



Helicon

O P L E I D I N G E N

Wim Kersten

Docent Eco & Wildlife studies

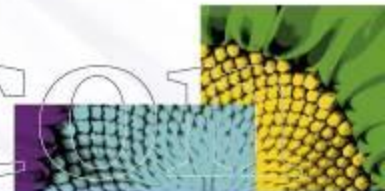
Helicon MBO Geldermalsen

Met dank aan Fac. Diergeneeskunde Utrecht

Digestiestelsels

Vergelijkende anatomie

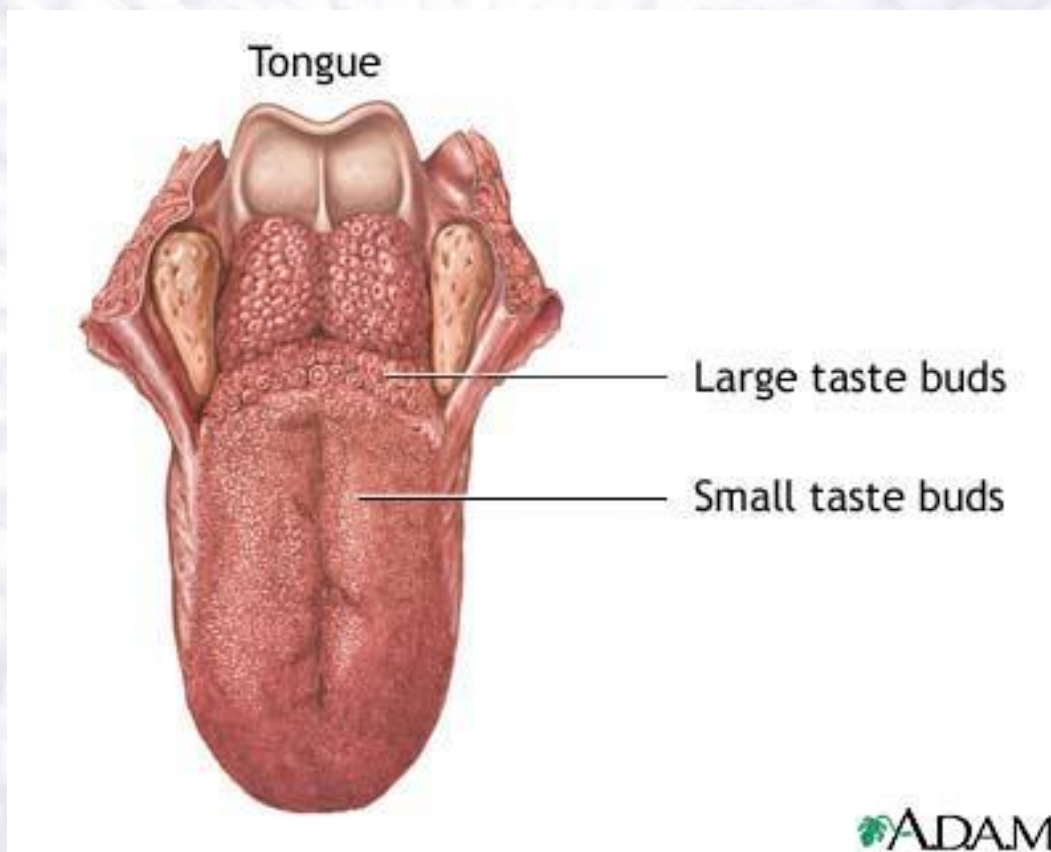
Helicon



Vorm en Functie

- Een paar citaten uit de les:
- Een carnivoor is een vleeseter
- De vertering begint in de mond
- Maagsap is zuur
- Een herkauwer heeft 4 magen

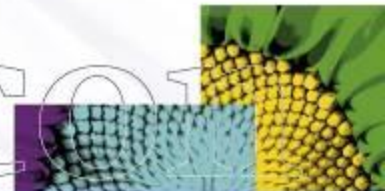




Een bek vol tanden?

- Het gebit past bij het dieet.

Helicon



Zoogdieren

Hiermee hebben de zoogdieren de beschikking over een gereedschapskist die het mogelijk heeft gemaakt om bijna alle voedselbronnen op aarde te benutten.



Wapens

Tanden blijken ook gebruikt te kunnen worden om te vechten en te imponeren.



Helicon

Zonder tanden

Er zijn zelfs zoogdieren die vanwege een dieet van mieren en termieten zonder tanden en kiezen kunnen leven.

De miereneter en de aardwolf



Varkens zijn omnivoren



Of niet soms?



Soms niet dus....



Carnivora



Hond



Beren



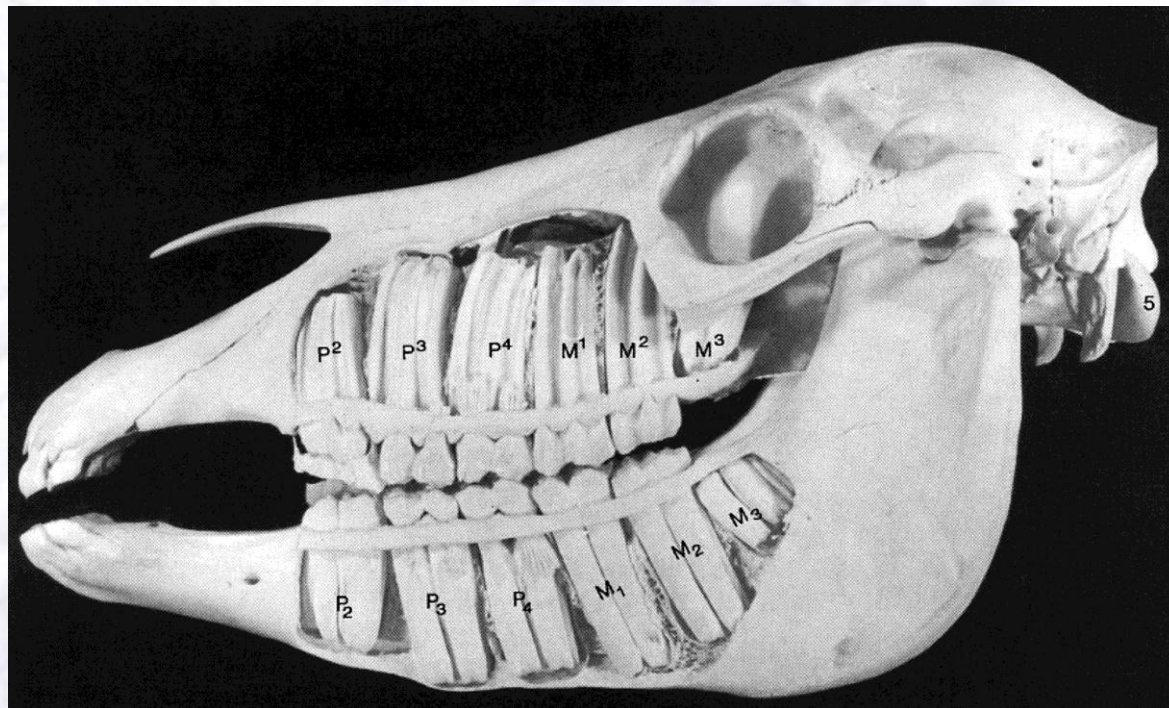
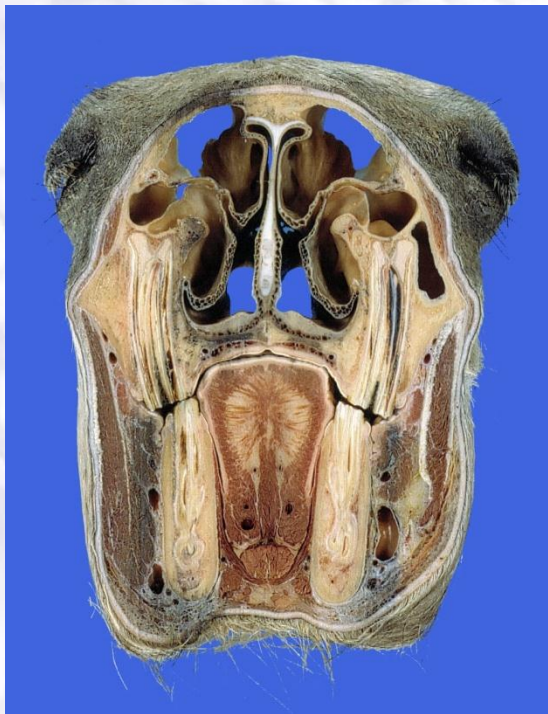
IJsbeer

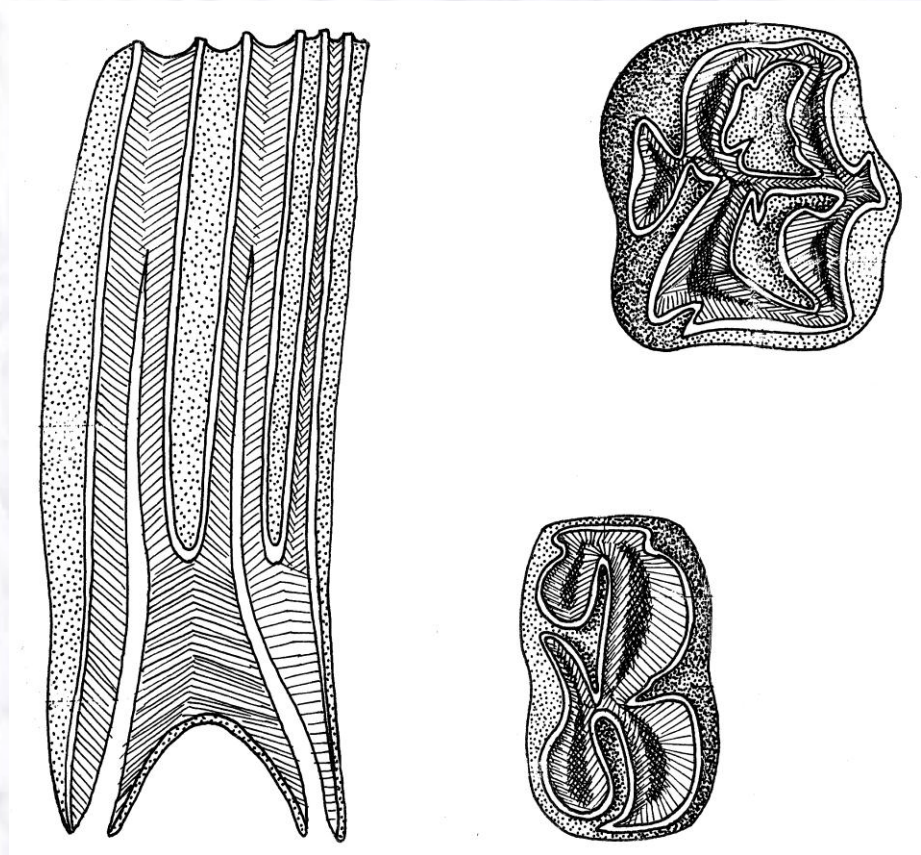


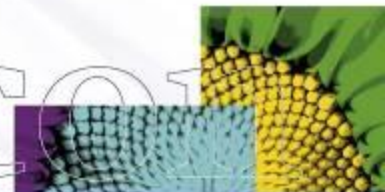
Helicon

Panda









Een bek vol tanden?

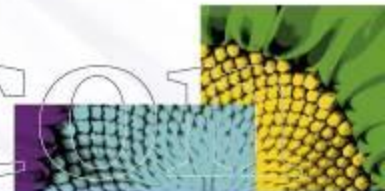
- Gebitstype wordt bepaald door 2 factoren:
- 1 gemeenschappelijk bouwplan taxonomische groep.
- 2 aanpassingen aan het dieet.



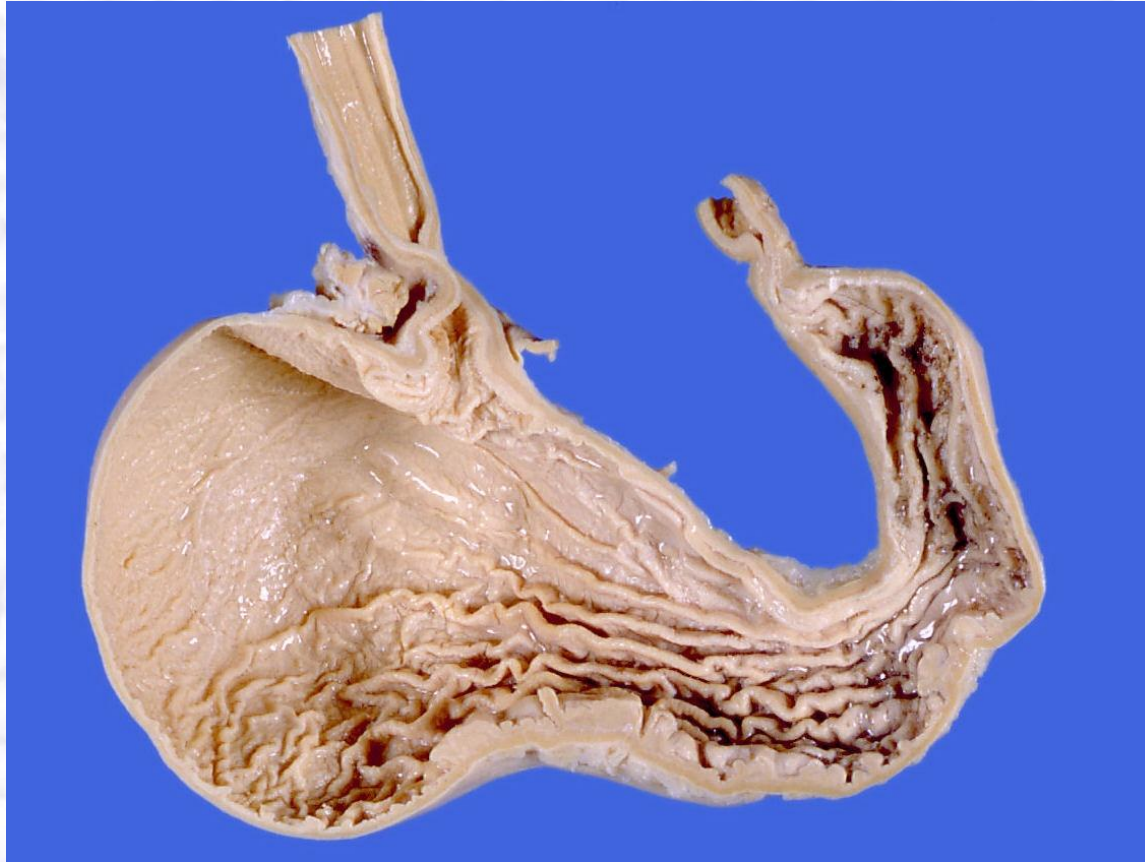
Maagsap is zuur

- En een koe heeft 4 magen....

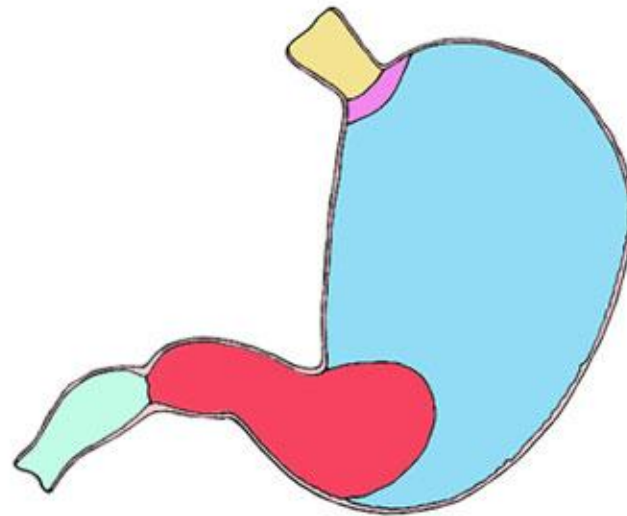
Helicon



Maagsap is zuur...



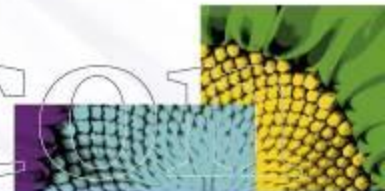
Maag van een hond



Mucosal Regions of the Stomach (Cat)

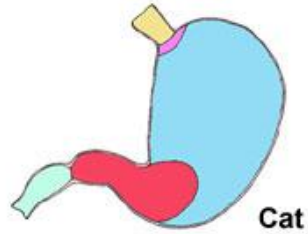
Maagzuur

- De aanwezigheid van zuurproducerende klieren in de gehele maagwand zorgt ervoor dat bacteriën in de maag worden gedood door het zure maagsap.

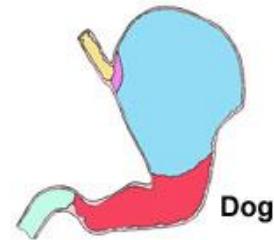


Mucosal Regions of the Stomach of Domestic Mammals

1. Glandular Stomachs:

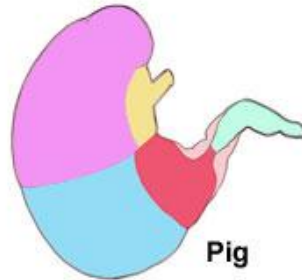


Cat

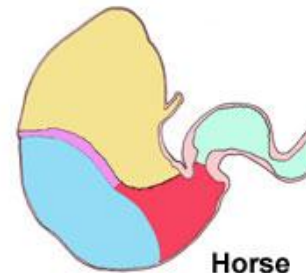


Dog

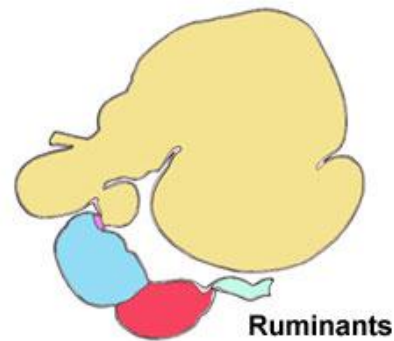
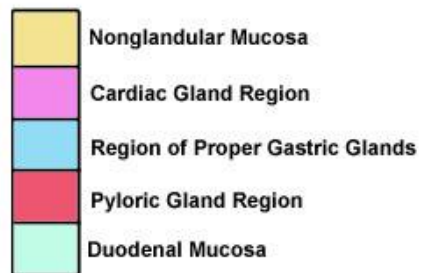
2. Composite Stomachs:



Pig



Horse

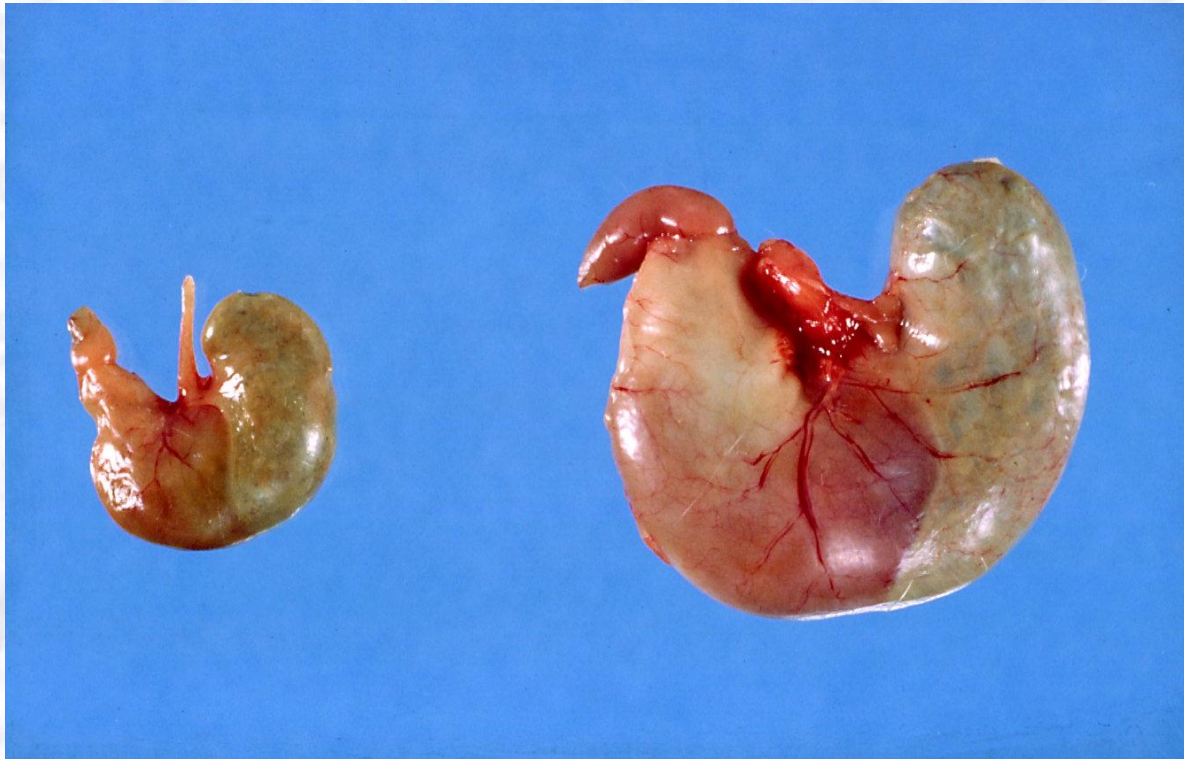


Ruminants

Paard

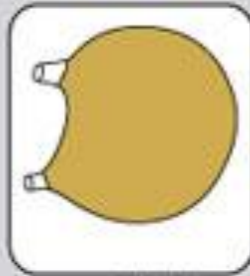


Rat en muis

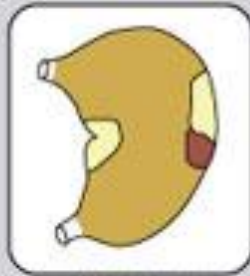


Zuur?

- In de delen van de maag die bekleed zijn met a-glandulair slijmvlies wordt geen zuur geproduceerd.
- Cardiaklieren produceren geen zuur.
- Grote delen van de maag kunnen dus een pH neutrale inhoud hebben, waar bacteriën kunnen groeien.



Echidna



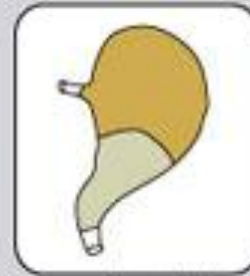
Scaly Anteater



Dolphin



Kangaroo



Armadillo



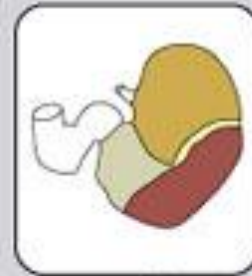
3-toed Sloth



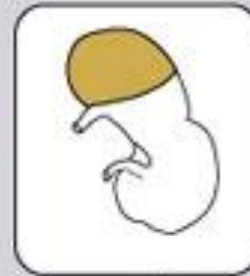
Colobus Monkey



Rat



Horse



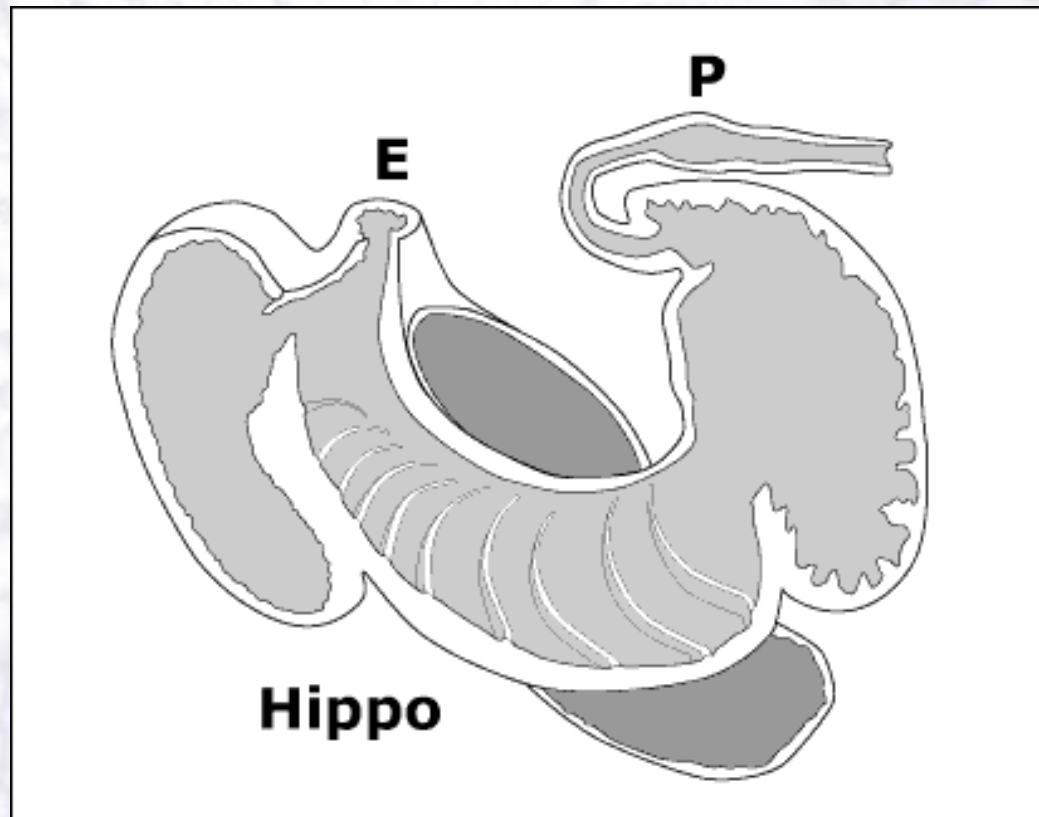
Hyrax

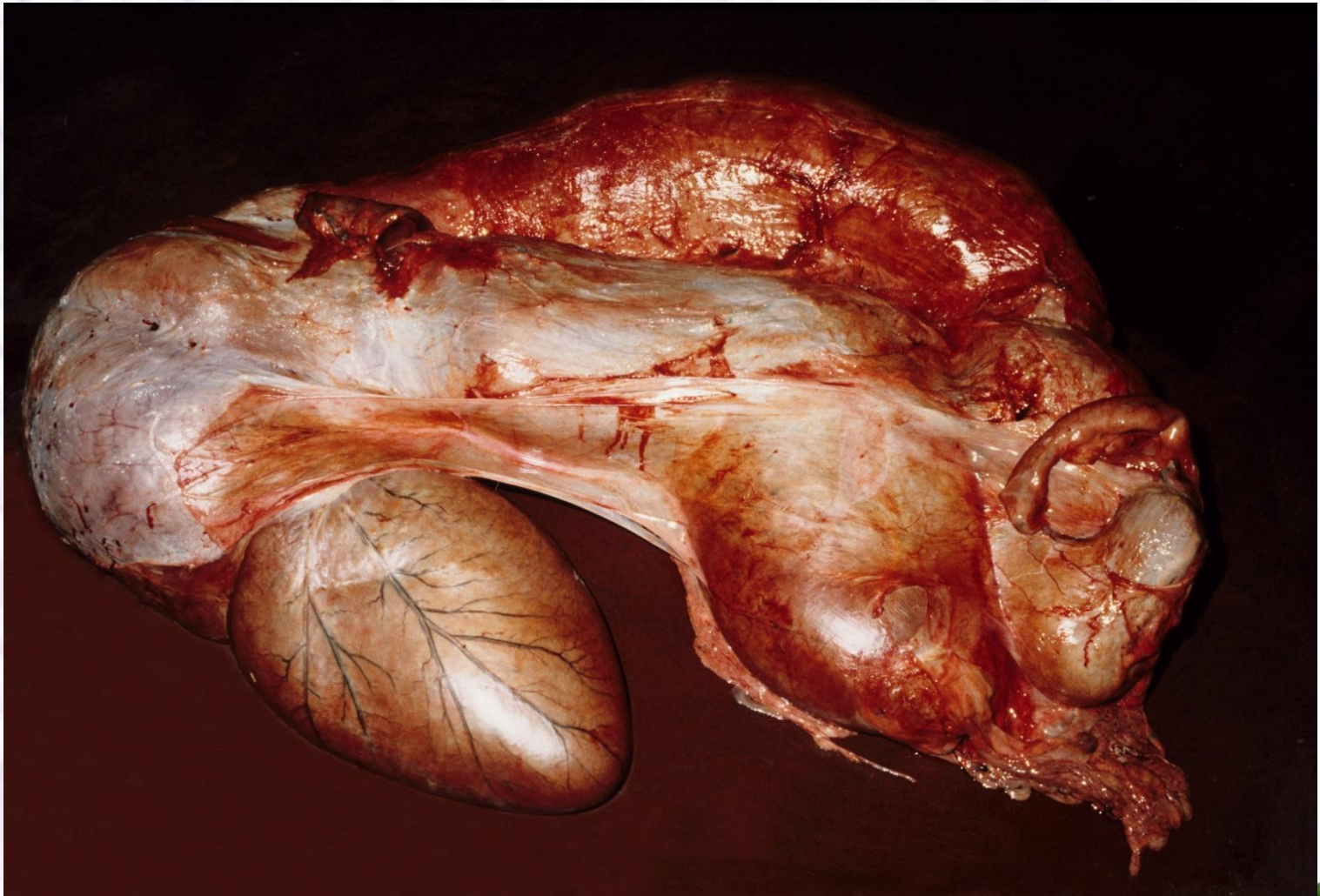
-  **Stratified Squamous Epithelium**
-  **Cardiac Gland Region**
-  **Proper Gastric Region**
-  **Pyloric Gland Region**

De maag

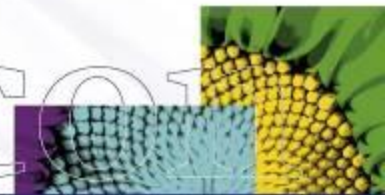
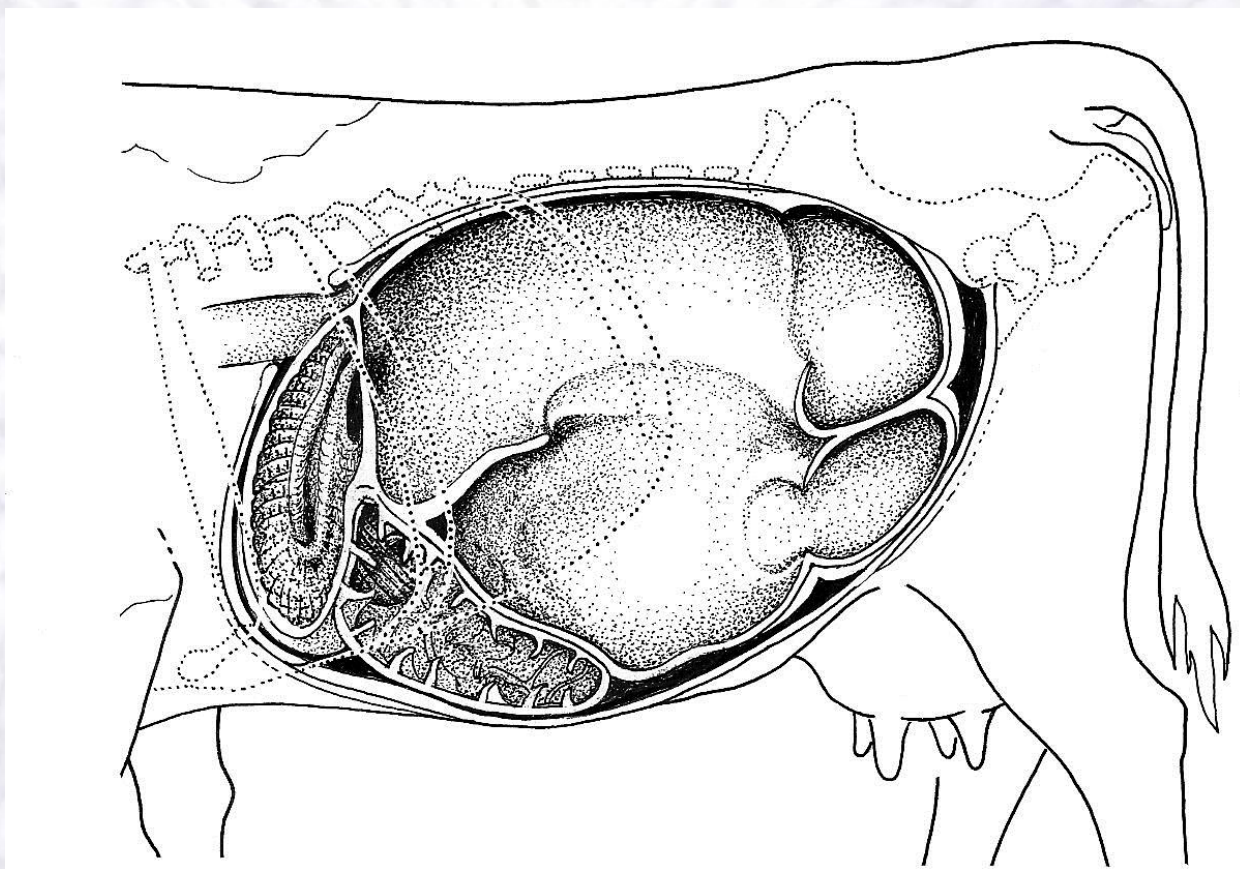
- Varken klein diverticulum
- Peccari twee diverticuli
- Babirusa groot diverticulum
- Nijlpaard twee enorme diverticuli

Nijlpaard

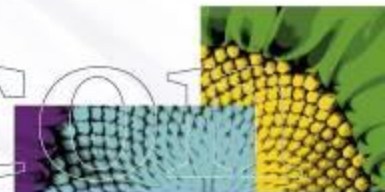


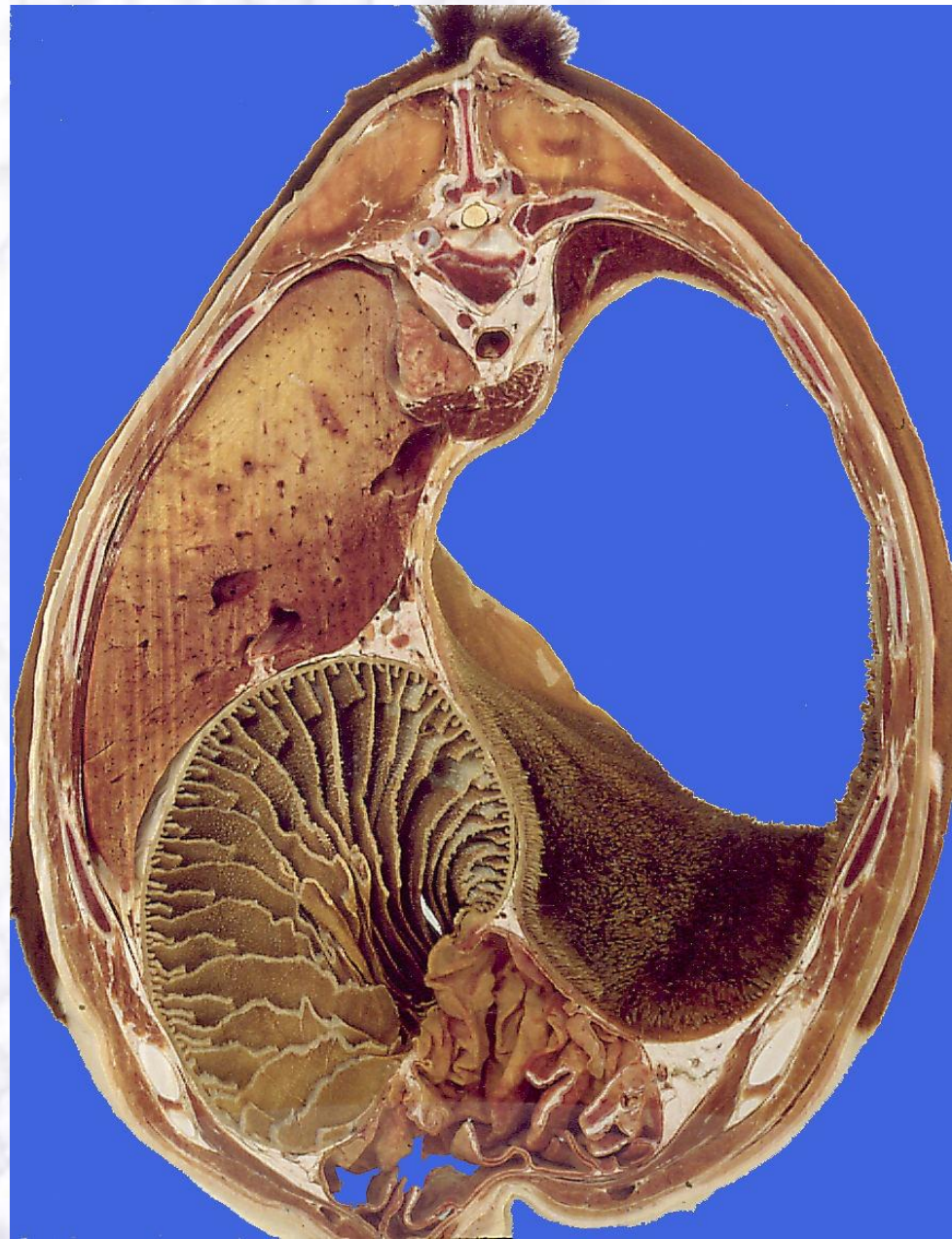


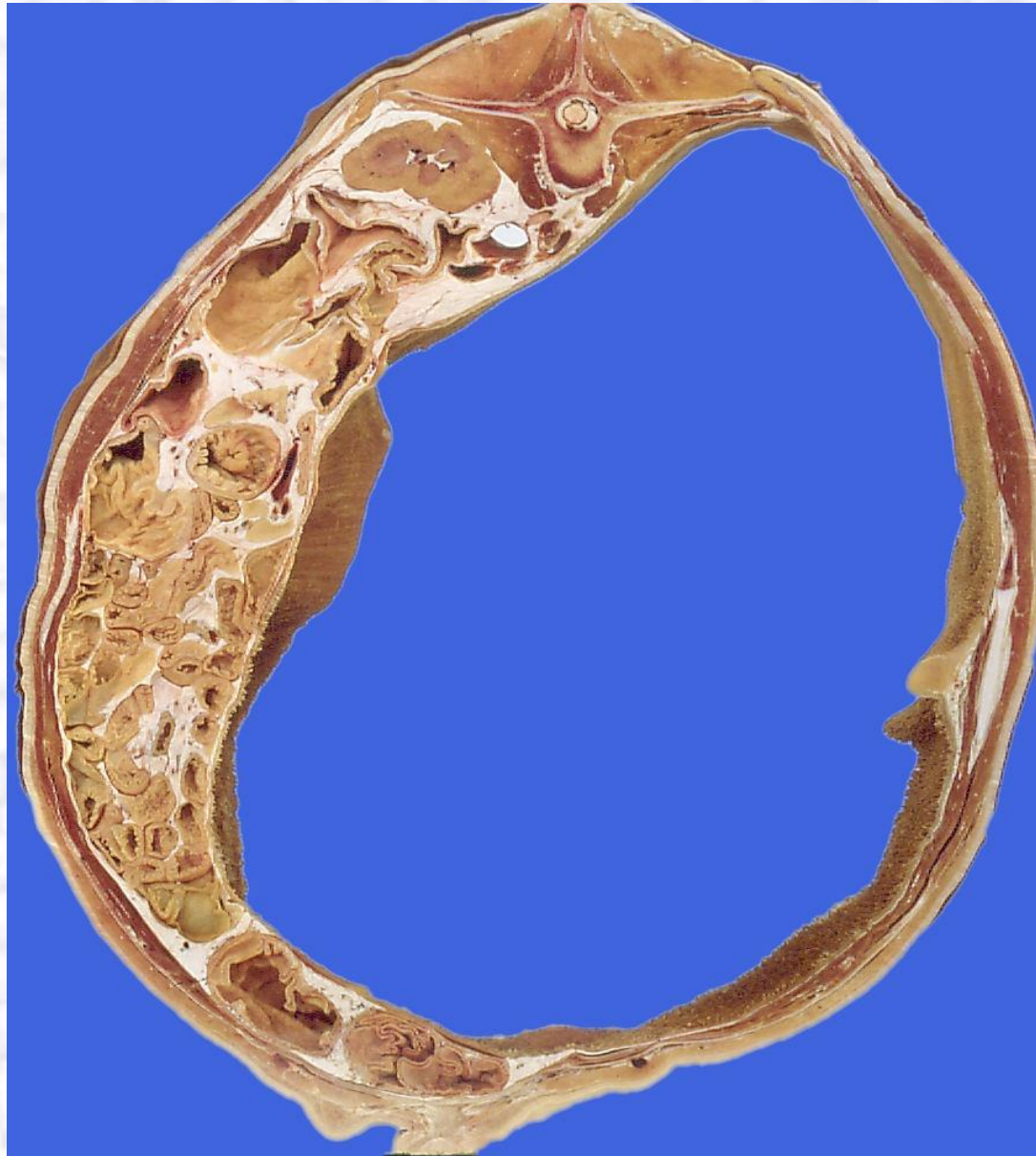


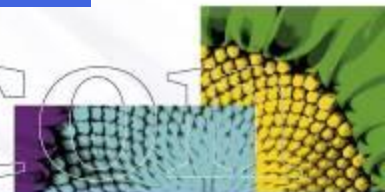


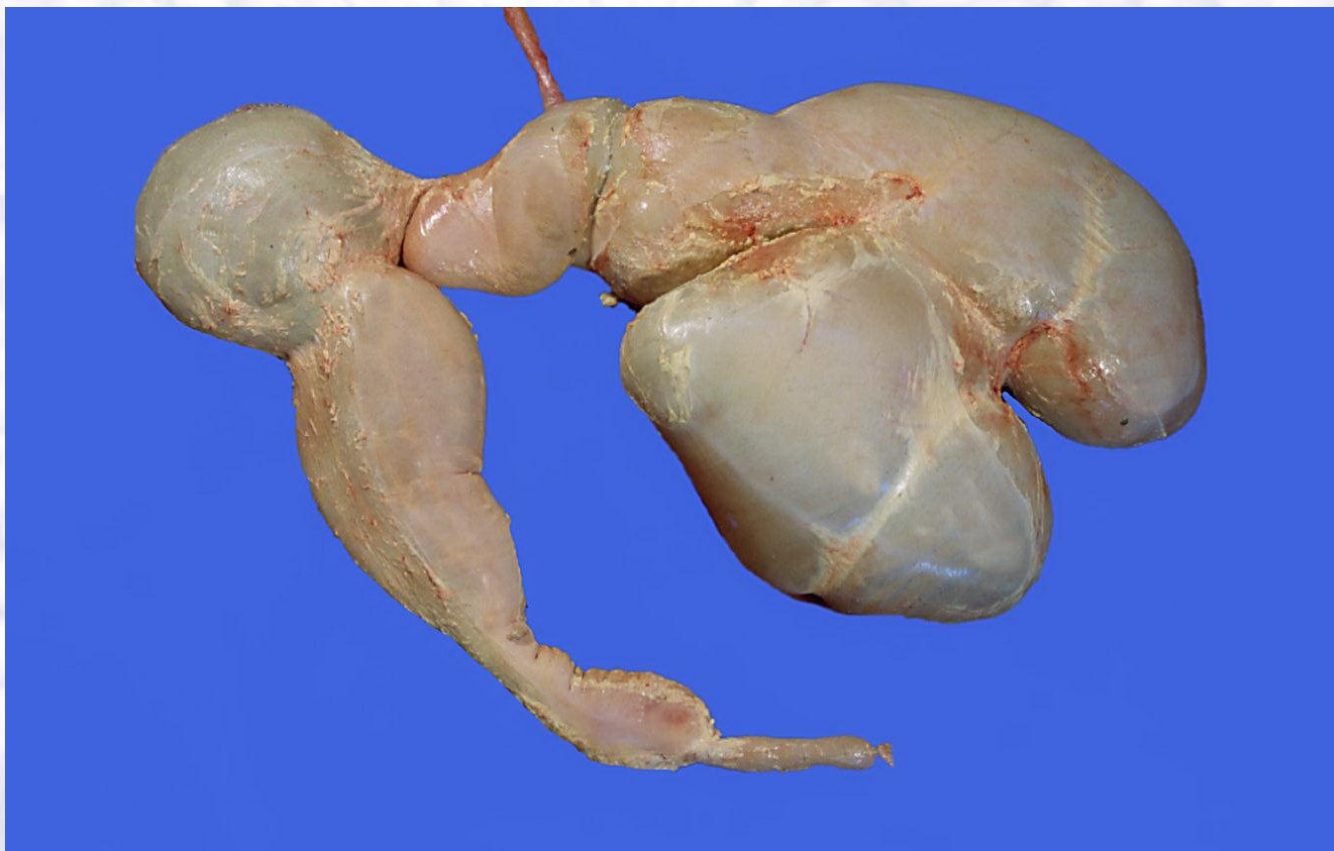








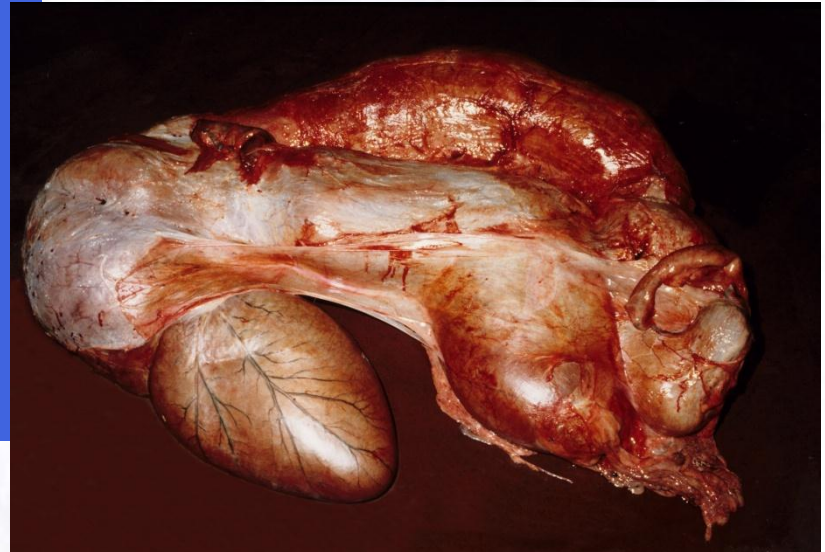




Herkauwersmaag?



Rund



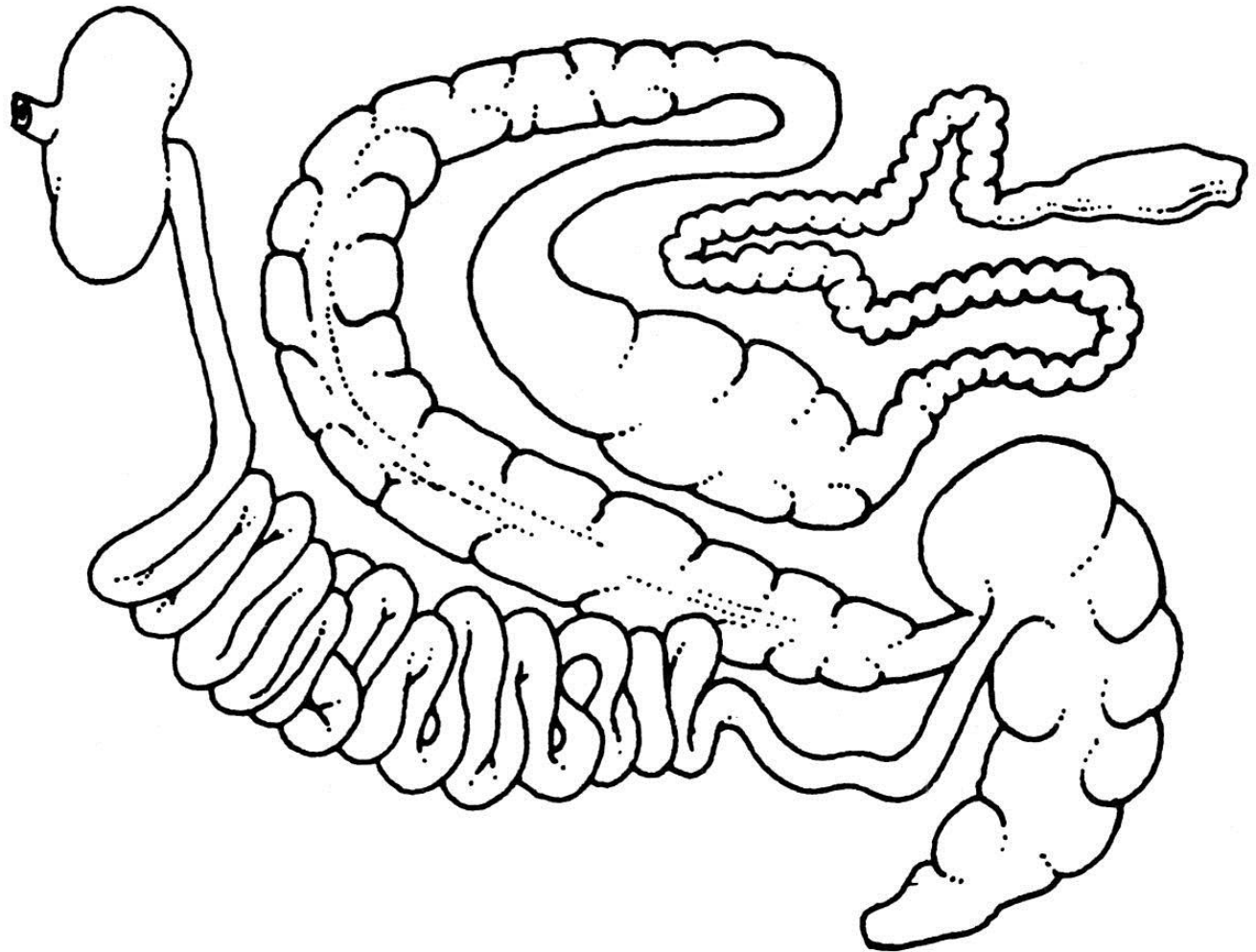
Nijlpaard

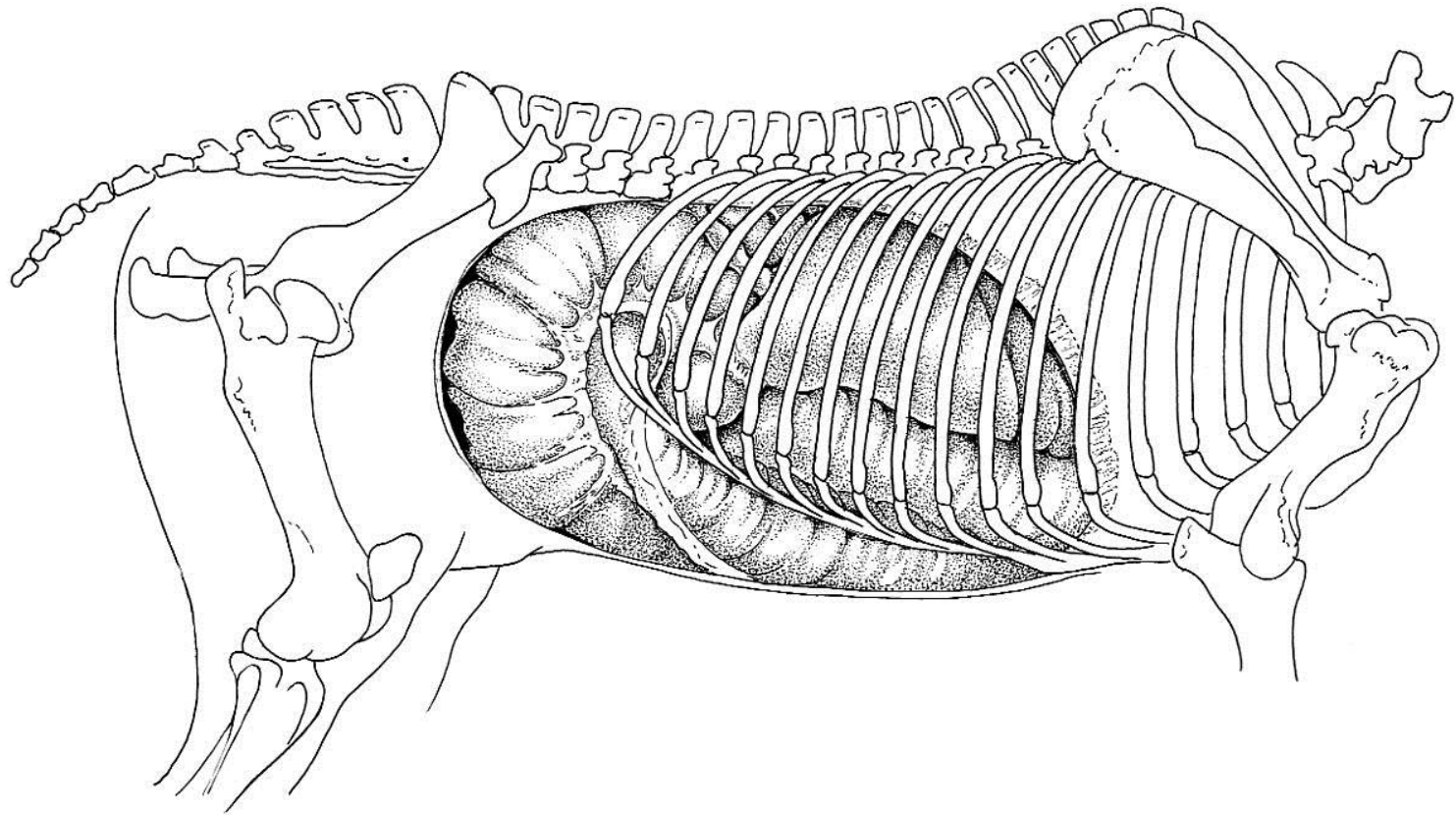


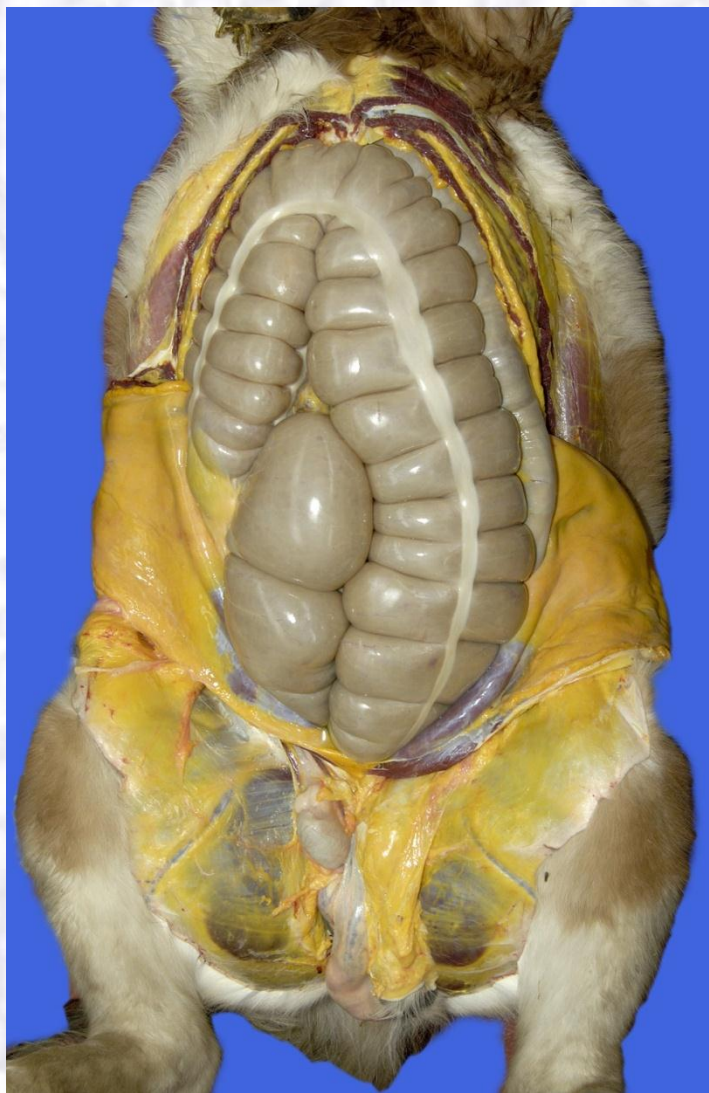




Rat









Konijn

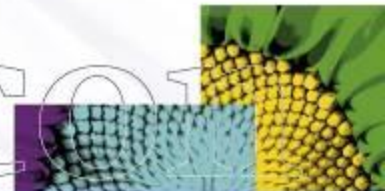
Ceci n'est pas un carnivore

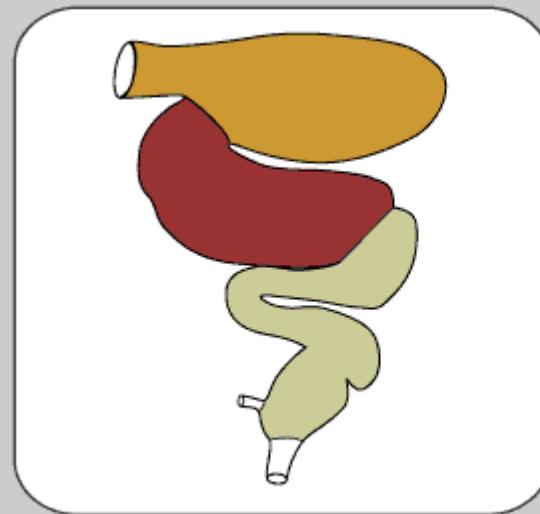


*Met dank aan
Fac. Diergeneeskunde Utrecht*

w.kersten@helicon.nl

Helicon





Dolphin

- Stratified Squamous Epithelium
- Cardiac Gland Region
- Proper Gastric Region
- Pyloric Gland Region

