



Diagnostic Exercise

From The Davis-Thompson Foundation*

Case #: **214** Month: **June** Year: **2023**

Question Sheet

Contributors: Igor R. Santos, DVM, MS, Anatomic Pathology Resident¹; Luan C. Henker, DVM, MS, PhD, Anatomic Pathology Resident^{1,2}; Regina T. Kemper, DVM, MS, Intern in Anatomic and Clinic Pathology^{1,3}; Marianna Bertolini, DVM, MS candidate¹; David Driemeier, DVM, MS, PhD¹; and Saulo P. Pavarini, DVM, MS, PhD¹.

¹Setor de Patologia Veterinária, Faculdade de Medicina Veterinária, Universidade Federal do Rio Grande do Sul, Porto Alegre, RS, Brazil. Corresponding author: igor.ozn@gmail.com.

²Department of Pathobiology, College of Veterinary Medicine, Auburn University, Auburn, AL, USA.

³Ross University School of Veterinary Medicine, Ross University, Saint Christopher Island, Federation of Saint Christopher and Nevis.

Clinical History: A 5-year-old, Holstein-Friesian dairy cow was evaluated by a veterinary practitioner for a 30-day history of unilateral exophthalmos (Fig. 1). After 15 days, the cow presented lameness followed by progressive weight loss and pelvic limbs paresis, culminating in persistent sternal recumbency (Fig. 2). The superficial inguinal lymph nodes were enlarged. Due to the poor prognosis, the cow was euthanized and submitted to a postmortem examination.

Gross Findings: The cow was in poor body condition with mild amounts of subcutaneous and visceral fat stores. The oral and conjunctival mucous membranes were pale. There was severe exophthalmos in the right eye, caused by a soft, homogenous, white to yellow mass (6 cm in diameter) (Fig. 3) in the retrobulbar space. Similar irregular masses were seen in the left renal pelvis, partially effacing the renal parenchyma, and in the epidural space, circumferentially surrounding the pachymeninges (extradural location) (Fig. 4) of the lumbar segment of the spinal cord. The superficial inguinal lymph nodes (supramammary) were markedly enlarged and, on the cut surface, had homogenous white to yellow discoloration and loss of the corticomedullary junction. Multifocal areas of the abomasum wall were moderately thickened and expanded by a soft, homogenous, white to yellow masses. No significant alterations were observed in other organs.

Gross and Microscopic Images:



Figure 1



Figure 2



Figure 3

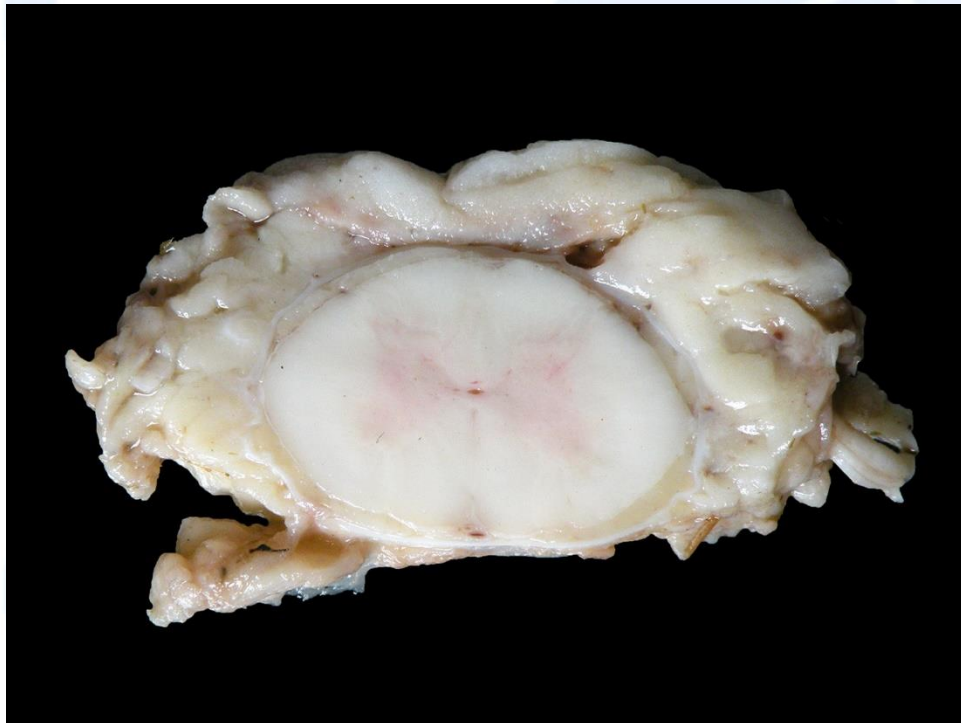


Figure 4

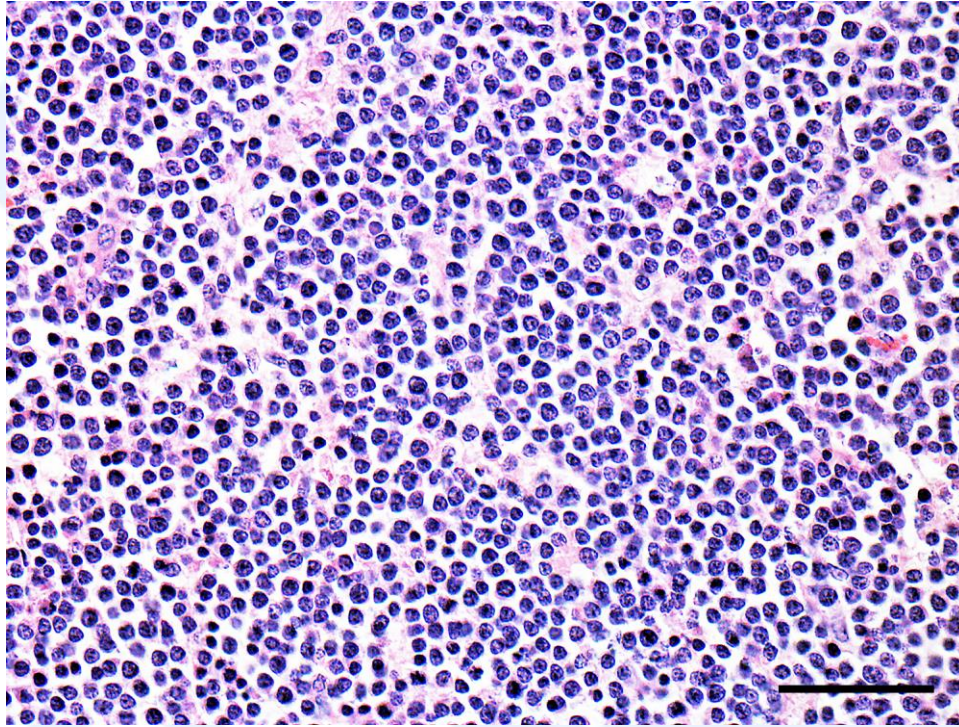


Figure 5

Follow-up questions:

- *Morphologic diagnosis*
- *Etiological agent*
- *Name of the condition*
- *Probable pathogenesis pathway*

*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: Saulo Pavarini

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