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**Zoo/Exotic Pathology Service**  
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<b>Doctor:</b> -	<b>Date:</b> June 22, 2016
<b>Clinic:</b> Bat World MidCities, Bat World Sanctuary 701 Timberline Court Arlington, TX 76006	<b>Access:</b> V161267 <b>Species:</b> Chiroptera <b>Breed:</b> Seminole Bat <b>Sex:</b> Female <b>Name:</b> GiGi
<b>ISIS:</b> BWME-2016-001	<b>Age:</b> Adult <b>Type:</b> Post mortem jar

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**CLINICAL INFORMATION**

The clinical history is attached to the submission form. This bat gave birth to three pups full-term; however, two of the pups died with one surviving after mom became dehydrated.

**MICROSCOPIC**

Submitted is the entire bat preserved for examination.

Salivary gland: No lesion recognized.

Thyroid gland: No lesion recognized.

Trachea: No lesion recognized.

Skin from wings: In some sections of the keratin, there is some mild hyperkeratosis and proliferation of footprint morphology yeast.

Diaphragm: Examined is a section through the diaphragm. No lesion is recognized.

Urinary bladder: No lesion recognized.

Uterus: In the examined section of uterus, there is extensive and severe inflammation, which is of numerous neutrophils. These are accumulating within the lumen of the uterus as well as across the lining endometrium.

Nasal sinuses abdomen overlying skin with bone and section of oral cavity: Several of the perifollicular glands are supporting extensive and severe inflammation of lymphoid cells with plasmacytic cells and an occasional neutrophil. This is almost completely effacing some of these large sebaceous glands multifocally.

Large intestine: No lesion recognized.

Stomach: No lesion recognized.

Pancreas: No lesion recognized.

CONTINUED

Spleen: The spleen is edematous. Sections of the spleen are also depleted of lymphocytes. Many of the histiocytic cells are supporting an intracytoplasmic small bacilliform structure.

Lung: No lesion recognized.

Cerebellum: No lesion recognized.

Liver: The liver is congested and moderately autolyzed.

Adrenal gland: No lesion recognized.

Kidney: Examined is a section through the cortex and medulla of the kidney. No lesion is recognized.

Cerebrum: No lesion recognized.

Esophagus: There is proliferation of yeast, which are oval and budding, as well as pseudohyphae in the exfoliating superficial keratinizing mucosa.

Heart: Examined is a longitudinal section through the ventricle, atria, and A-V valves. No lesion is recognized.

### **DIAGNOSIS**

- 1) **UTERUS: EXTENSIVE MODERATE TO SEVERE ACUTE SUPPURATIVE ENDOMETRITIS**
- 2) **SPLEEN: LYMPHOID DEPLETION, EDEMA, AND HISTIOCYTIC INTRACYTOPLASMIC BACTERIA**
- 3) **ESOPHAGUS: MULTIFOCAL MILD SUPERFICIAL ESOPHAGEAL HYPERKERATOSIS WITH INTRAKERATIN YEAST AND PSEUDOHYPHAE**
- 4) **PATAGIAL SKIN: MULTIFOCAL MILD HYPERKERATOSIS WITH INTRAKERATIN YEAST (MALASSEZIA)**

### **COMMENT**

One significant finding is of the suppurative endometritis and accumulation of suppurative inflammation into the lumen of the uterus. I suspect, based on the cell population, this may be a bacterial infection although no specific bacteria are recognized in this section. In the spleen, there are some apparent macrophages, which are supporting cytoplasmic structures interpreted as a small rod-shaped bacterium.

There is an apparent candidal or other yeast proliferation noted in the esophagus. This is more significant given the presence of the pseudohyphae indicating tissues invasion. Yeast organisms most consistent with *Malassezia* are recognized in the keratin of the wing web. Although these lipophilic yeast are part of the normal cutaneous microflora of most warm-blooded vertebrates, their proliferation is recognized as a significant finding in seborrheic dermatitis of domestic canines. The pathogenesis of the dermatopathy is unknown but probably reflects an abnormal microenvironment of the skin permitting the growth of the yeast.

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DRR:br\*

Q2 KW reproductive, inflammatory