

# Diagnostic Exercise

## From the CL Davis/SW Thompson Foundation

Case #: **231**; Month: **February**; Year: **2024**  
*Question sheet*

**Contributors:** Megan Crawford<sup>1</sup>, Annette Lundberg<sup>2</sup>, Rachel Neto<sup>3</sup>

<sup>1</sup>College of Veterinary Medicine, Michigan State University

<sup>2</sup>Department of Clinical Sciences, Auburn University,

<sup>3</sup>Department of Pathobiology, Auburn University

**Corresponding author** [rtn0004@auburn.edu](mailto:rtn0004@auburn.edu)

**Clinical History:** A 6-year-old spayed female Samoyed dog was presented to the Dermatology Service at Auburn University Veterinary Teaching Hospital (AUVTH) for a 6-month history of non-pruritic alopecia on the hips and back, with the skin turning black in those areas (Figures 1 and 2). The animal had a prior history of hypothyroidism (controlled at the time of evaluation) and a urinary tract infection. The dog was on levothyroxine, Interceptor plus, Nexgard, fish oil, and Royal Canin Veterinary Diet Adult Urinary SO Dry Dog Food. There was no travel history outside the Southern United States. This animal was cohoused with another healthy dog. Bloodwork was unremarkable and testing for Cushing's disease was negative. Skin scrapes, cytology, and dermatophyte and bacterial cultures were negative.

### Clinical Photographs:



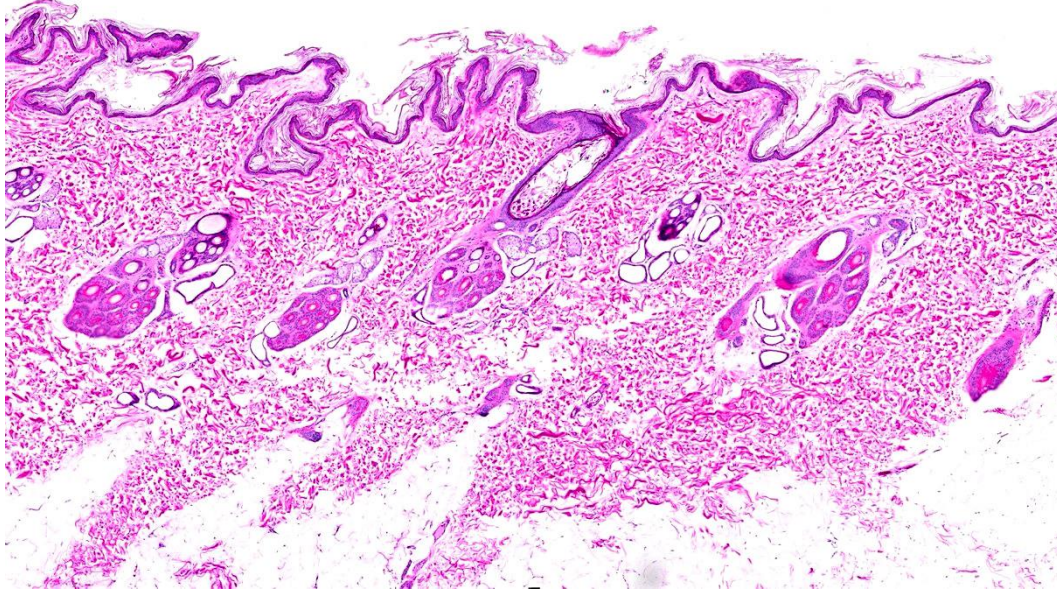
**Figure 1**



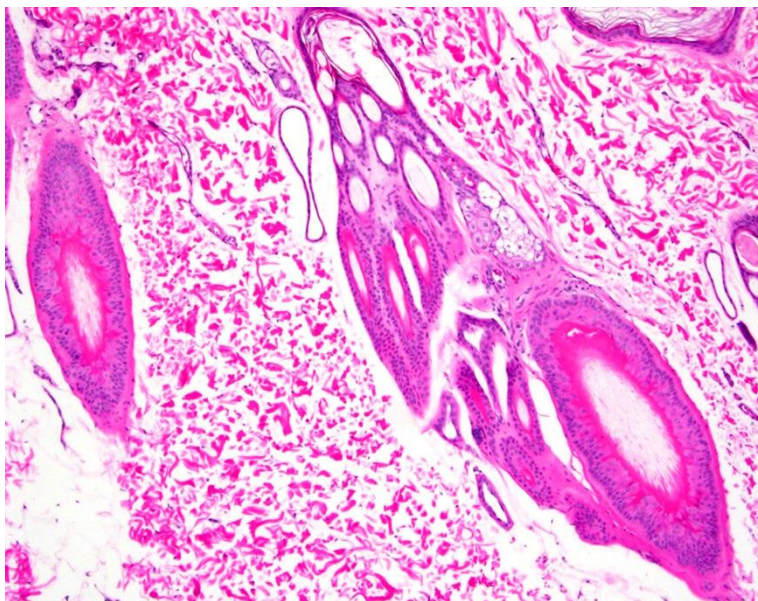
**Figure 2**

**Gross Findings:** Three 3 x 8 mm punch biopsies from the dorsum are examined. Two of the samples are hyperpigmented and alopecic, from the hypotrichotic areas. One of the samples is from the shoulder region with mild hypotrichosis.

**Microscopic Photographs:**



**Figure 3.** Haired skin H&E.



**Figure 4.** Haired skin H&E.

**Follow-up questions:**

- *Using the history and clinical photographs, what would be the main differential diagnoses for the lesions shown?*
- *Based on the photomicrographs, what is your morphologic diagnosis?*

**Editor in Chief:** Claudio Barros

**Associate Editor for this Diagnostic Exercise:** Saulo Pavarini