**McLelland DJ. Macropod Progressive Periodontal Disease (Lumpy Jaw). In: Miller RE, Fowler ME (eds.). Zoo and wild animal medicine, Volume 10, Current therapy. St. Louis (MO): Elsevier; 2022. p. 709-13.**

What characteristic of macropod molar progression **is different from** other species that exhibit molar progression (elephants, manatees), and is important in the pathogenesis of macropod progressive periodontal disease (MPPD)?

1. The teeth erupt caudally and migrate forward
2. The teeth naturally exfoliate on their own
3. Molars are shed from the front with wear
4. The persistence of “post-functional teeth”
5. Molar eruption has been used to estimate age

**Correct Answer: D)** The persistence of “post-functional teeth”

Note: The chapter explicitly states that persistence of post-functional teeth (plural) is unique to macropods and may contribute to MPPD. I believe some elephants may retain M6, however. A-C describe normal features of molar progression in all species as described in Fowlers 8 & 10. Option E is described in both macropods and Proboscidea/elephants (not different from) – albeit is described as likely an inaccurate method of age estimation particularly in elephants.

\*\*For a true boards style question, I would remove the parentheses comment about other spp. that exhibit molar progression, but added it in for the purpose of CBS with students that may not know what other species exhibit MP, feel free to take this out\*\*

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HYPERLIPIDEMIA AND XANTHOMATOSIS IN YELLOW-FOOTED ROCK WALLABIES (*PETROGALE XANTHOPUS*) UNDER MANAGED CARE.

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In a recent case series describing xanthomatosis in yellow-footed rock wallabies (*Petrogale xanthopus*), what overlapping factor was considered to be the most likely contributor to the development of the disease?

1. An underlying viral infection causing mass-like lesions
2. Inappropriate diet and obesity causing dyslipidemias
3. Development of hypothyroidism in related individuals
4. Environmental stress from a lack of social interaction
5. Substantial weight loss and associated hepatic lipidosis

**Correct Answer: B)** Inappropriate diet and obesity causing dyslipidemias

Note: The dyslipidemias described in this study were suspected to be related to overlapping features of obesity and inappropriate diet – both amount and diet items. Hypothyroidism was evaluated but was not thought to be a predominant cause. A and D are distractors. Hepatic lipidosis (E) was described in one individual, but was thought to be a result of obesity (most indiviuals had a described weight gain from previous exam initially), not causative of the xanthomatosis. Genetic component was also discussed, due to inability to rule that component out, that answer choice is not included.

Journal of Zoo and Wildlife Medicine, 54(3): 511-519, 2023.

**A RETROSPECTIVE ANALYSIS OF MORBIDITY AND MORTALITY IN THE CAPTIVE LEADBEATER'S POSSUM (*GYMNOBELIDEUS LEADBEATERI*) POPULATION FROM 1970 TO 2021** - reviewed by HSS

Chloe Steventon, Leanne Wicker, Alistair R. Legione, Joanne M. Devlin, Dan Harley, Elizabeth Dobson

Question:

Which three organ systems were most frequently affected by pathology in Leadbeater’s possums (*Gymnobelideus leadbeateri*)?

1. Neurological, cardiovascular, gastrointestinal
2. Cardiovascular, reproductive, gastrointestinal
3. Reproductive, neurological, renal
4. Gastrointestinal, renal, reproductive
5. Renal, cardiovascular, reproductive

Answer: E

**Chapter 69, Tasmanian Devil Facial Tumor Disease, Fowler 9**- reviewed by HSS

Question:

Which of the following histochemical markers is diagnostic for DFT1 in Tasmanian devils with devil facial tumor disease (DFTD)?

1. Vimentin
2. Periaxin
3. Cytokeratin
4. E-cadherin
5. Uroplakin

Answer: B

**QUESTION:** Which anatomical trait is characteristic of echidnas?

1. Reduced pectoral girdle
2. Radiolucent dorsal spines
3. Hindlimb spurs with venom
4. Parathyroid within thymus
5. Absent subcutaneous fat

Answer: D - note that C and E are characteristics of platypus

SOURCE: Vaasjo E et al. ADVANCED DIAGNOSTIC IMAGING AND PATHOLOGIC FINDINGS OF THYROID LESIONS IN TWO SHORT-BEAKED ECHIDNAS (TACHYGLOSSUS ACULEATUS). JZWM 2024.

**QUESTION:** Which marsupial has aradicular, hypsodont, elodont dentition?

1. Eastern quolls (*Dasyurus viverrinus)*
2. Common wombats (*Vombatus ursinus*)
3. Australian koalas (*Phascolarctos cinereus*)
4. Barred bandicoots (*Perameles gunnii*)
5. Bennett’s wallabies (*Macropus rufogriseus*)

Answer: B

SOURCE: Crosta et al. AN ENDOSCOPY-GUIDED TECHNIQUE FOR THE COLLECTION OF MICROBIOLOGY SAMPLES FROM THE TRACHEA OF COMMON WOMBATS (VOMBATUS URSINUS). JZWM 2022.

**Testis abnormalities in a population of south Australian koalas (*Phascolarctos cinereus*).** *Journal of Wildlife Diseases.* 2022. 58(1): 158-167.

Question: Testis asymmetry in koala in the Mount Lofty Ranges of Australia is most associated with which of the following?

1. *Chlamydia pecorum*
2. Juvenile Age
3. Epididymitis
4. Normal parenchyma
5. Breeding season

Answer: D

***Lonepinella* sp. isolated from wound infections of koalas.** *Journal of Wildlife Diseases.* 2023. 59(3): 398-406.

Question: To what family does *Lonepinella koalarum* belong? Can you describe the characteristics of the genus Lonepinella?

Answer: *Pasteurellaceae.* Gram-negative, oxidase positive (or weakly positive), Catalase negative, failure of common commercial-ID systems to identify an organism that has these same characteristics.

1. This parameter was found in red kangaroos in both medetomidine-ketamine-midazolam and medetomidine-ketamine-butorphanol groups but was most significantly found in the red kangaroo group with butorphanol.
2. Hypertension
3. Hypothermia
4. Bradycardia
5. Hypoxemia
6. Hypotension

Answer: D

2. Which of the following parameters starts out high and then decreases to less then 2% in wallaby milk after 200-300 days of lactation?

1. Water
2. Protein
3. Lipids
4. Carbohydrates
5. Vitamins and Minerals

Answer: D