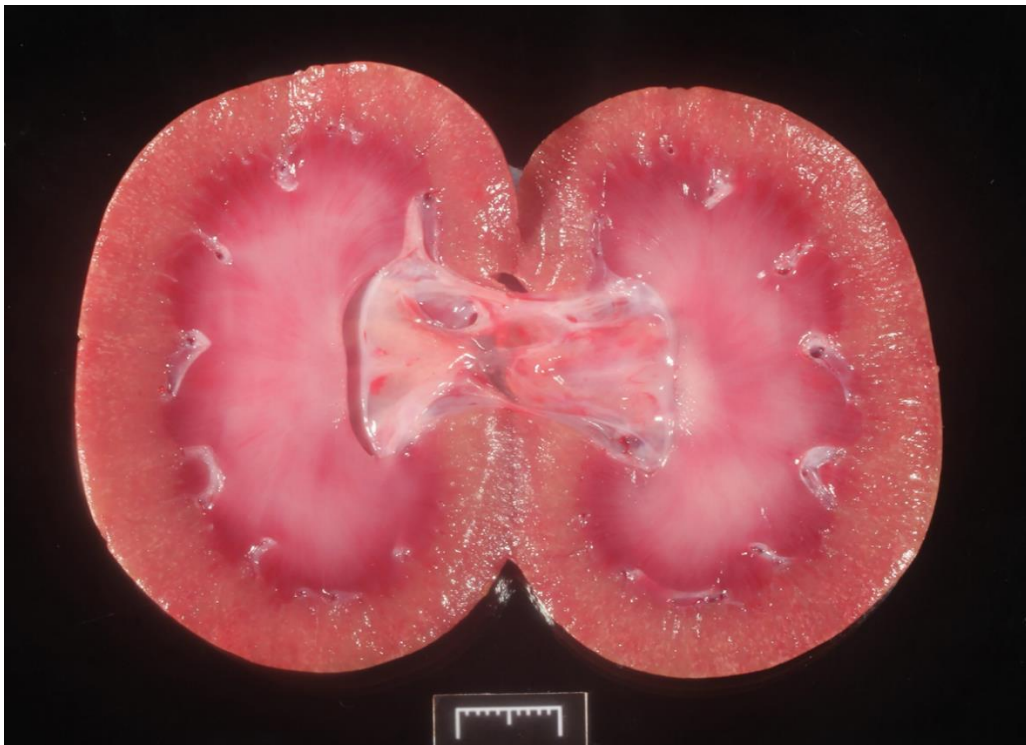


Figure 2

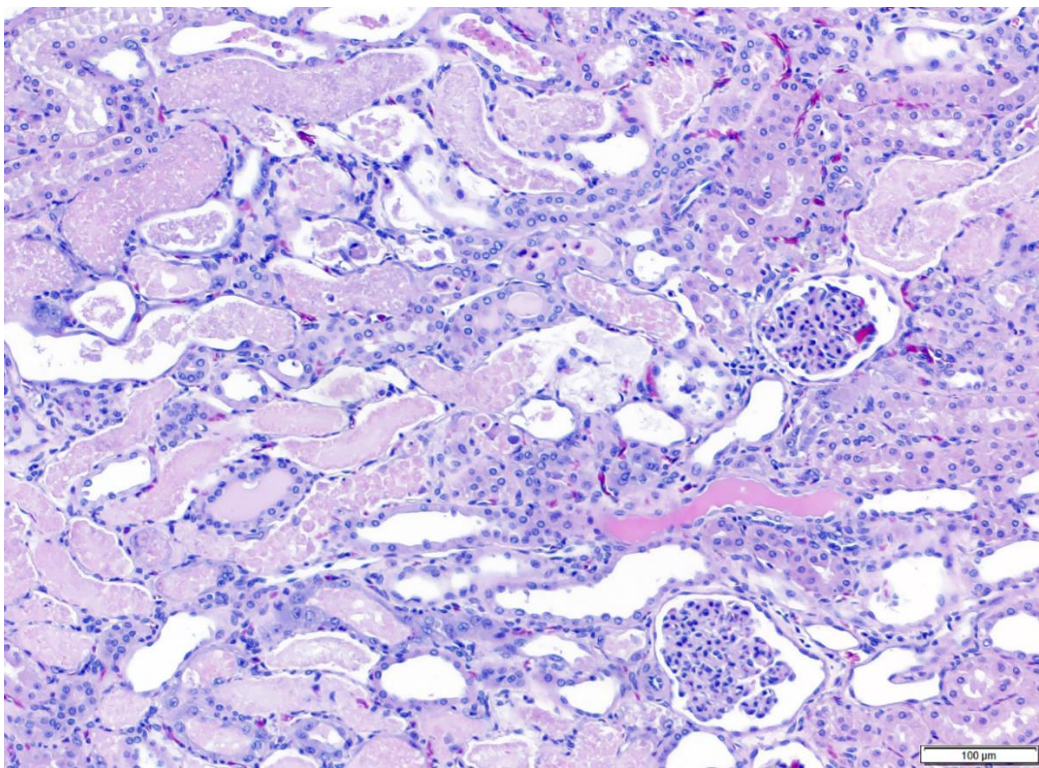


Figure 3

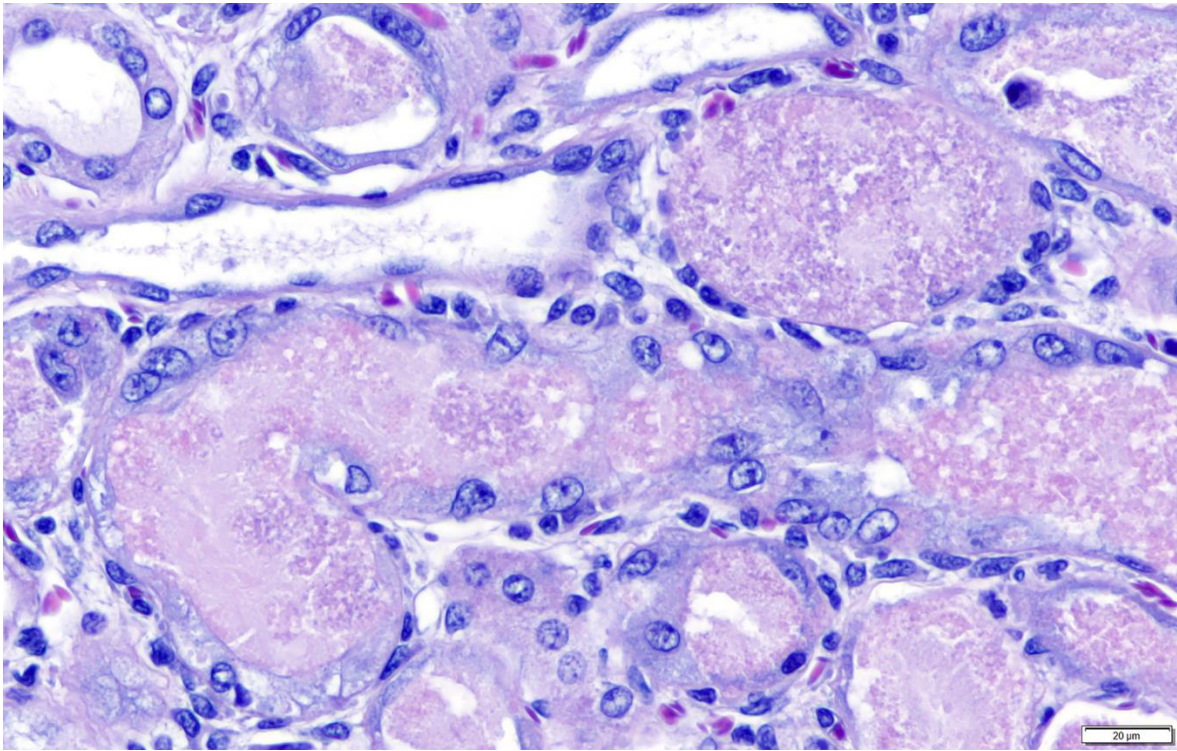


Figure 4

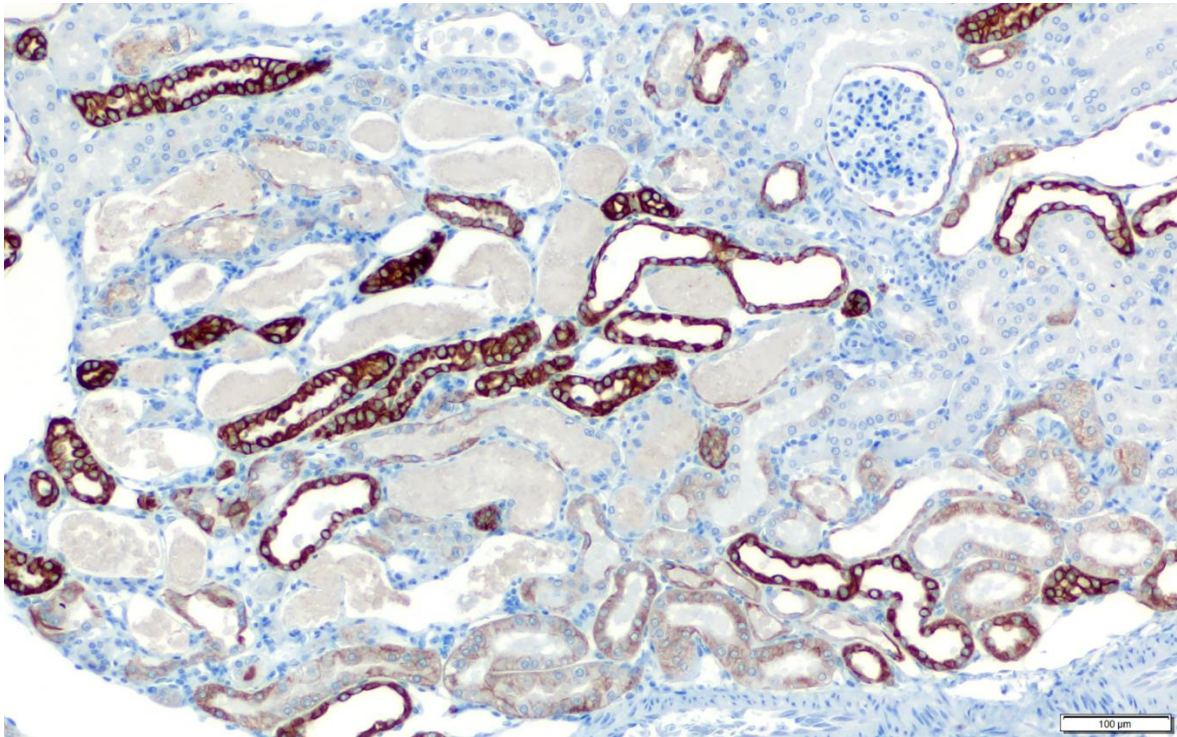


Figure 5. Immunohistochemistry for pancytokeratin

Follow-up questions:

- *Microscopic description*
- *Morphologic diagnosis*
- *Potential cause(s)?*

*The Diagnostic Exercises are an initiative of the Latin Comparative Pathology Group (LCPG), the Latin American subdivision of The Davis-Thompson Foundation. These exercises are contributed by members and non-members from any country of residence. Consider submitting an exercise! A final document containing this material with answers and a brief discussion will be posted on the CL Davis website (<https://davisthompsonfoundation.org/diagnostic-exercise/>).

Associate Editor for this Diagnostic Exercise: Raquel Rech

Editor-in-chief: Claudio Barros