Bradford, C., & Eschenbrenner, M. (2017). Health survey including selected blood parameters in the african slender snouted crocodile (mecistops cataphractus) at the abidjan zoo in côte d'ivoire. *Journal of Zoo and Wildlife Medicine*, *48*(2), 510-513.

Abstract: The Zoo National d'Abidjan (Abidjan Zoo) in Côte d'Ivoire, West Africa, holds the world's largest captive population of African slender-snouted crocodiles (*Mecistops cataphractus*, formerly *Crocodylus cataphractus*), at 36 adults, 16 yearlings, and 23 hatchlings. **Twelve yearling and 12 adult slender-snouted crocodiles at the Abidjan Zoo were restrained for physical exam, body condition scoring, and venipuncture** in September 2015. Blood samples collected from the **supravertebral venous sinus** were analyzed using a handheld blood **analyzer (Abaxis® I-stat, Abaxis, Inc., Union City, California 94587, USA) with Chem8 cartridges** (CLIAwaived, Inc., San Diego, California 92130, USA). The adult crocodiles appeared in good general health and demonstrated blood values similar to those of other reptiles. The **yearlings had low, ionized calcium values and low hematocrit and hemoglobin levels compared with the adult crocodiles and to other crocodile reference ranges.** These findings may dramatically improve the health of the crocodiles and help to ensure a thriving captive population of this critically endangered species.

Question:

Which of the following was observed in a health survey evaluating selected blood parameters in African slender snouted crocodiles (*Mecistops cataphractus*)?

1. Yearlings had lower mean ionized calcium than adults.
2. Adults had lower mean hematocrits than yearlings.
3. Yearlings had higher mean hemoglobin than adults.
4. Adults had lower mean blood glucose than yearlings.
5. Females had lower ionized calcium than males.

Answer: A – Yearlings had lower mean ionized Ca compared to adults.

Questions:

1. Name two unique features of the crocodilian cardiovascular system when compared with other reptiles.
   * 4 chambered heart
   * Right to left shunting (adaption for prolonged apnea) occurs via:
     + Foramen of Panizza – between right and left aortic arches at base
     + Distal abdominal aortic anastomosis
   * Subpulmonary conus
     + located proximal to pulmonary valve within right ventricular outflow tract
     + contains cog-teeth valve – regulates degree of pulmonary to systemic shunting
2. Administration of epinephrine intramuscularly following isoflurane anesthesia in American alligators (*Alligator mississippiensis*) had what effect on recovery when compared with saline?
   1. Increased extubation time
   2. Decreased extubation time
   3. Had no effect on extubation time
   4. Prolonged recovery of spontaneous movement
   5. Had no effect on time to spontaneous movement

Question: What are the two primary end products of protein catabolism in crocodilians?

Answer: Uric Acid and Ammonia

**MYCOTIC DERMATITIS IN JUVENILE FRESHWATER CROCODILES (*CROCODYLUS JOHNSTONI*) CAUSED BY *NANNIZZIOPSIS CROCODILI*.**

Hill AG, Sandy JR, Begg A.

J Zoo Wildl Med. 2019 Mar 1;50(1):225-230.

**A juvenile saltwater crocodile presents with multifocal regions of black pigmented scales on its ventrum and hind limbs. Which is a recommended treatment protocol for the most likely etiology?**

1. Topical enilconazole and terbinafine nebulization
2. Intramuscular ceftazidime and topical chlorhexidine
3. **Topical betadine and immersion formaldehyde**
4. Intravenous amikacin and subcutaneous fluids
5. Oral meloxicam and surgical excision

Most likely agent is *Nannizziopsis crocodili*. Enilconazole is contraindicated because it caused fatal, systemic gout in juvenile freshwater crocodiles.

**Which of the following is a reported side effect of enilconazole topical treatment for *Nannizziopsis crocodili* in freshwater crocodiles*?***

1. **Visceral gout**
2. Cutaneous erythema
3. Anaphylaxis
4. Generalized ataxia
5. Dermal ulceration