PHARYNX, ESOPHAGUS, STOMACH

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DEPARTMENT OF ANATOMY AND HISTOLOGY

25TH MARCH 2019

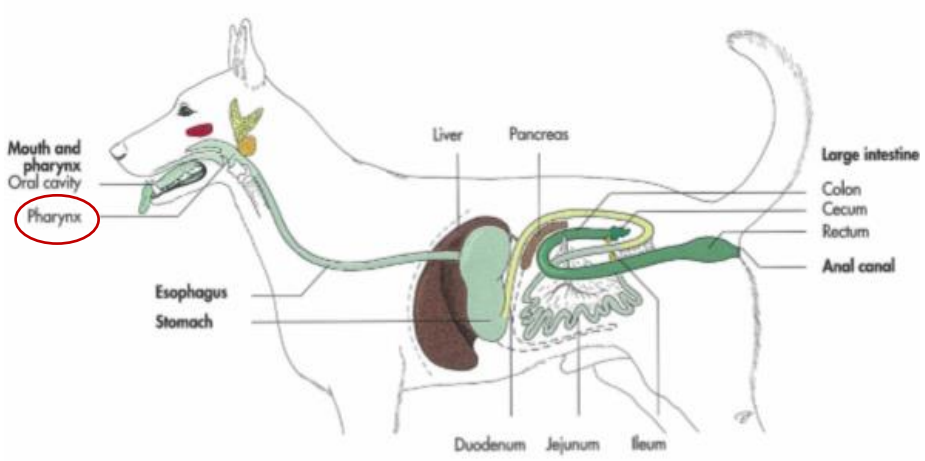
PHARYNX

- **musculo – membranous passage**

connects:

a. the oral cavity with the esophagus

b. the nasal cavity with the larynx



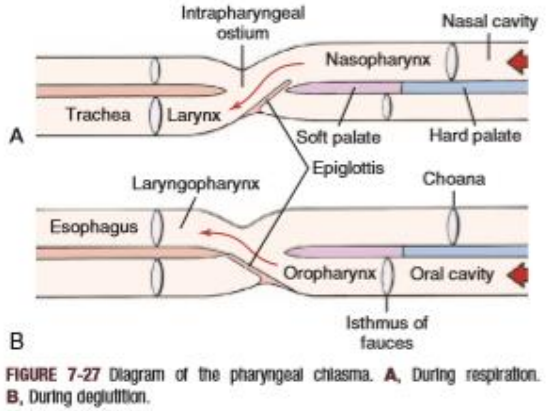
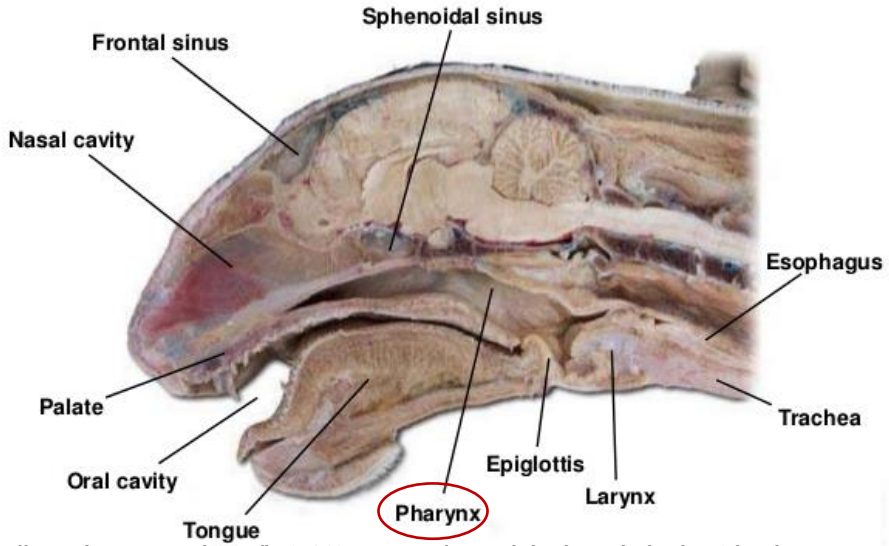
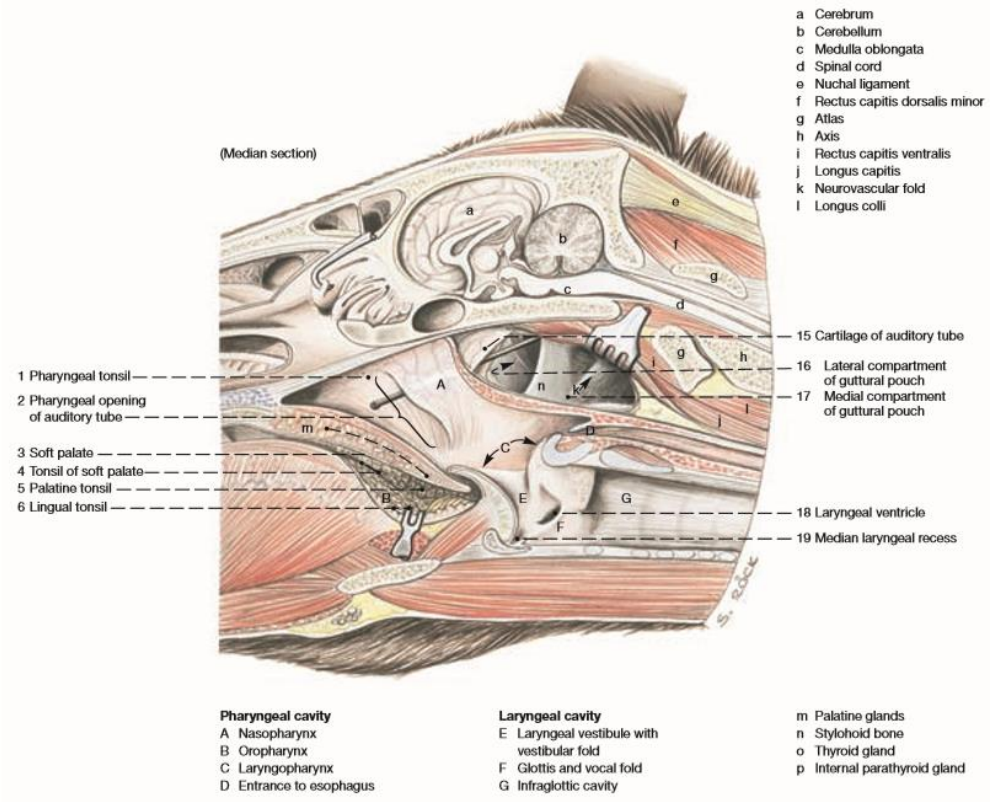


FIGURE 7-27 Diagram of the pharyngeal chiasma. **A**, During respiration. **B**, During deglutition.

http://bvetmed1.blogspot.com/2013/02/tongue-hyoid-pharynx-deglutition_22.html



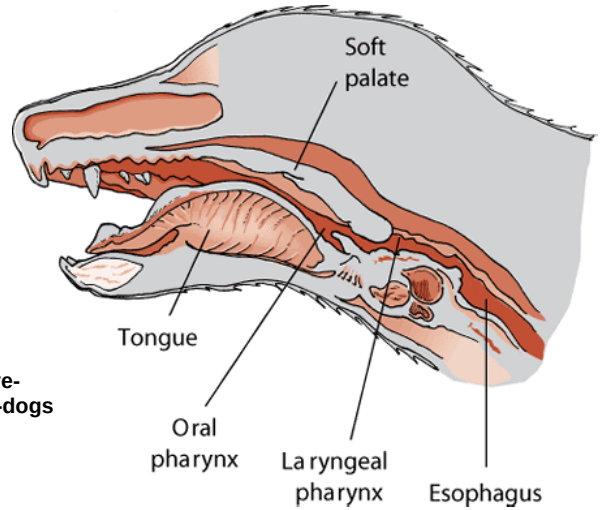
https://www.imagenesmi.com/im%C3%A1genes/cat-epiglottis-and-glottis-50.html



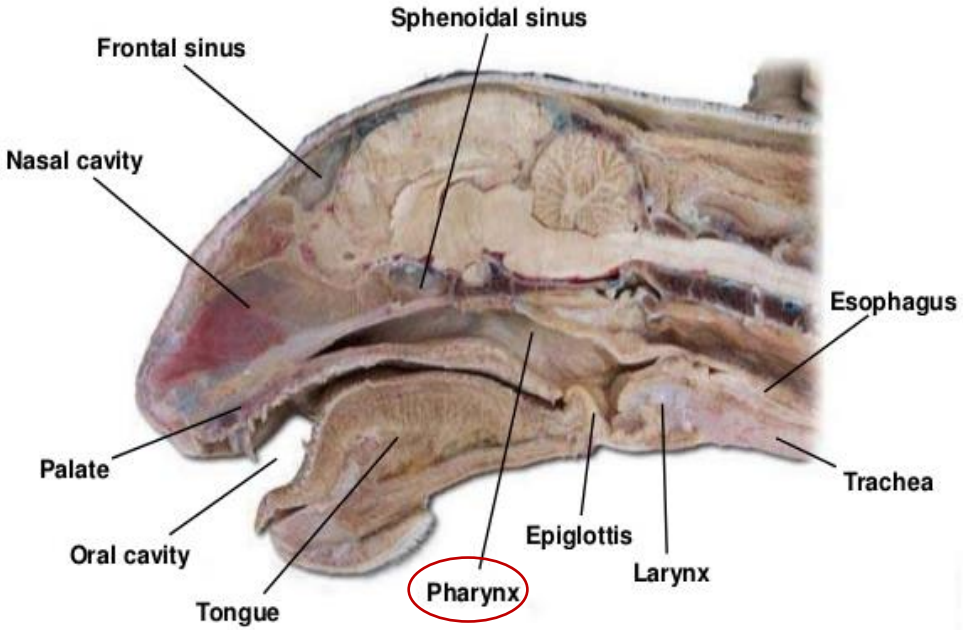
PHARYNX

PARTS OF THE PHARYNX:

1. **roof**
2. **lateral walls**
3. **rostral portion**
4. **floor**



https://www.msdvetmanual.com/dog-owners/digestive-disorders-of-dogs/disorders-of-the-pharynx-throat-in-dogs



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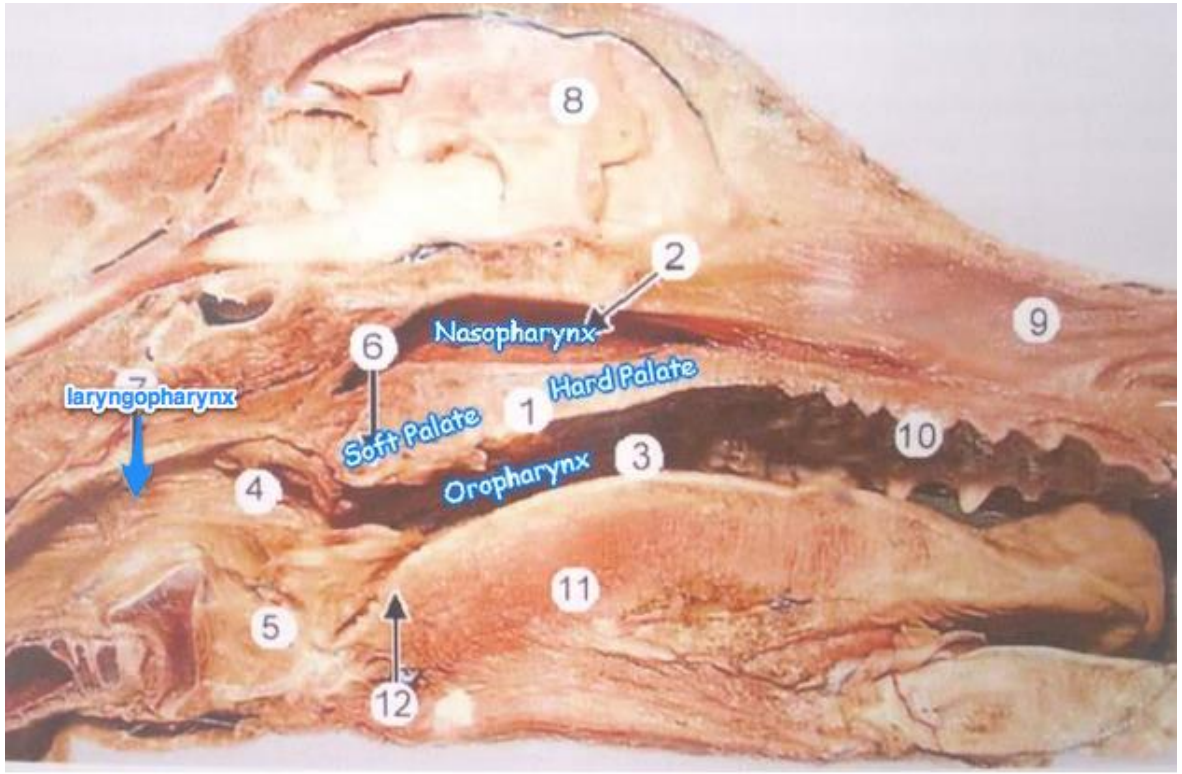

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PHARYNX

ROOF OF THE PHARYNX:

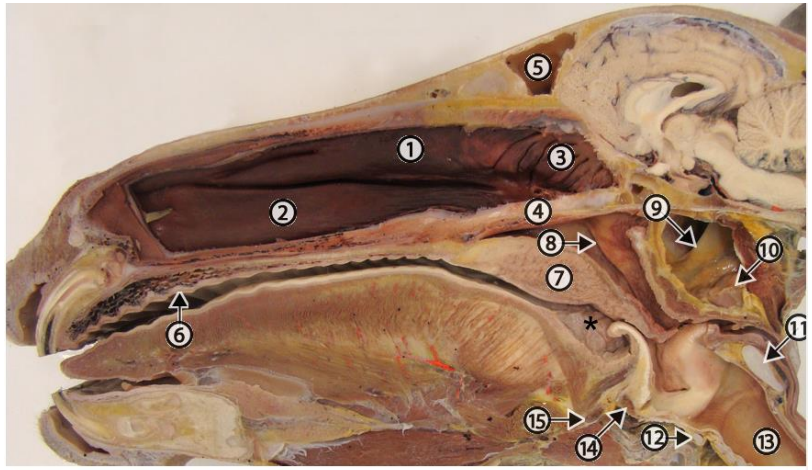
– releated to the basis cranii, vomer and corpus sphenoidalis

a. in Car – extends to the C2

b. in Eq 19 – 20 cm, rostral third of roof attached to the basis cranii, caudal two-thirds releated to the guttural pouches

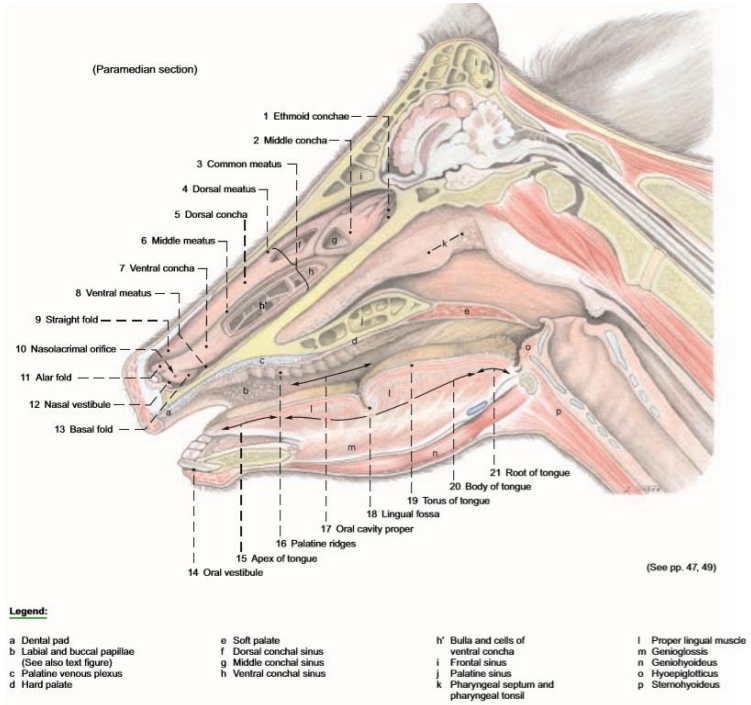
c. in Ru, short, not extend caudally beyond the base of the skull

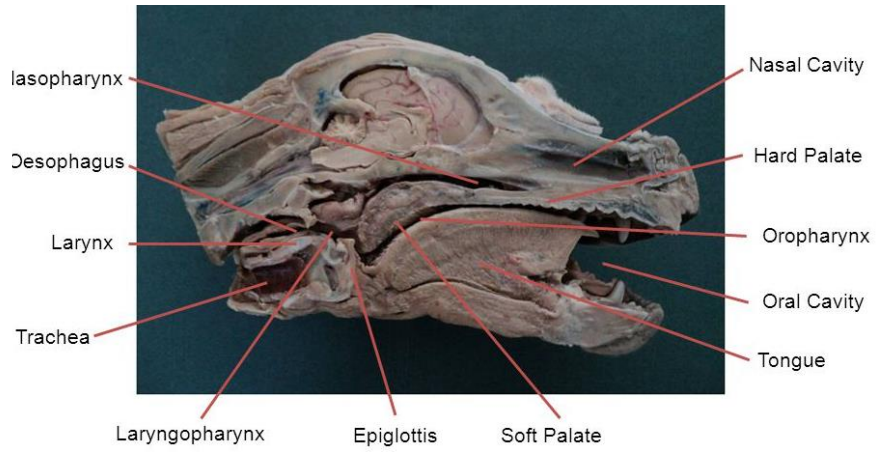
d. in Su extends to the level of axis



Equine split head after removal of the nasal septum to expose the nasal cavity. 1, dorsal concha; 2, ventral concha; 3 ethmoidal conchas; 4, vomer (bone); 5, frontal sinus; 6, hard palate; 7, soft palate; 8, orifice of the auditory tube on the lateral wall of the nasopharynx. At this place, an endoscope can be passed into the guttural pouch. 9, stylohyoid bone; 10, medial retropharyngeal lymph nodes adjacent to the ventral wall of the guttural pouch; 11, cricoid cartilage; 12, cricoid cartilage (ventral), 13, trachea; 14, ossified rostral edge of the thyroid cartilage; 15, basihyoid bone; asterisk, palatine tonsil.

http://vanat.cvm.umn.edu/ungDissect/Lab20/Img20-2.html





https://markylla.eu/the-respiratory-system-nasal-cavity-pharynx-larynx.html

PHARYNX

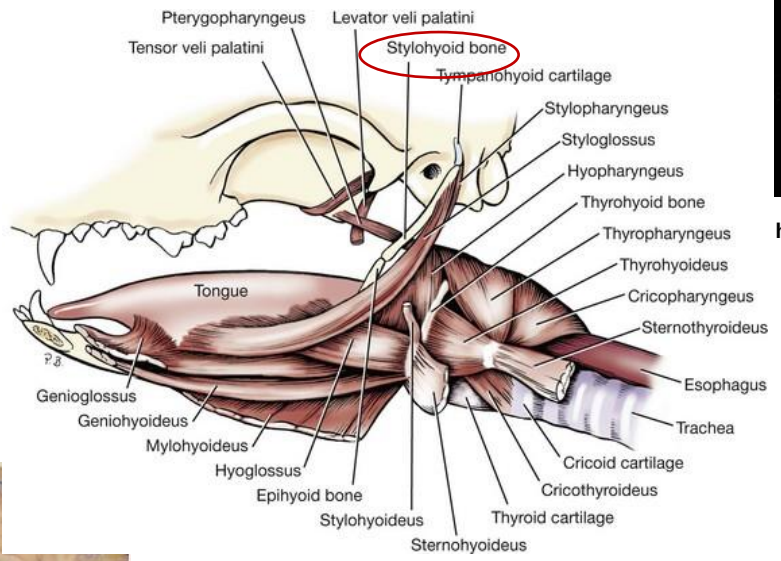
LATERAL WALLS OF THE PHARYNX:

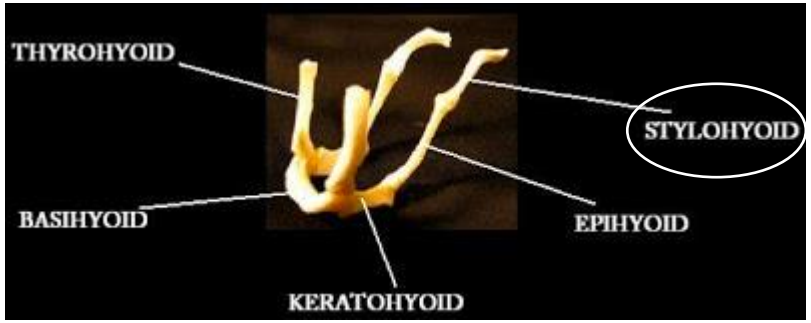
releated to:

a. **the stylohyoid**

b. **the pterygoid muscles**

c. **in Eq – the guttural pouches**





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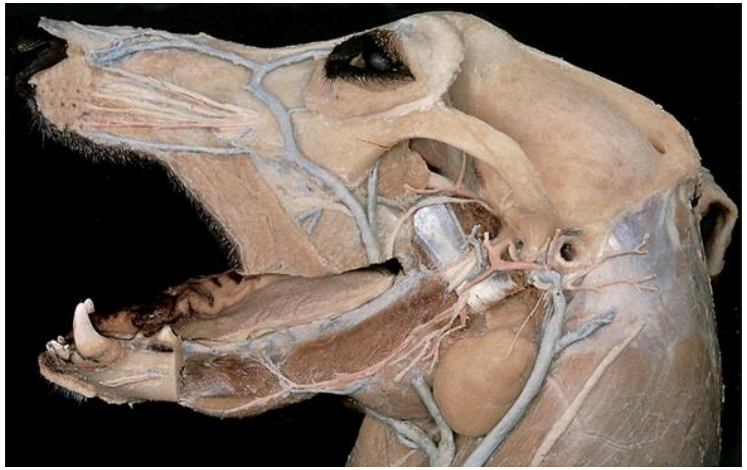
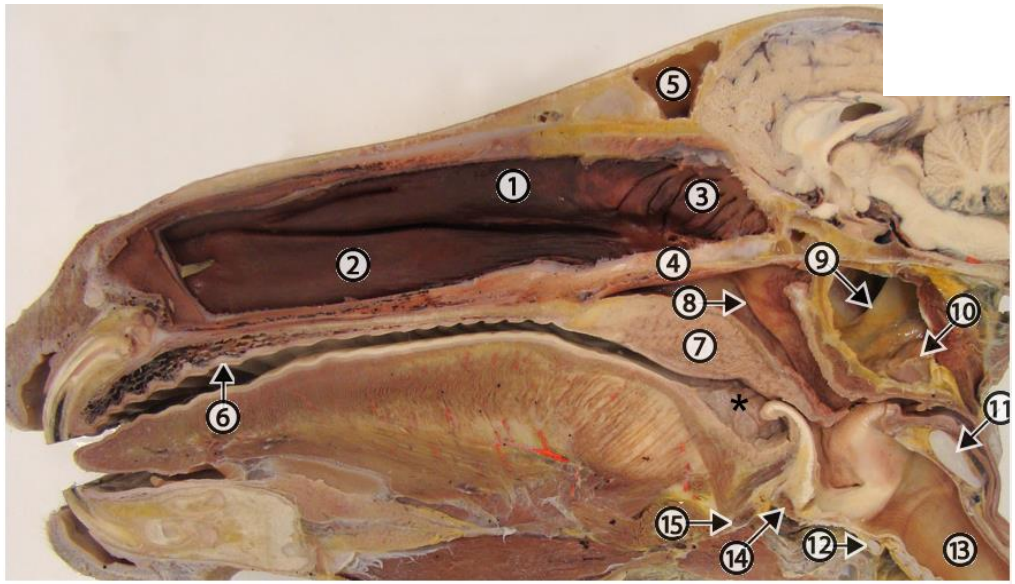
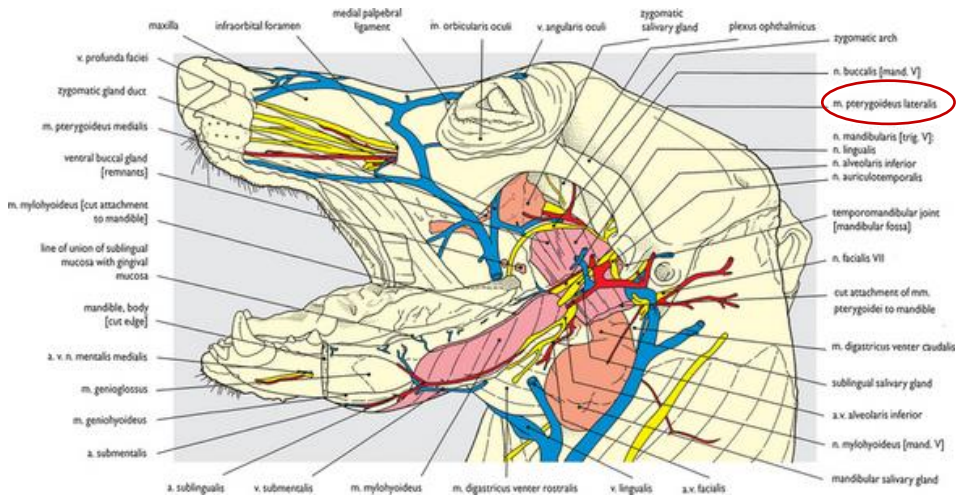




Equine split head after removal of the nasal septum to expose the nasal cavity. 1, dorsal concha; 2, ventral concha; 3 ethmoidal conchas; 4, vomer (bone); 5, frontal sinus; 6, hard palate; 7, soft palate; 8, orifice of the auditory tube on the lateral wall of the nasopharynx. At this place, an endoscope can be passed into the guttural pouch. 9, stylohyoid bone; 10, medial retropharyngeal lymph nodes adjacent to the ventral wall of the guttural pouch; 11, cricoid cartilage; 12, cricoid cartilage (ventral), 13, trachea; 14, ossified rostral edge of the thyroid cartilage; 15, basihyoid bone; asterisk, palatine tonsil.

http://vanat.cvm.umn.edu/ungDissect/Lab20/Img20-2.html



https://veteriankey.com/head/

PHARYNX

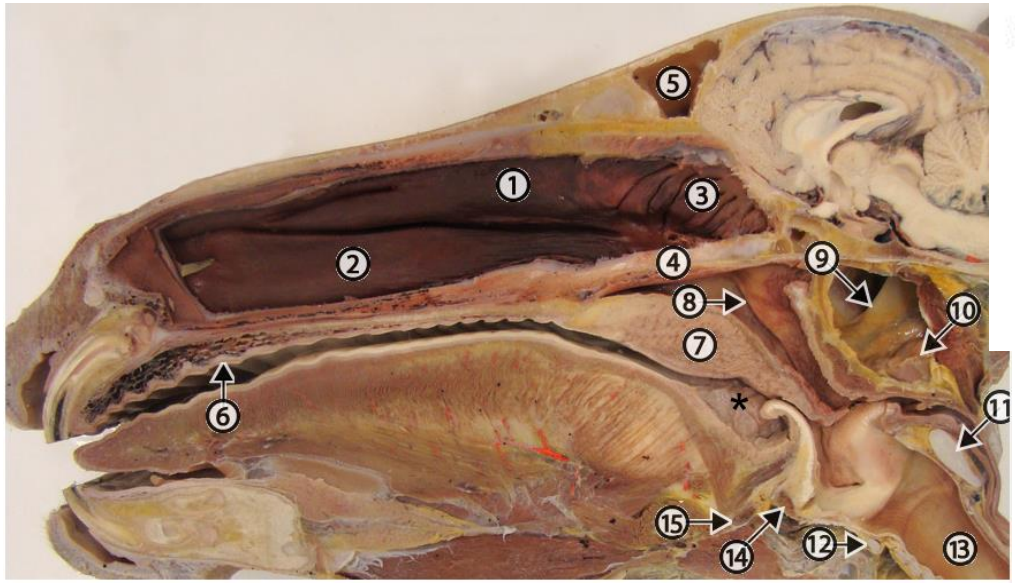
FLOOR OF THE PHARYNX:

extends:

a. from the root of the tongue

b. over and around the laryngeal entrance

c. to the level of the cricoid cartilage



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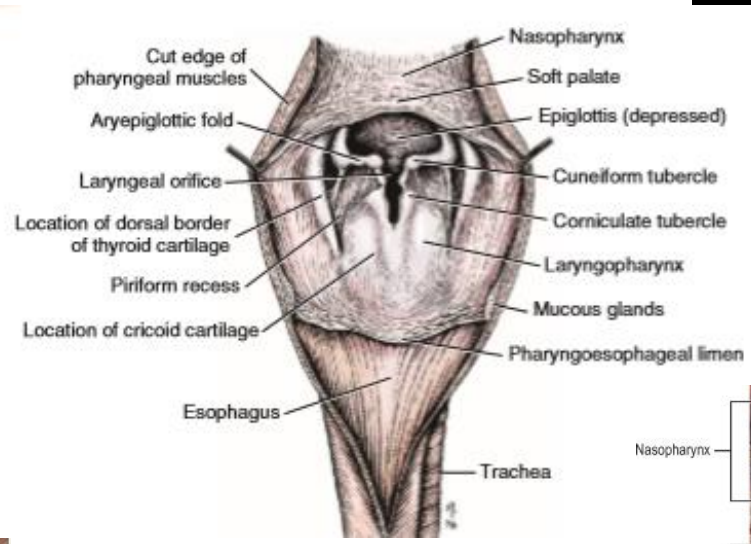
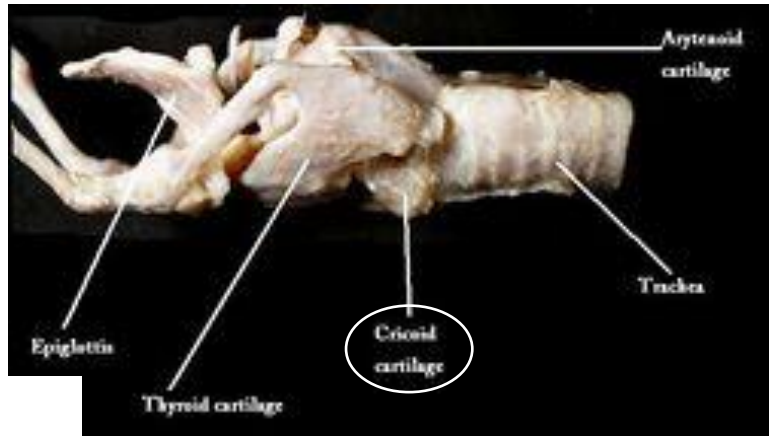
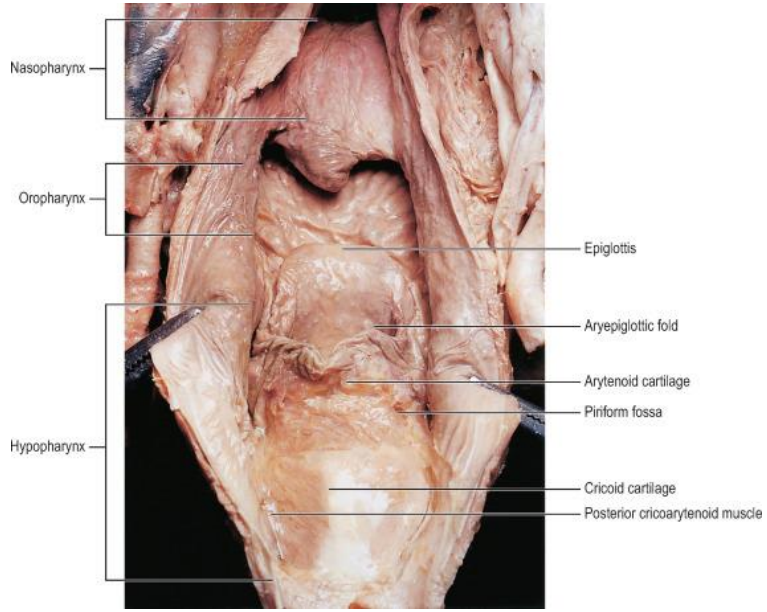




https://en.wikivet.net/Larynx_-_Anatomy_%26_Physiology



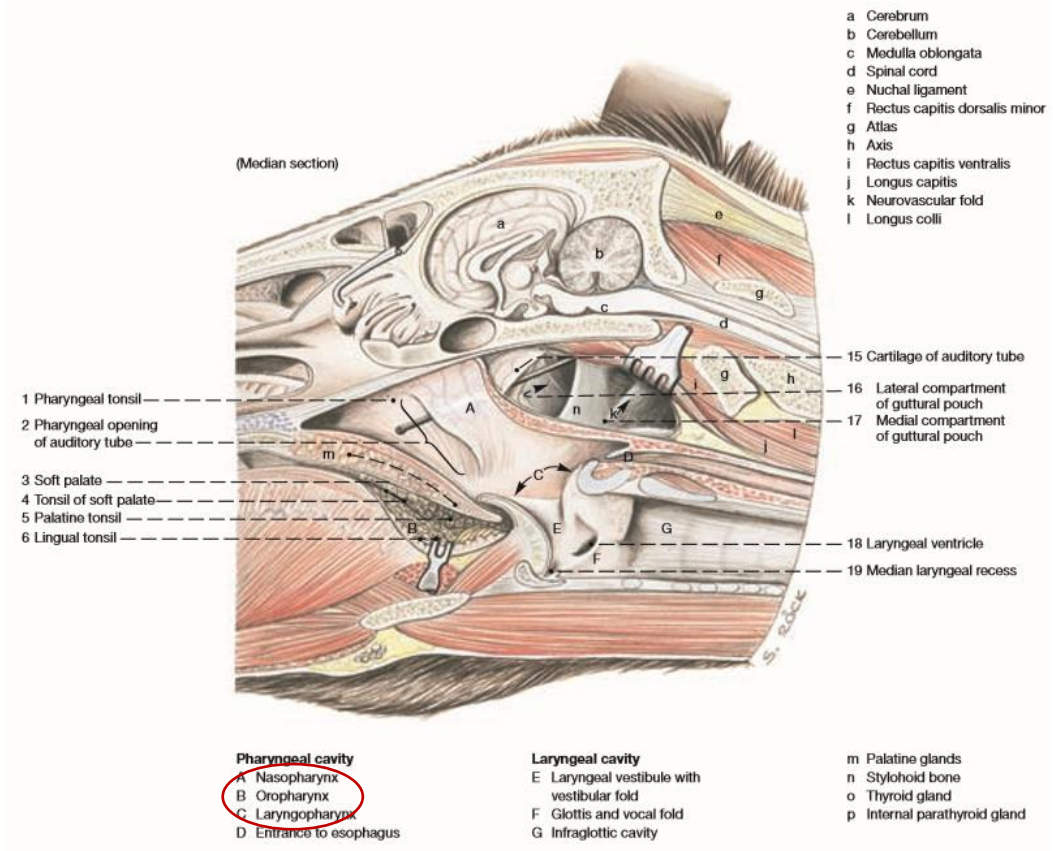
https://www.sciencedirect.com/topics/veterinary-science-and-veterinary-medicine/vocal-ligament

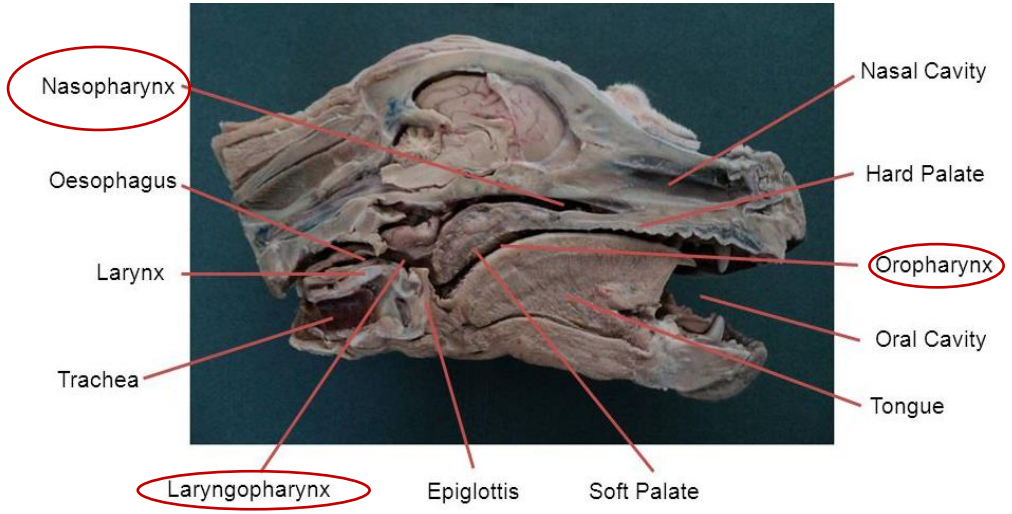
PHARYNX

ROSTRAL PORTION OF THE PHARYNGEAL CAVITY (CAVUM PHARYNGIS):

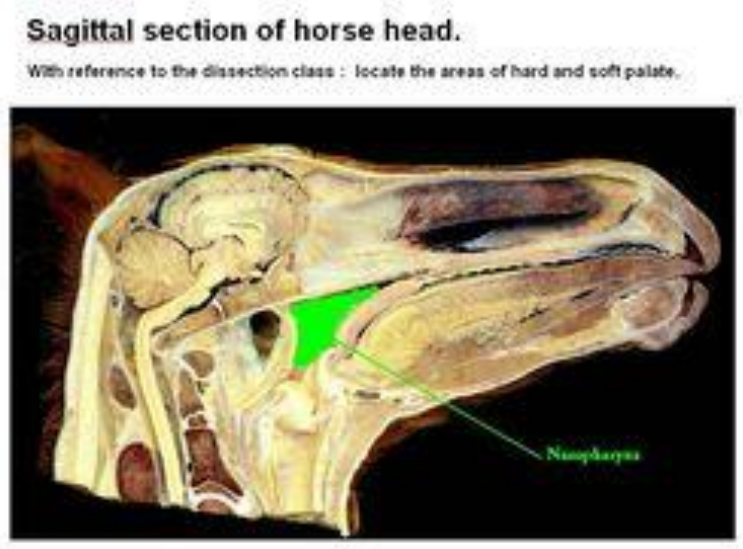
- **devided by the soft palate into:**

1. **PARS NASALIS PHARYNGIS (NASOPHARYNX)**
2. **PARS ORALIS PHARYNGIS (OROPHARYNX)**
3. **PARS LARYNGEA PHARYNGIS (LARYNGOPHARYNX)**





https://markylla.eu/the-respiratory-system-nasal-cavity-pharynx-larynx.html



https://en.wikivet.net/Pharynx_-_Anatomy_%26_Physiology

PHARYNX

INTRAPHARYNGEAL OPENING (OSTIUM INTRAPHARYNGEUM):

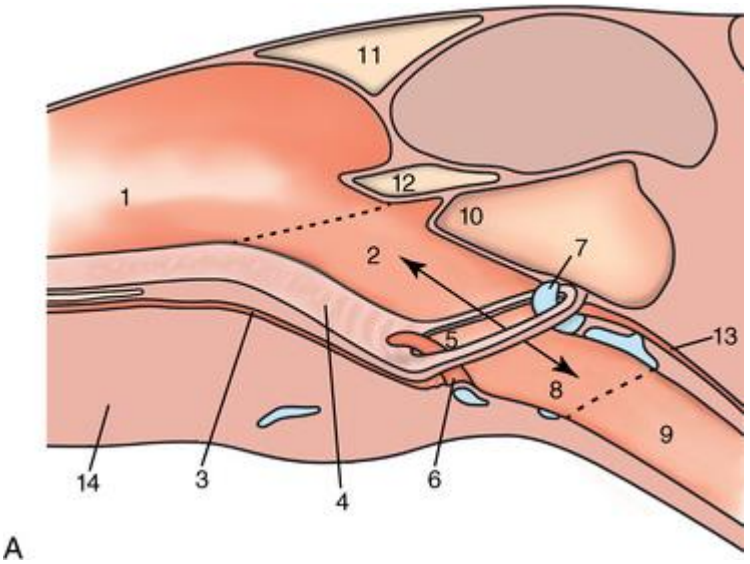
- located above the entrance of larynx (aditus laryngis)

surrounded by:

a. the free border of the soft palate

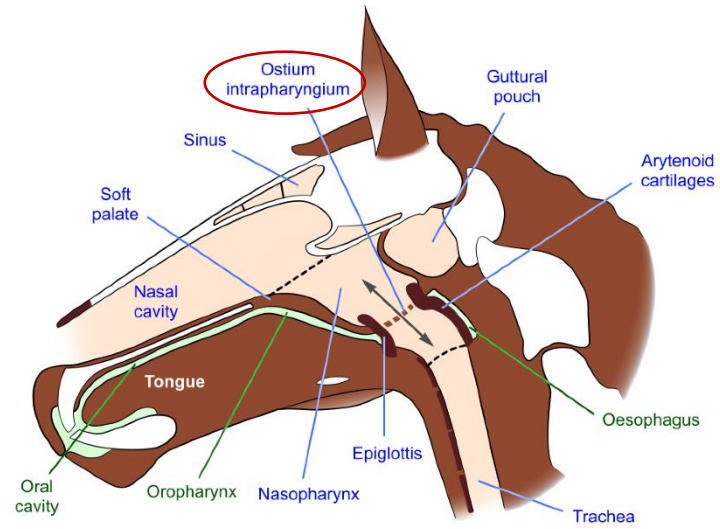
b. palatopharyngeal arches

- through the ostium the nasopharynx communicates with the laryngopharynx

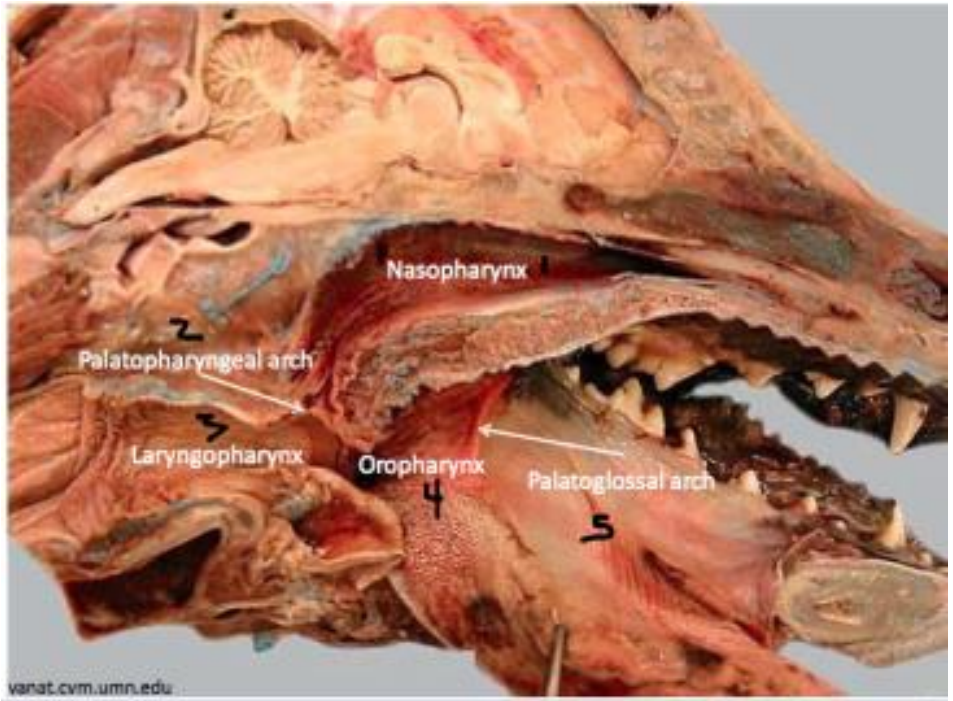


Lateral view of the pharyngolaryngeal area during (*A*) normal breathing,(l: nasal cavity; 2: nasopharynx; 3: oropharynx; 4: soft palate; 5: intrapharyngeal ostium ("button hole"); 6: epiglottis; 7: corniculate cartilage; 8: larynx; 9: trachea; 10: guttural pouch; 11: frontal sinus; 12: sphenopalatine sinus; 13: esophagus; 14: tongue; 15: food bolus; 16: closed larynx; 17: endoscope.)
(Modified with permission from Cook WR:* Specifications for speed in the racehorse: in the airflow factors, *Menasha, WI, 1989, Russell Meerdink.)

https://veteriankey.com/the-respiratory-system-anatomy-physiology-and-adaptations-to-exercise-and-training/



https://www.mdpi.com/2076-2615/7/6/41/htm



https://www.studyblue.com/notes/note/n/anatomy-ii-exam-2/deck/17495593

PHARYNX

OPENINGS OF THE PHARYNGEAL CAVITY (CAVUM PHARINGIS):

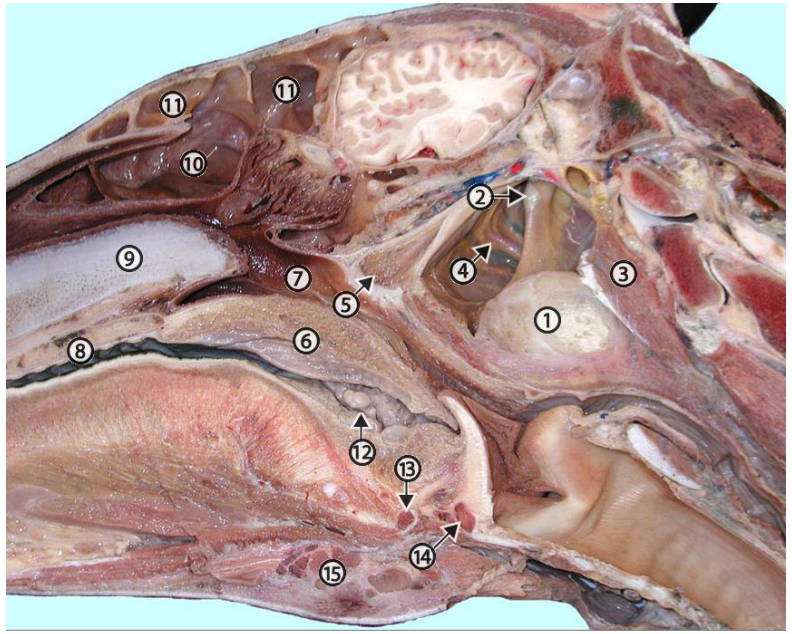
1. CHOANAE:

- rostrodorsally

- connect the nasopharynx with the nasal cavity

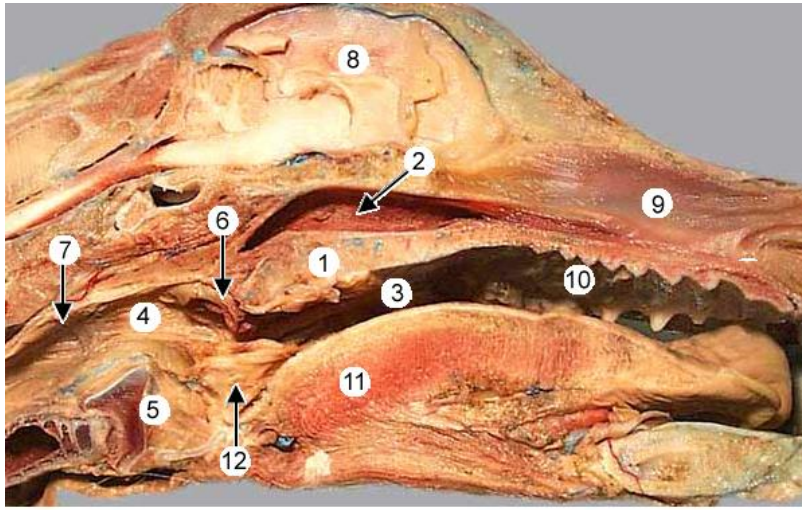
The choanae (internal nostrils) of a cat, indicated by the dashed lines and bounded by the vomer (blue gray) and the palatine bone (orange)

https://en.wikipedia.org/wiki/Choana



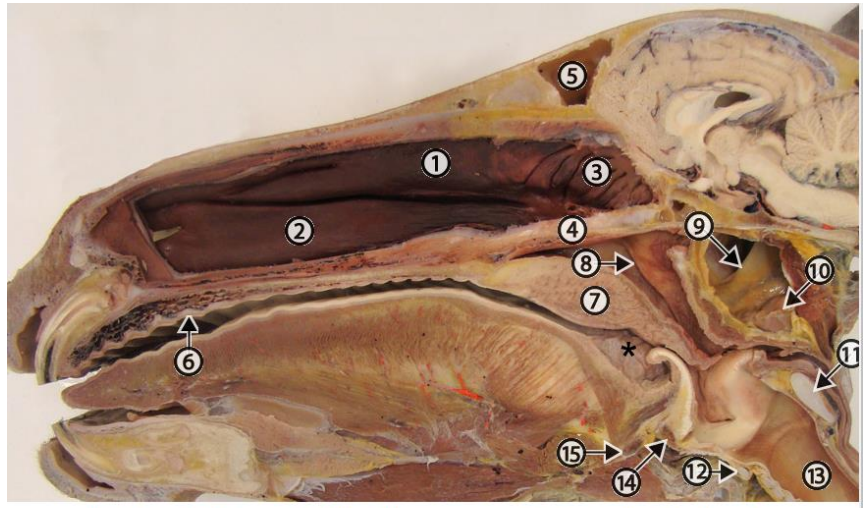
Equine split head with a large strangles abscess (1) on the ventral aspect of the guttural pouch. 2, temporohyoid joint; 3, longus capitis m.; 4, maxillary artery; 5, auditory tube; 6, soft palate; 7, nasopharynx; 8, hard palate; 9, cartilage of nasal septum; 10, dorsal conchal sinus; 11, frontal sinus; 12, palatine tonsil; 13, basihyoid bone; 14, ossified rostral edge of the thyroid cartilage; 15, mandibular lymph nodes.

http://vanat.cvm.umn.edu/ungDissect/Lab20/Img20-5.html



Bisected canine head. The pharynx is subdivided by the **soft palate** (1) into a **nasopharynx** (2), an **oropharynx** (3), and a **laryngopharynx** (4). The latter is located caudal to the soft palate and dorsal to the larynx (5). The **palatopharyngeal arch** (6) marks the caudal end of the soft palate. The **pharyngoesophageal limen** (7) marks the boundary between the pharynx and esophagus.

Identify: brain (8) in the cranial cavity, nasal septum (9), hard palate (10), root of the tongue (11) and epiglottis (12). **http://vanat.cvm.umn.edu/carnLabs/Lab22/Img22-9.html**



Equine split head after removal of the nasal septum to expose the nasal cavity. 1, dorsal concha; 2, ventral concha; 3 ethmoidal conchas; 4, vomer (bone); 5, frontal sinus; 6, hard palate; 7, soft palate; 8, orifice of the auditory tube on the lateral wall of the nasopharynx. At this place, an endoscope can be passed into the guttural pouch. 9, stylohyoid bone; 10, medial retropharyngeal lymph nodes adjacent to the ventral wall of the guttural pouch; 11, cricoid cartilage; 12, cricoid cartilage (ventral), 13, trachea; 14, ossified rostral edge of the thyroid cartilage; 15, basihyoid bone; asterisk, palatine tonsil. **http://vanat.cvm.umn.edu/ungDissect/Lab20/Img20-2.html**

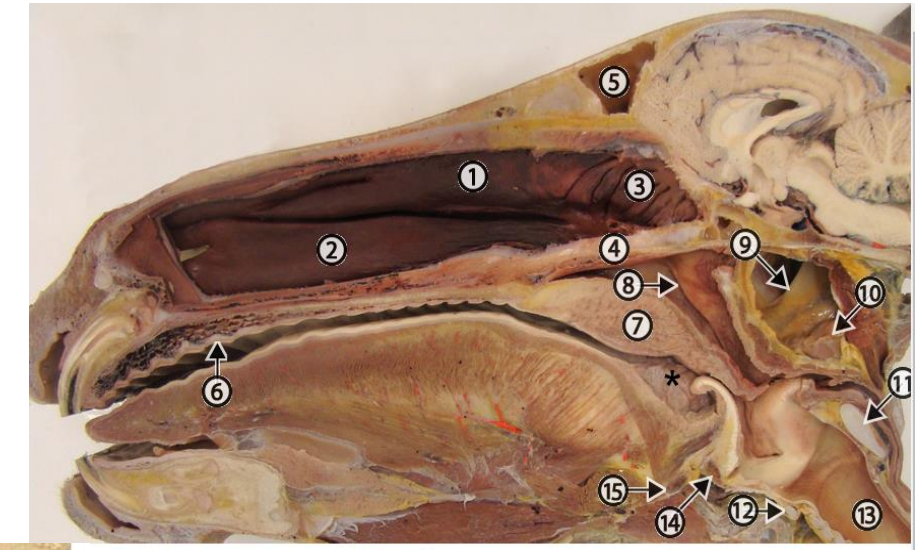
PHARYNX

OPENINGS OF THE PHARYNGEAL CAVITY (CAVUM PHARINGIS):

2. PHARYNGEAL OPENING OF THE AUTIDORY TUBES

(OSTIUM PAHRYNGEUM TUBAE AUDITIVAE EUSTACHI):

- **dorsolaterally**
- **connect the nasopharynx with the tuba auditiva with the middle ears**



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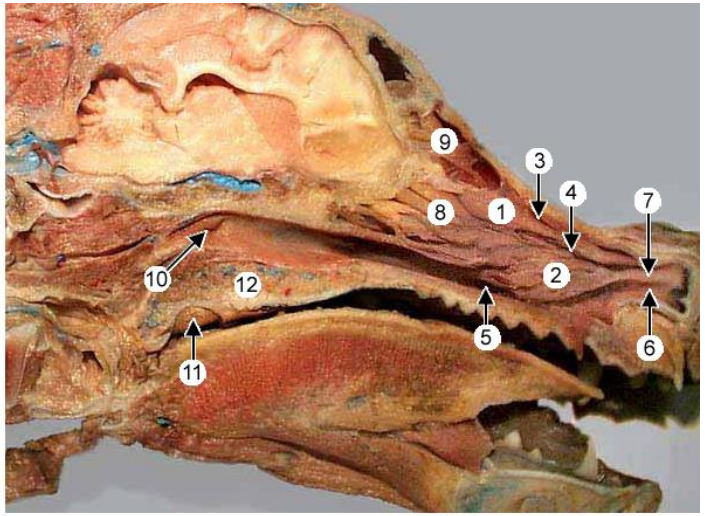
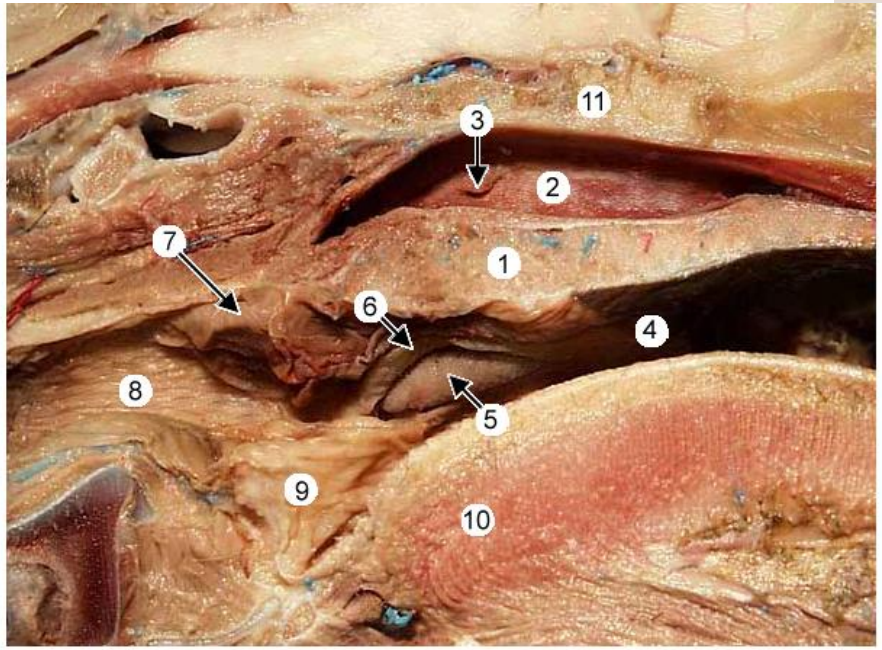


With the nasal septum removed from the midline, the contents of the nasal cavity are exposed. Find the **dorsal nasal concha** (1) and the **ventral nasal concha** (2). The conchae divide nasal cavity space into a dorsal nasal meatus (3), a middle nasal meatus (4), and a ventral nasal meatus (5). The nasolacrimal duct opens (6) on the rostromedial surface of the alar fold (7), an extension of the ventral concha into the nose. Olfactory epithelium is found on the **ethmoidal labyrinth** (8), located caudally in the nasal cavity.

Also observe: frontal sinus (9), opening of the auditory tube (10), palatine tonsil (11), and soft palate (12).

http://vanat.cvm.umn.edu/carnLabs/Lab22/Img22-12.html



Enlarged view of the pharynx. The pharynx is subdivided by the **soft palate** (1). The **nasopharynx** (2) contains the opening of the **auditory tube** (3). The **oropharynx** (4) contains the **palatine tonsil** (5) within a fossa normally covered by a semilunar fold (6). The **palatopharyngeal arch** (7) marks the caudal end of the soft palate. The **laryngopharynx** (8) is located caudal to the soft palate and dorsal to the larynx. Identify the epiglottis (9), root of the tongue (10), and bones of the floor of the cranial cavity (11).

http://vanat.cvm.umn.edu/carnLabs/Lab22/Img22-10.html

https://www.msd-animal
health.ie/diseases/horses/strangles/Introduction.aspx

PHARYNX

OPENINGS OF THE PHARYNGEAL CAVITY (CAVUM PHARINGIS):

3. ISTHMUS FAUCIUM:

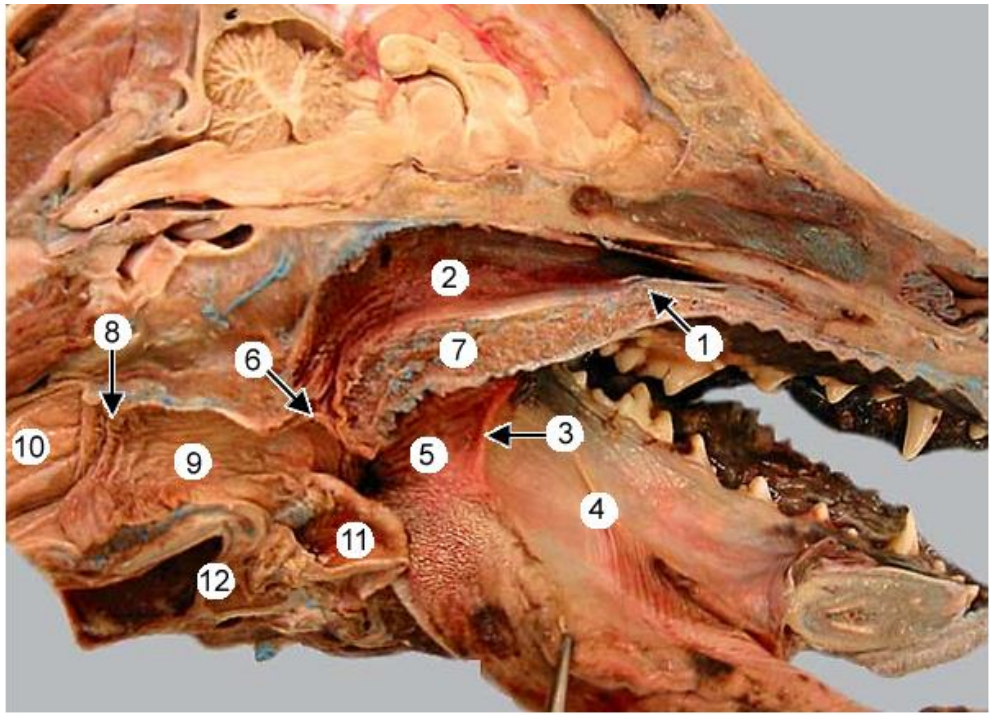
- **orifice between cavum oris and pars oralis pharyngis (oropharynx)**

bounded by:

a. arcus palatoglossus

b. soft palate

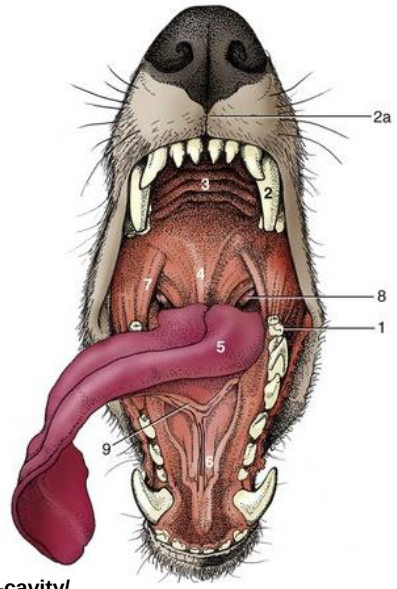
c. tongue



Another view of the pharynx. Choanae (openings) at the caudal end of the hard palate (1) mark the boundary between nasal cavity and **nasopharynx** (2). The **palatoglossal arch** (3) marks the boundary between oral cavity (4) and **oropharynx** (5). The **palatopharyngeal arch** (6) marks the end of the **soft palate** (7). The **pharyngoesophageal limen** (8) marks the boundary between the **laryngopharynx** (9) and the esophagus (10). Identify the epiglottis (11) and other laryngeal cartilages (12).

http://vanat.cvm.umn.edu/carnLabs/Lab22/Img22-11.html

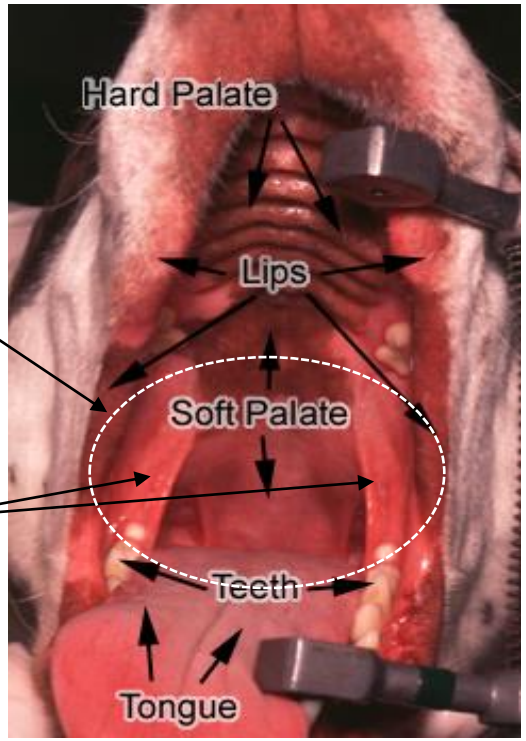
General view of the oral cavity of the dog. *1,* Vestibule; *2,* canine tooth; *2a,* philtrum; *3,* hard palate; *4,* soft palate; *5,* tongue; *6,* sublingual caruncle; *7,* palatoglossal arch; *8,* palatine tonsil; *9,*frenulum. (From Dyce KM, Sack WO, Wensing CJ: Textbook of veterinary anatomy, ed 4, St Louis, 2010, Saunders/Elsevier.)



https://veteriankey.com/soft-tissues-of-the-oral-cavity/

Isthmus faucium

Arcus palatoglossus



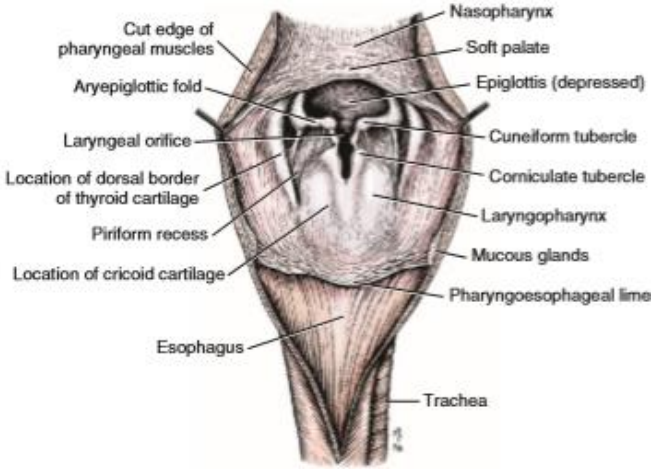
http://veterinary-online.blogspot.com/2013/02/

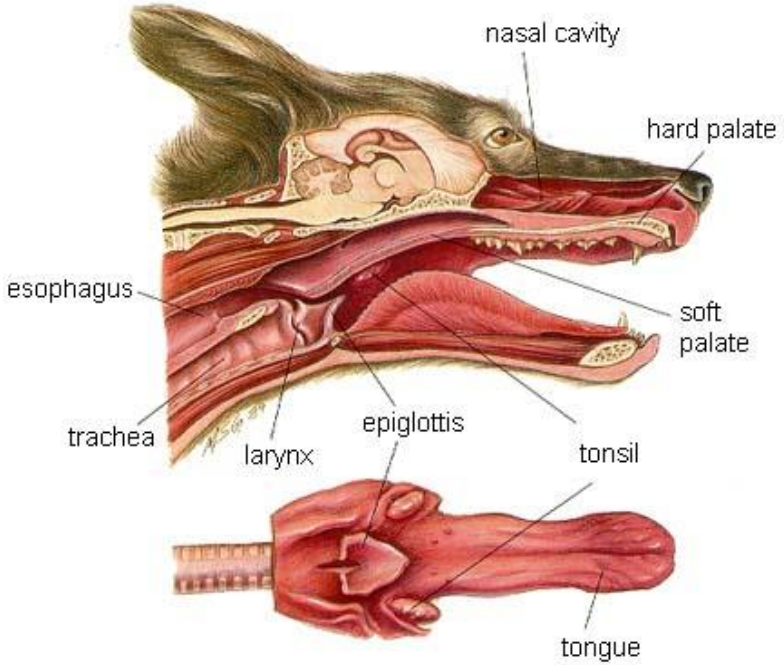
PHARYNX

OPENINGS OF THE PHARYNGEAL CAVITY (CAVUM PHARINGIS):

4. ADITUS LARYNGIS (ENTRANCE OF LARYNGX):

- **caudoventrally**
- **closed by the epiglottis during swallows**

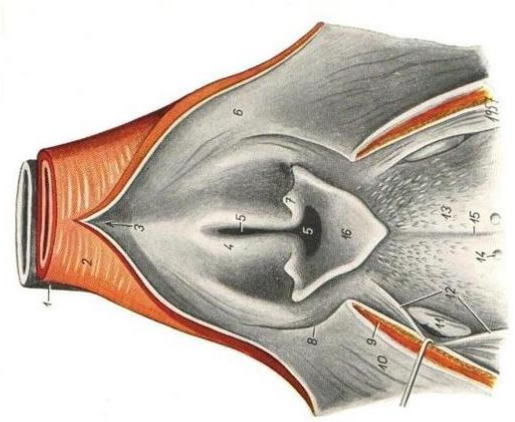




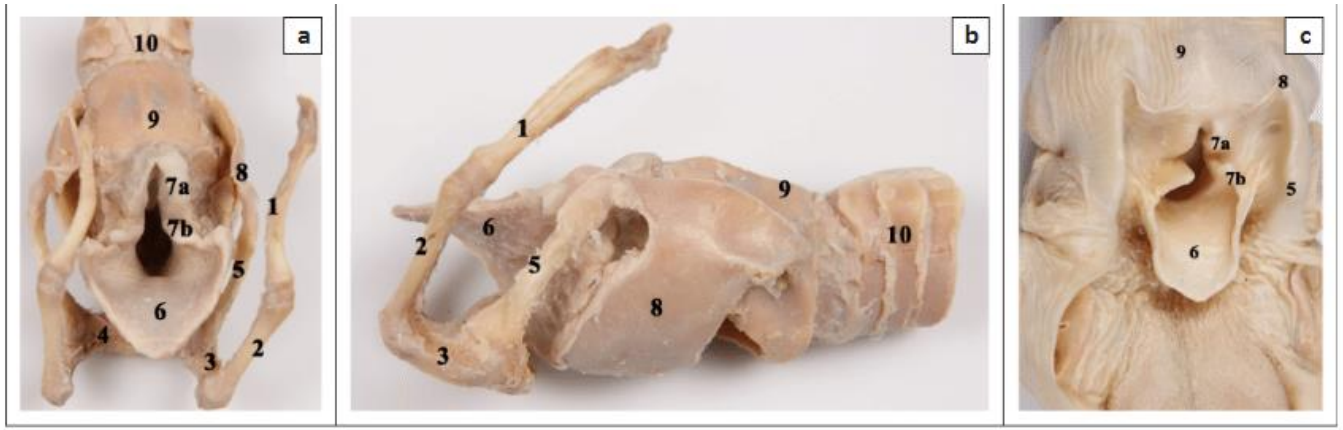
https://www.vetmed.wsu.edu/outreach/Pet-Health-Topics/categories/cat-and-dog-anatomy/respiratory-system-of-the-dog

Larynx DOG

1. Trachea
2. Oesophagus
3. Vestibulum oesoph
4. cart.arytenoidea
5. aditus laryngis
6. fornix pharyngis
7. cartilago corniculata.
9. velum palatini
11. tonsilla palatina
13 radix lingua
14 papilla vallata
16 epiglottis



https://airfreshener.club/quotes/laryngeal-aditus-laryngis-cavities.html



Source: Photographs by M. Doom
Evident in these views are the, (1) stylohyoid, (2) epihyoid, (3) ceratohyoid, (4) basihyoid (5) thyrohyoid, (6) epiglottis, (7a) corniculate process of the arytenoid cartilage, (7b) cuneiform process of the arytenoid cartilage, (8) thyroid cartilage, (9) cricoid cartilage and (10) trachea.

FIGURE 1: Embalmed cadaver specimen of a canine larynx, depicted as, (a) rostrodorsal view with the muscles removed, (b) lateral view after removal of the muscles and (c) rostrodorsal view with the dorsal aspect of the oesophagus removed.

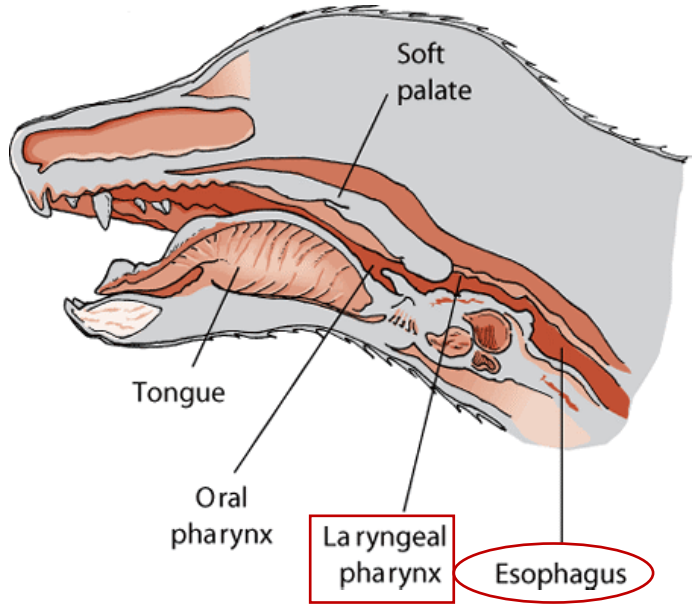
https://www.researchgate.net/publication/236966638_Laryngeal_paralysis_in_dogs_An_update_on_recent_knowledge

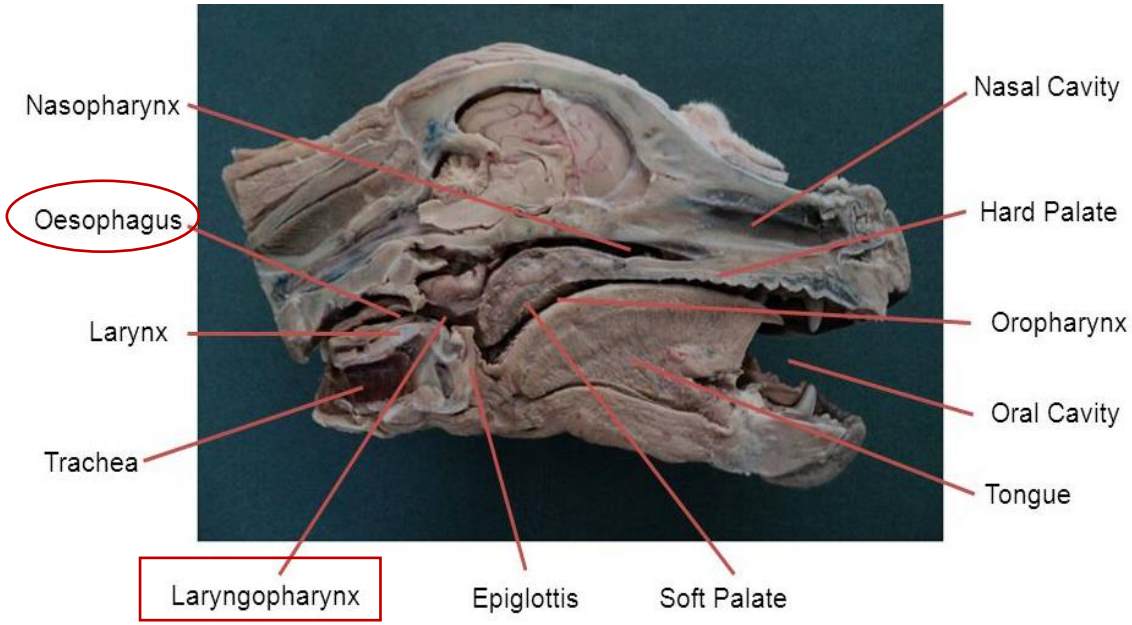
PHARYNX

OPENINGS OF THE PHARYNGEAL CAVITY (CAVUM PHARINGIS):

5. ENTRANCE INTO THE ESOPHAGUS:

- caudal end of the laryngopharynx





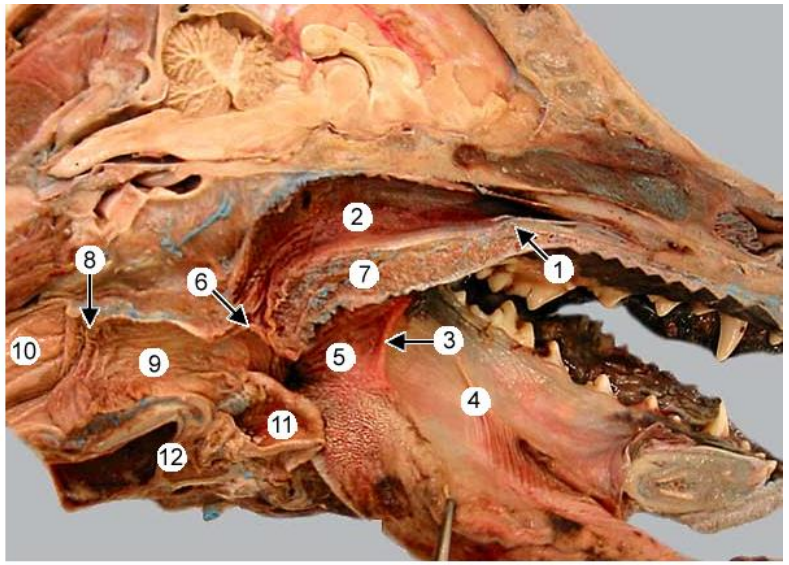
https://markylla.eu/the-respiratory-system-nasal-cavity-pharynx-larynx.html

http://bvetmed1.blogspot.com/2013/02/tongue-hyoid-pharynx-deglutition_22.html

PHARYNX

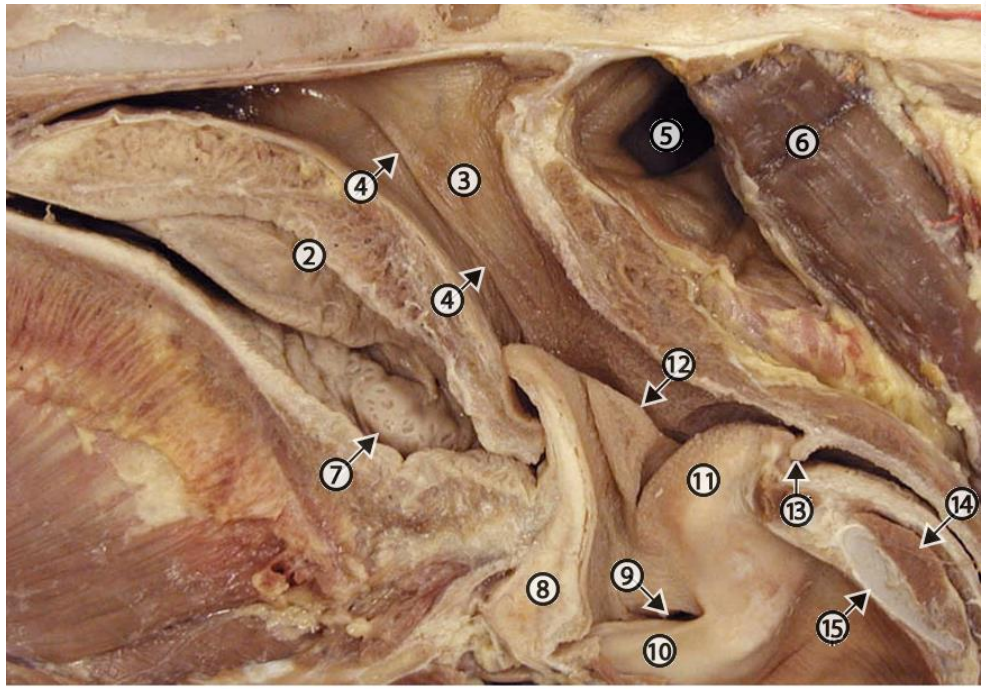
PARS NASALIS PHARYNGIS (NASOPHARYNX):

- **part of the respiratory channel**
- **lies dorsal to the soft palate**
- **extends from the choanae to the intrapharyngeal opening**

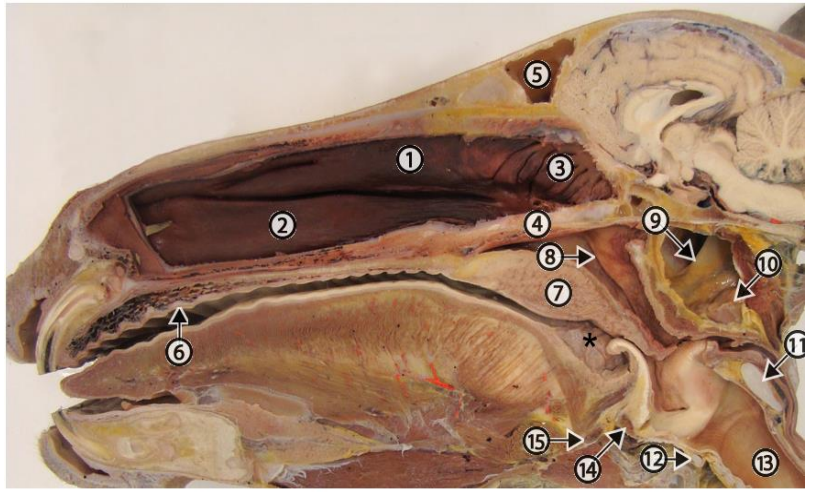


Another view of the pharynx. Choanae (openings) at the caudal end of the hard palate (1) mark the boundary between nasal cavity and **nasopharynx** (2). The **palatoglossal arch** (3) marks the boundary between oral cavity (4) and **oropharynx** (5). The **palatopharyngeal arch** (6) marks the end of the **soft palate** (7). The **pharyngoesophageal limen** (8) marks the boundary between the **laryngopharynx** (9) and the esophagus (10). Identify the epiglottis (11) and other laryngeal cartilages (12).

http://vanat.cvm.umn.edu/carnLabs/Lab22/Img22-11.html



Equine split head close up view. 1, nasal septum; 2, soft palate; 3, nasopharynx; 4, orifice of auditory tube = entrance to guttural pouch; 5, interior of guttural pouch; 6, longus capitis m.; 7, palatine tonsil; 8, epiglottic cartilage; 9, entrance to laryngeal ventricle; 10, vocal fold; 11, arytenoid cartilage covered with mucosa; 12, aryepiglottic fold; 13, caudal most part of the palatopharyngeal fold; 14, cricoarytenoideus dorsalis muscle; 15, midline section of cricoid cartilage.



Equine split head after removal of the nasal septum to expose the nasal cavity. 1, dorsal concha; 2, ventral concha; 3 ethmoidal conchas; 4, vomer (bone); 5, frontal sinus; 6, hard palate; 7, soft palate; 8, orifice of the auditory tube on the lateral wall of the nasopharynx. At this place, an endoscope can be passed into the guttural pouch. 9, stylohyoid bone; 10, medial retropharyngeal lymph nodes adjacent to the ventral wall of the guttural pouch; 11, cricoid cartilage; 12, cricoid cartilage (ventral), 13, trachea; 14, ossified rostral edge of the thyroid cartilage; 15, basihyoid bone; asterisk, palatine tonsil.

http://vanat.cvm.umn.edu/ungDissect/Lab20/Img20-2.html

PHARYNX

PARS NASALIS PHARYNGIS (NASOPHARYNX):

ROOF (FORNIX PHARYNGIS):

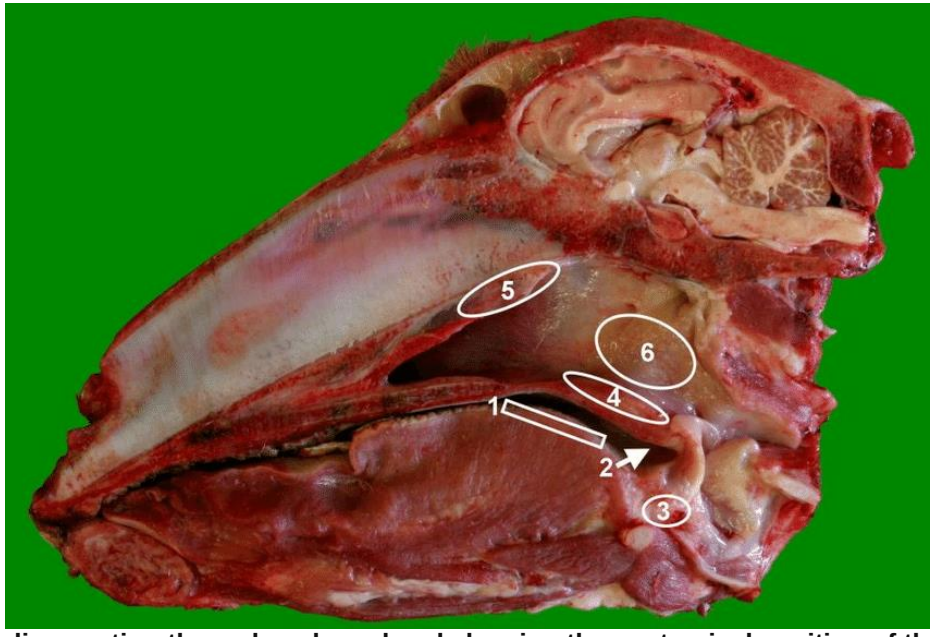
- **dorsal part**

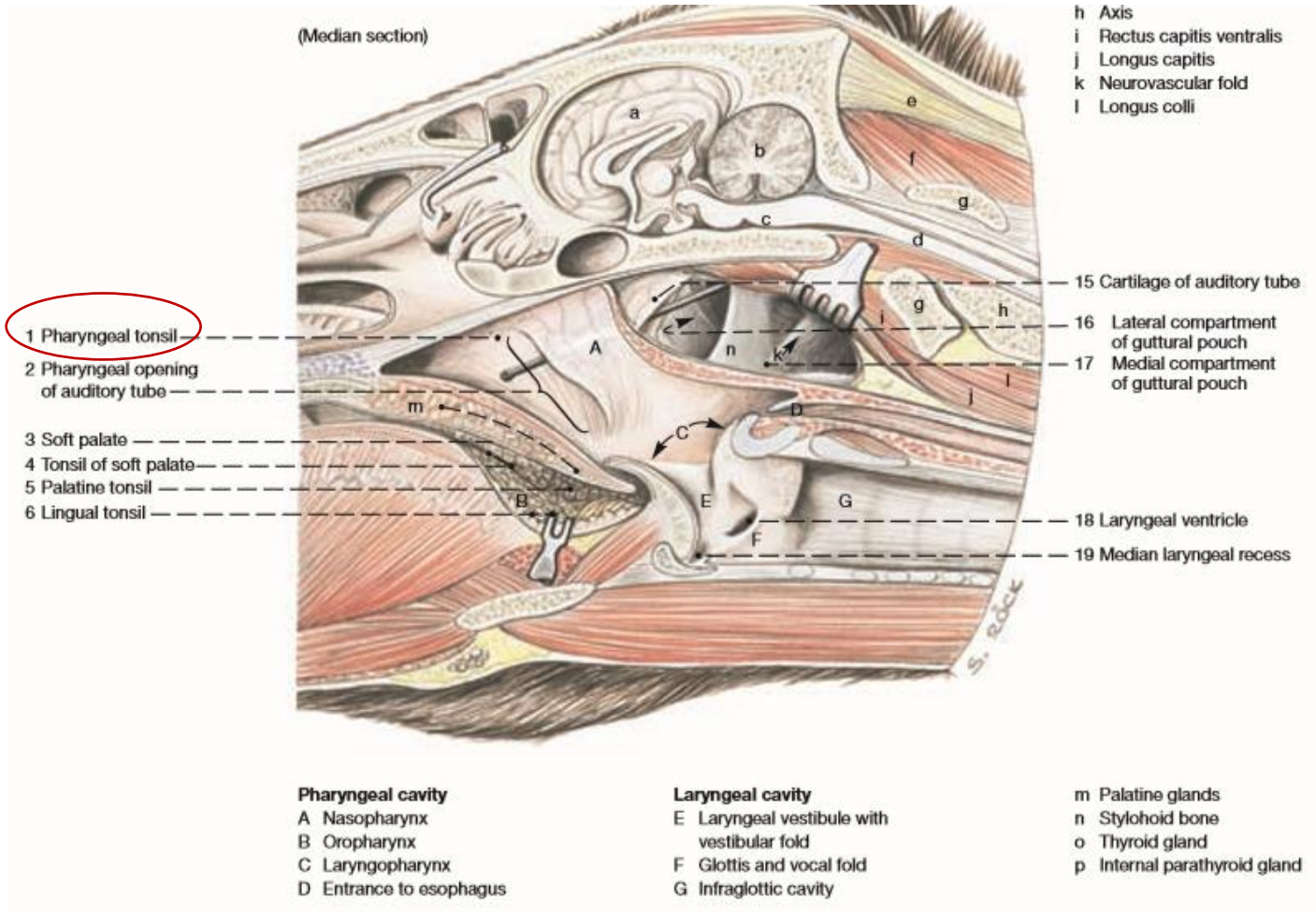
a. pharyngeal septum (septum pharyngis) in Su, Ru

b. pharyngeal tonsil (tonsilla pharyngea):

- **on the caudodorsal wall**

- **in Su, Ru in the paryngeal septum**





https://www.researchgate.net/figure/Median-section-through-a-sheep-head-showing-the-anatomical-position-of-the-six-ovine_fig5_294263038

Median section through a sheep head showing the anatomical position of the six ovine tonsils: 1 = lingual tonsil, 2 = palatine tonsil (not visible), 3 = paraepiglottic tonsil, 4 = tonsil of the soft palate, 5 = pharyngeal tonsil, 6 = tubal tonsil.

PHARYNX

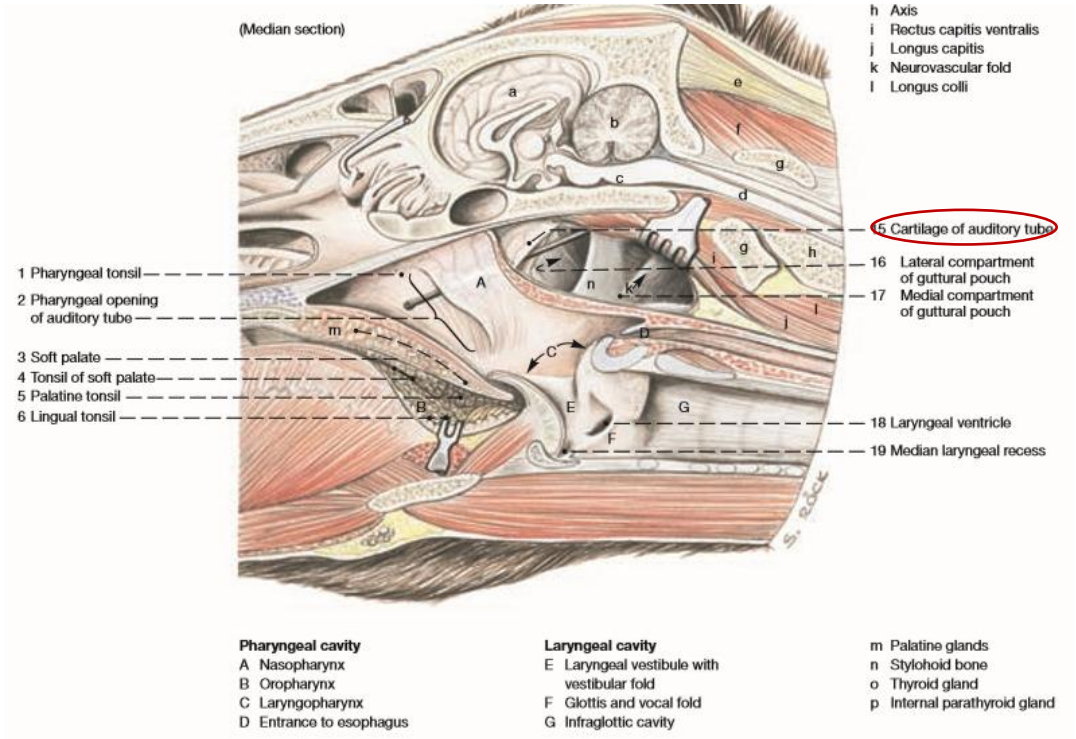
PARS NASALIS PHARYNGIS (NASOPHARYNX):

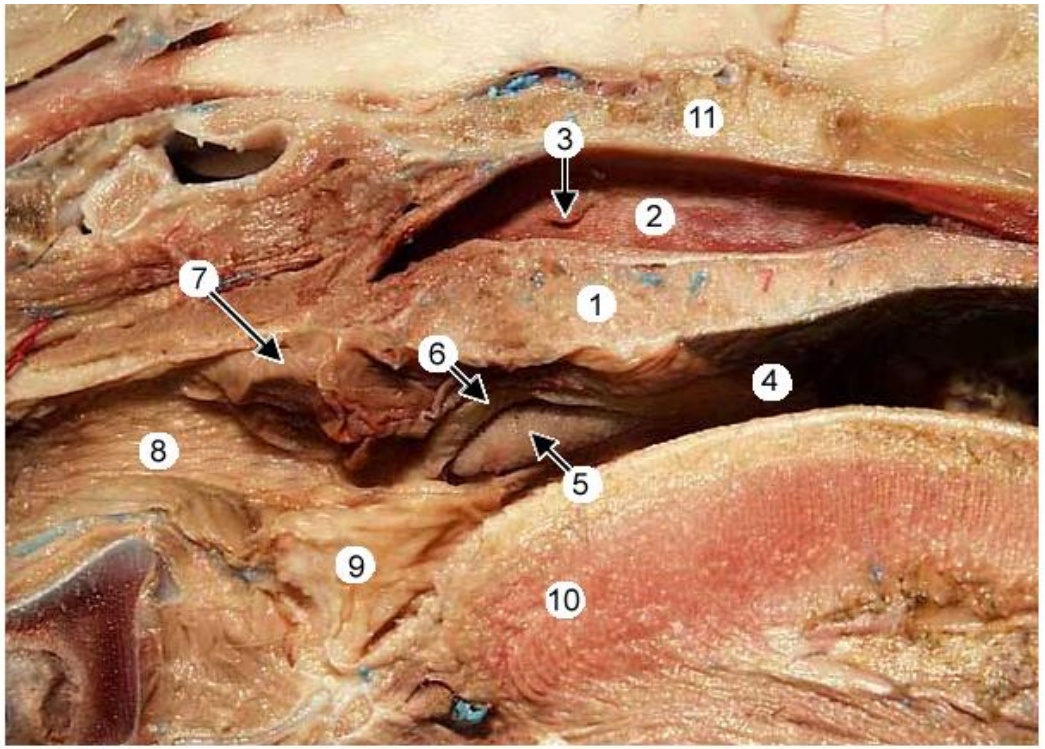
ROOF (FORNIX PHARYNGIS):

c. ostium pharyngeum tubae auditivae

d. torus tubarius:

- **swelling caudodorsal to the ostium tubae**
- **caused by the median lamina of the cartilage of the tuba auditiva**





Enlarged view of the pharynx. The pharynx is subdivided by the **soft palate** (1). The **nasopharynx** (2) contains the opening of the **auditory tube** (3). The **oropharynx** (4) contains the **palatine tonsil** (5) within a fossa normally covered by a semilunar fold (6). The **palatopharyngeal arch** (7) marks the caudal end of the soft palate. The **laryngopharynx** (8) is located caudal to the soft palate and dorsal to the larynx. Identify the epiglottis (9), root of the tongue (10), and bones of the floor of the cranial cavity (11).

http://vanat.cvm.umn.edu/carnLabs/Lab22/Img22-10.html

PHARYNX

PARS NASALIS PHARYNGIS (NASOPHARYNX):

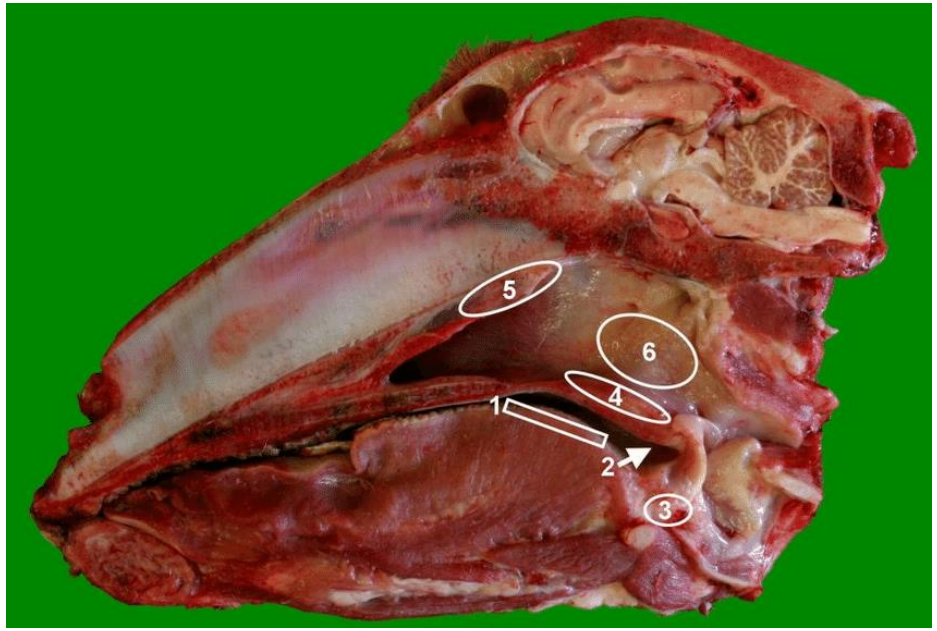
ROOF (FORNIX PHARYNGIS):

e. torus levatorius:

- **low ridge**
- **runs from the ostium pharyngeum tubae to the soft palate**

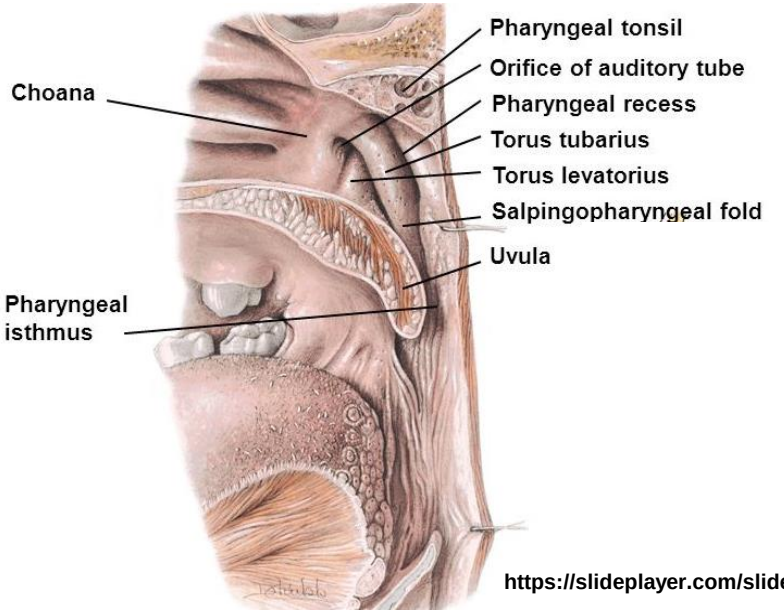
f. tonsilla tubaria:

- at the ostium pharyngeum tubae in Su, Ru



Median section through a sheep head showing the anatomical position of the six ovine tonsils: 1 = lingual tonsil, 2 = palatine tonsil (not visible), 3 = paraepiglottic tonsil, 4 = tonsil of the soft palate, 5 = pharyngeal tonsil, 6 = tubal tonsil.

https://www.researchgate.net/figure/Median-section-through-a-sheep-head-showing-the-anatomical-position-of-the-six-ovine_fig5_294263038



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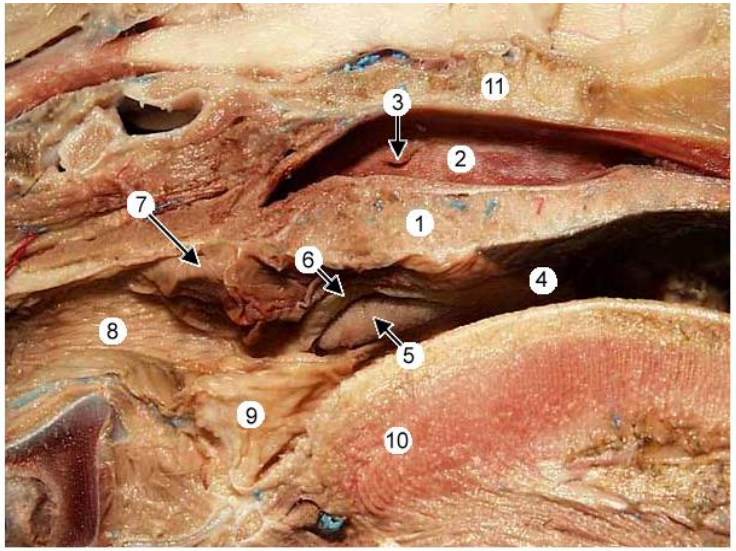


Enlarged view of the pharynx. The pharynx is subdivided by the **soft palate** (1). The **nasopharynx** (2) contains the opening of the **auditory tube** (3). The **oropharynx** (4) contains the **palatine tonsil** (5) within a fossa normally covered by a semilunar fold (6). The **palatopharyngeal arch** (7) marks the caudal end of the soft palate. The **laryngopharynx** (8) is located caudal to the soft palate and dorsal to the larynx. Identify the epiglottis (9), root of the tongue (10), and bones of the floor of the cranial cavity (11).

http://vanat.cvm.umn.edu/carnLabs/Lab22/Img22-10.html

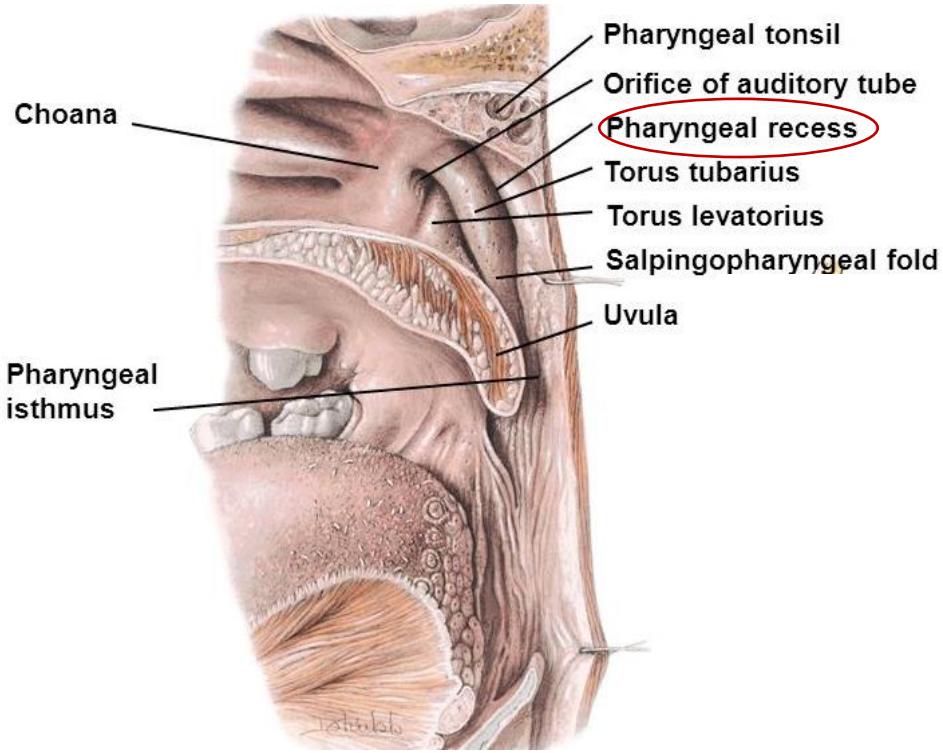
PHARYNX

PARS NASALIS PHARYNGIS (NASOPHARYNX):

ROOF (FORNIX PHARYNGIS):

g. recessus pharyngeus:

- niche at the caudodorsal angle of nasopharynx in Un

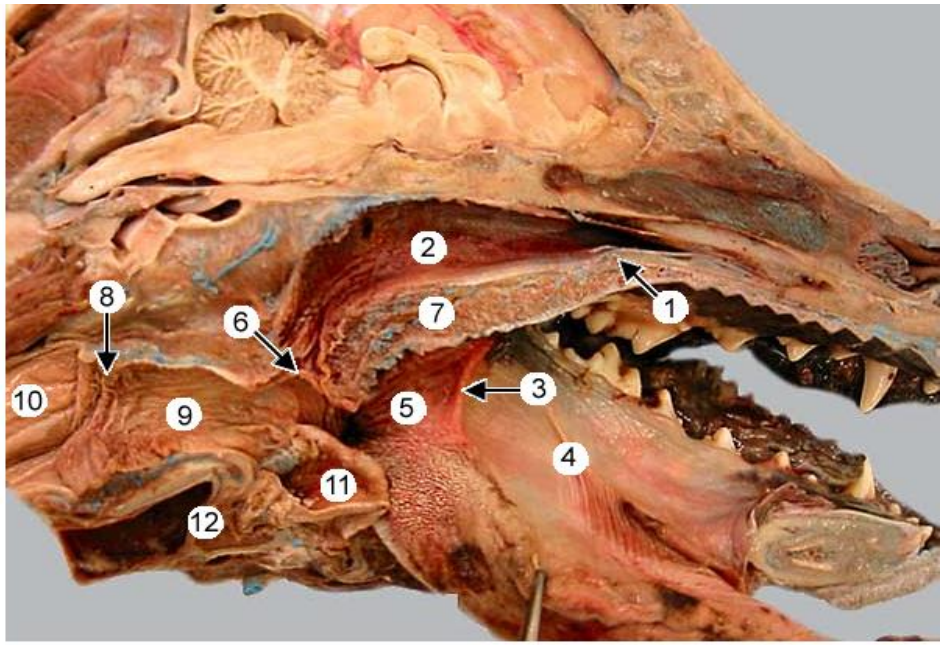


https://slideplayer.com/slide/8574027/

PHARYNX

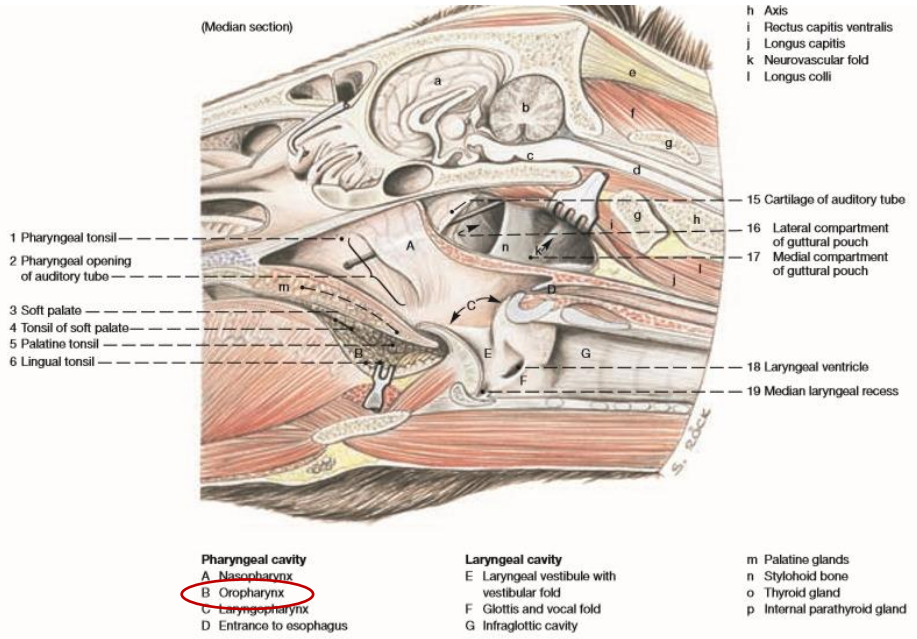
PARS ORALIS PHARYNGIS (OROPHARYNX):

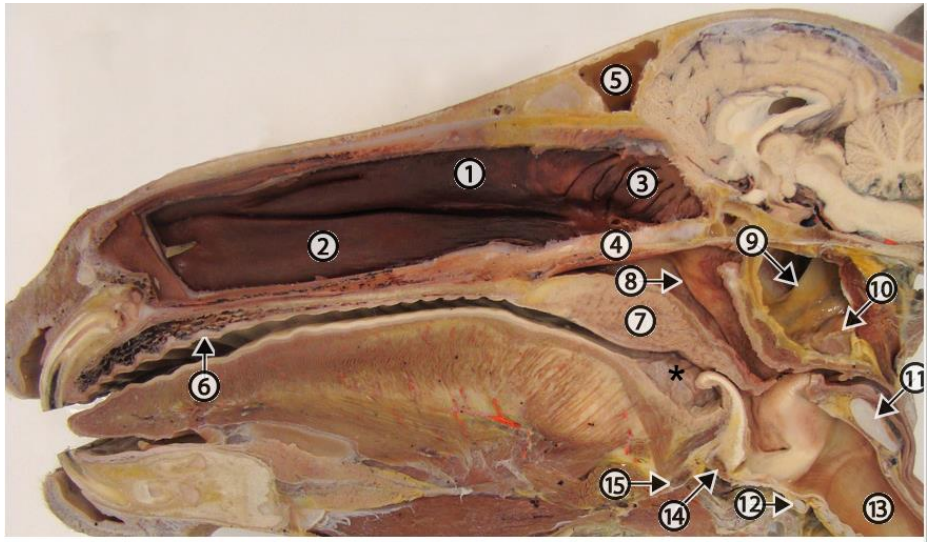
- **part of the digestive tract**
- **extends from the palatoglossal arches to the base of epiglottis**



Another view of the pharynx. Choanae (openings) at the caudal end of the hard palate (1) mark the boundary between nasal cavity and **nasopharynx** (2). The **palatoglossal arch** (3) marks the boundary between oral cavity (4) and **oropharynx** (5). The **palatopharyngeal arch** (6) marks the end of the **soft palate** (7). The **pharyngoesophageal limen** (8) marks the boundary between the **laryngopharynx** (9) and the esophagus (10). Identify the epiglottis (11) and other laryngeal cartilages (12).

http://vanat.cvm.umn.edu/carnLabs/Lab22/Img22-11.html





Equine split head after removal of the nasal septum to expose the nasal cavity. 1, dorsal concha; 2, ventral concha; 3 ethmoidal conchas; 4, vomer (bone); 5, frontal sinus; 6, hard palate; 7, soft palate; 8, orifice of the auditory tube on the lateral wall of the nasopharynx. At this place, an endoscope can be passed into the guttural pouch. 9, stylohyoid bone; 10, medial retropharyngeal lymph nodes adjacent to the ventral wall of the guttural pouch; 11, cricoid cartilage; 12, cricoid cartilage (ventral), 13, trachea; 14, ossified rostral edge of the thyroid cartilage; 15, basihyoid bone; asterisk, palatine tonsil.

http://vanat.cvm.umn.edu/ungDissect/Lab20/Img20-2.html

PHARYNX

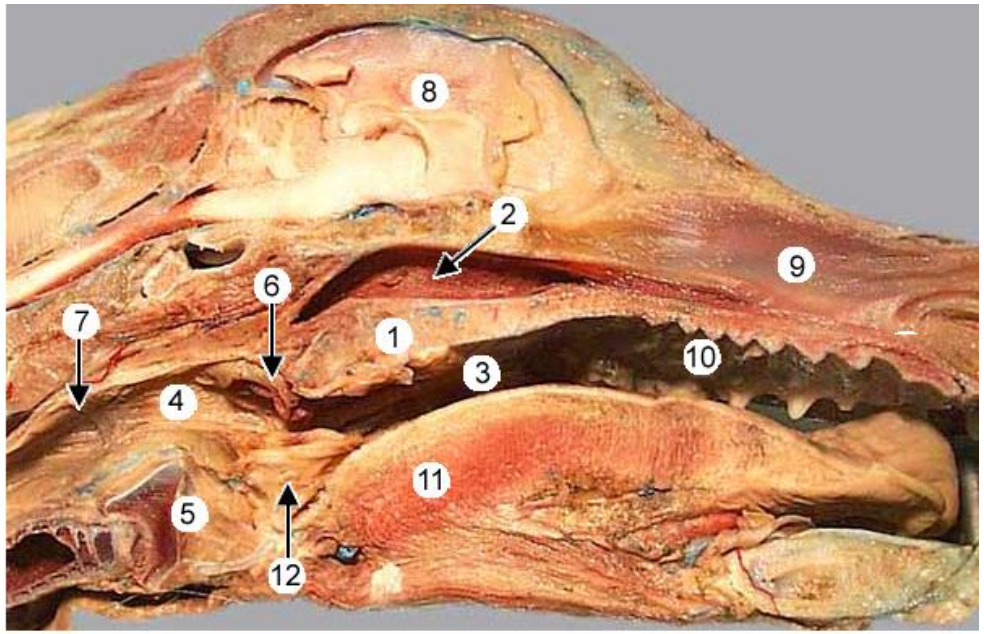
PARS ORALIS PHARYNGIS (OROPHARYNX):

ROOF:

- **formed by the soft palate**

FLOOR:

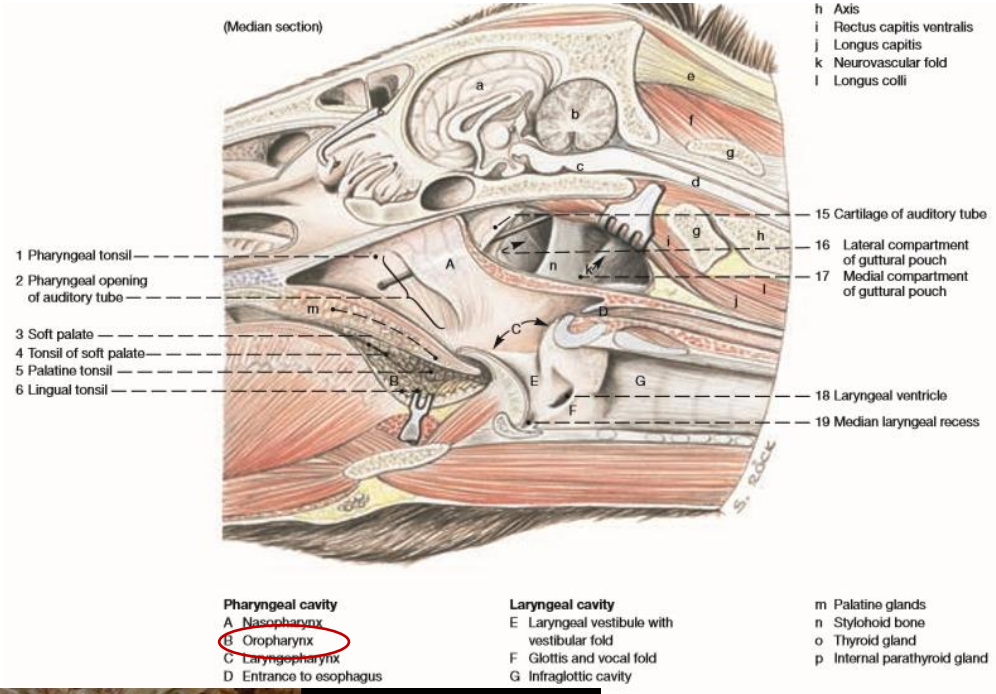
- formed by the radix linguae

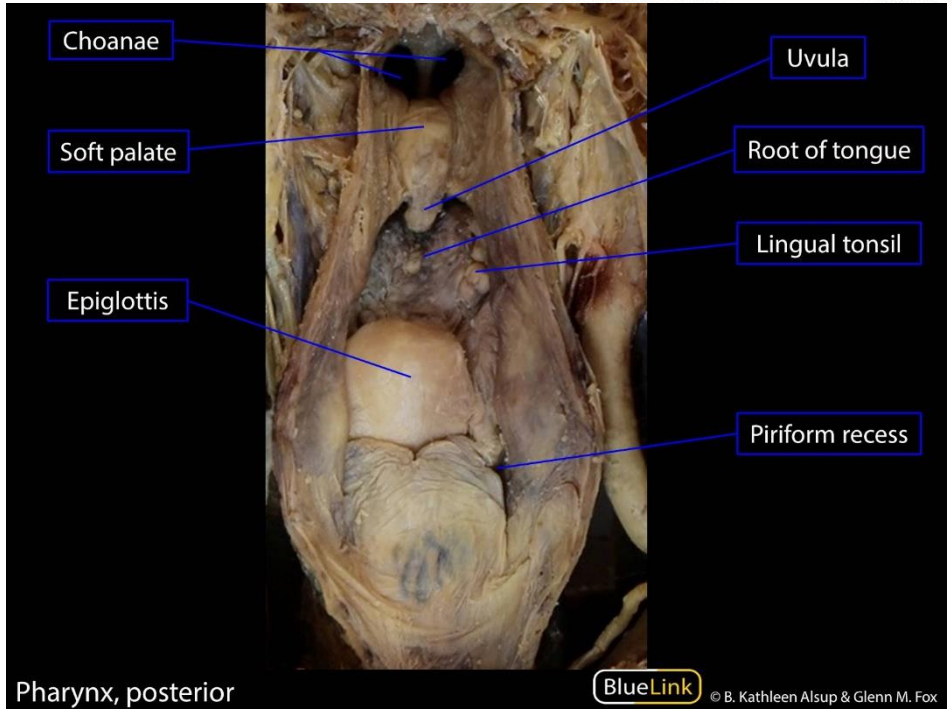


Bisected canine head. The pharynx is subdivided by the **soft palate** (1) into a **nasopharynx** (2), an **oropharynx** (3), and a **laryngopharynx** (4). The latter is located caudal to the soft palate and dorsal to the larynx (5). The **palatopharyngeal arch** (6) marks the caudal end of the soft palate. The **pharyngoesophageal limen** (7) marks the boundary between the pharynx and esophagus.

Identify: brain (8) in the cranial cavity, nasal septum (9), hard palate (10), root of the tongue (11) and epiglottis (12).

http://vanat.cvm.umn.edu/carnLabs/Lab22/Img22-9.html





https://sites.google.com/a/umich.edu/bluelink/curricula/sas/session-3-oral-cavity-and-pharynx/s3-oral-cavity-pharynx-lablink?tmpl=%2Fsystem%2Fapp%2Ftemplates%2Fprint%2F&showPrintDialog=1

PHARYNX

PARS ORALIS PHARYNGIS (OROPHARYNX):

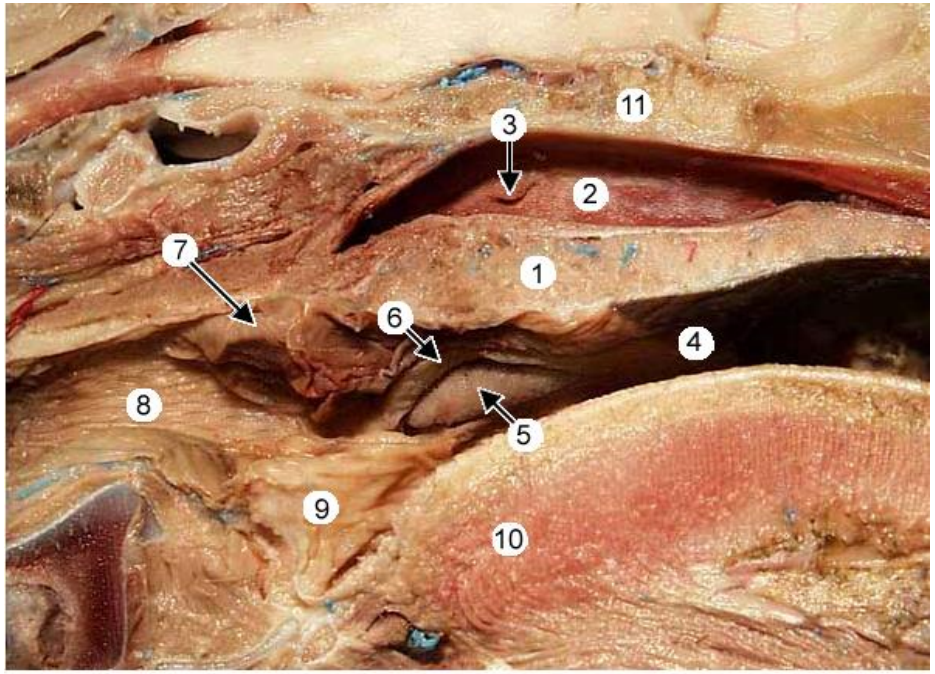
LATERAL WALL:

a. arcus palatoglossus et palatopharyngeus

b. in Car fossa tonsillaris - tonsilla palatina

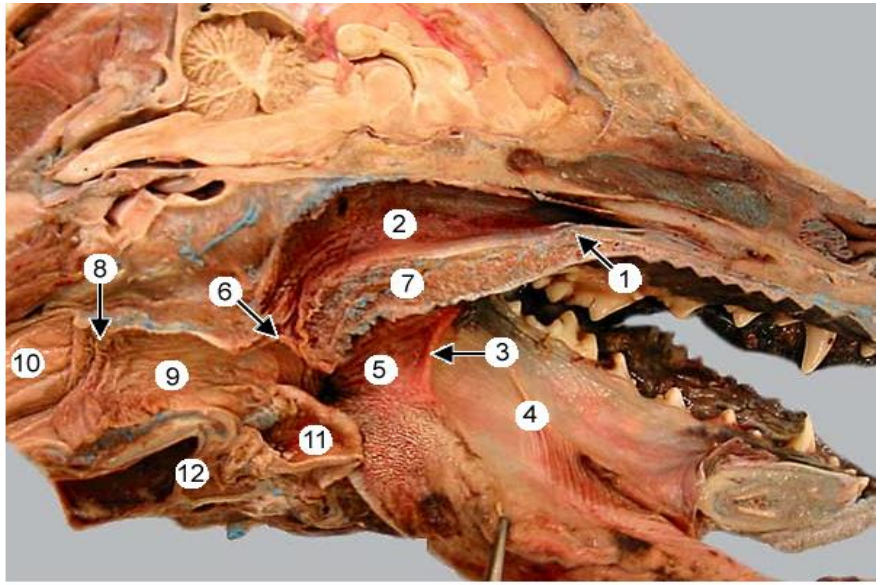
c. plica semilunaris :

- **in Car**
- **fold of mucosa from the soft palate**
- **forms the medial wall of the fossa tonsillaris**



Enlarged view of the pharynx. The pharynx is subdivided by the **soft palate** (1). The **nasopharynx** (2) contains the opening of the **auditory tube** (3). The **oropharynx** (4) contains the **palatine tonsil** (5) within a fossa normally covered by a semilunar fold (6). The **palatopharyngeal arch** (7) marks the caudal end of the soft palate. The **laryngopharynx** (8) is located caudal to the soft palate and dorsal to the larynx. Identify the epiglottis (9), root of the tongue (10), and bones of the floor of the cranial cavity (11).

http://vanat.cvm.umn.edu/carnLabs/Lab22/Img22-10.html



Another view of the pharynx. Choanae (openings) at the caudal end of the hard palate (1) mark the boundary between nasal cavity and **nasopharynx** (2). The **palatoglossal arch** (3) marks the boundary between oral cavity (4) and **oropharynx** (5). The **palatopharyngeal arch** (6) marks the end of the **soft palate** (7). The **pharyngoesophageal limen** (8) marks the boundary between the **laryngopharynx** (9) and the esophagus (10). Identify the epiglottis (11) and other laryngeal cartilages (12).

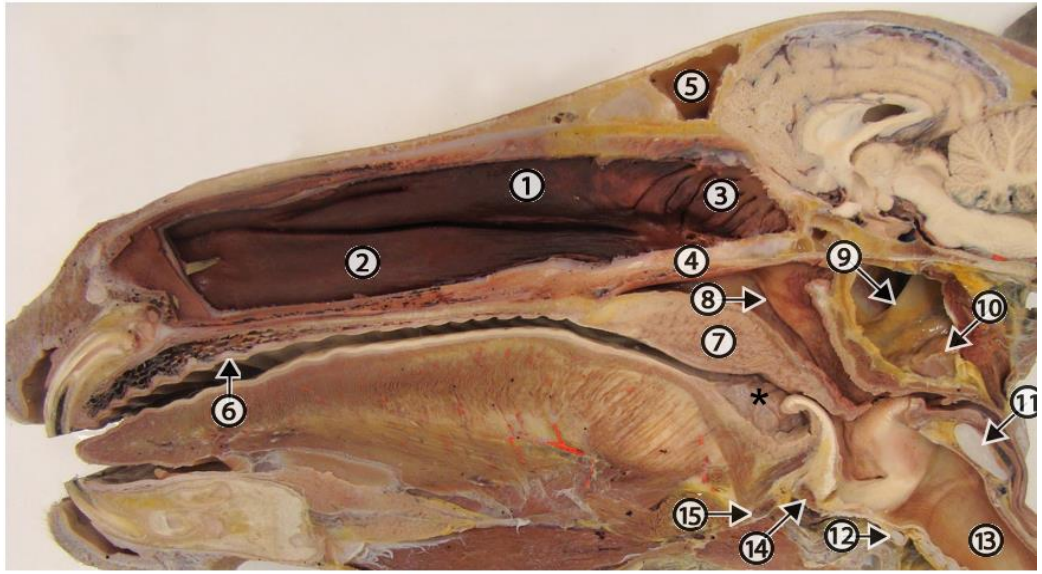
http://vanat.cvm.umn.edu/carnLabs/Lab22/Img22-11.html

PHARYNX

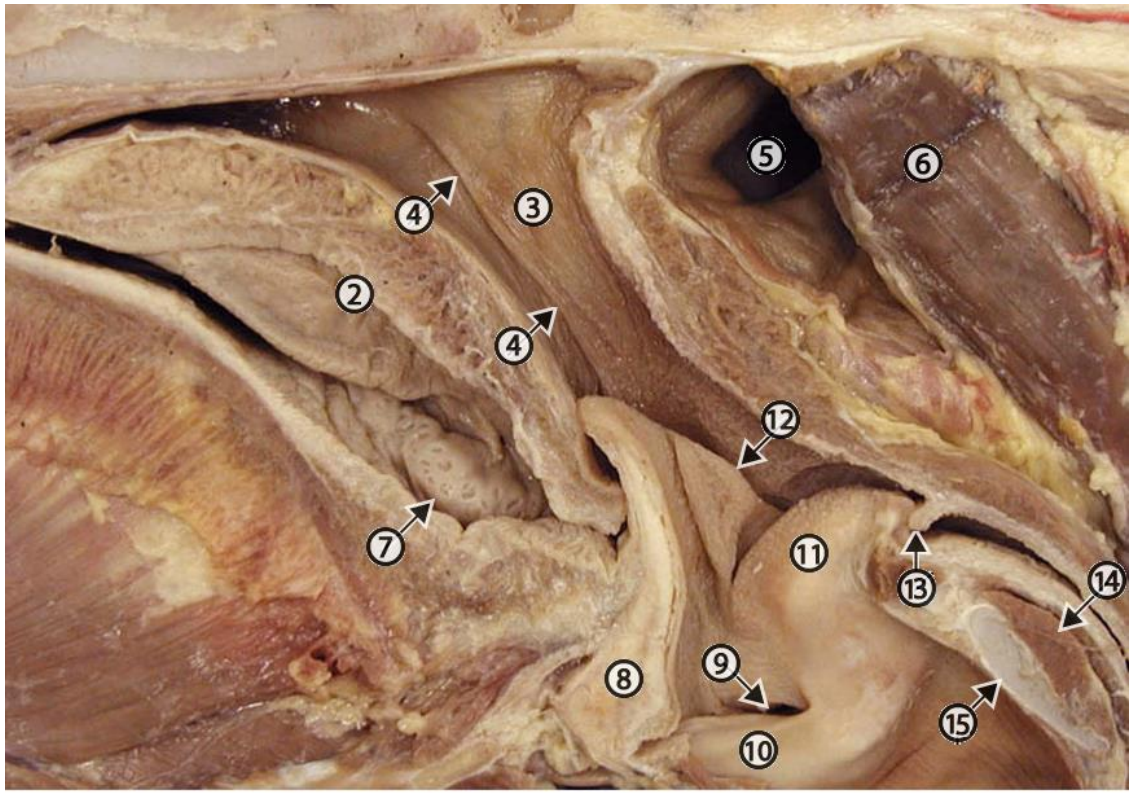
PARS ORALIS PHARYNGIS (OROPHARYNX):

LATERAL WALL:

d. tonsilla veli palatini in Su, Eq



Equine split head after removal of the nasal septum to expose the nasal cavity. 1, dorsal concha; 2, ventral concha; 3 ethmoidal conchas; 4, vomer (bone); 5, frontal sinus; 6, hard palate; 7, soft palate; 8, orifice of the auditory tube on the lateral wall of the nasopharynx. At this place, an endoscope can be passed into the guttural pouch. 9, stylohyoid bone; 10, medial retropharyngeal lymph nodes adjacent to the ventral wall of the guttural pouch; 11, cricoid cartilage; 12, cricoid cartilage (ventral), 13, trachea; 14, ossified rostral edge of the thyroid cartilage; 15, basihyoid bone; asterisk, palatine tonsil.



Equine split head close up view. 1, nasal septum; 2, soft palate; 3, nasopharynx; 4, orifice of auditory tube = entrance to guttural pouch; 5, interior of guttural pouch; 6, longus capitis m.; 7, palatine tonsil; 8, epiglottic cartilage; 9, entrance to laryngeal ventricle; 10, vocal fold; 11, arytenoid cartilage covered with mucosa; 12, aryepiglottic fold; 13, caudal most part of the palatopharyngeal fold; 14, cricoarytenoideus dorsalis muscle; 15, midline section of cricoid cartilage.

http://vanat.cvm.umn.edu/ungDissect/Lab20/Img20-2.html

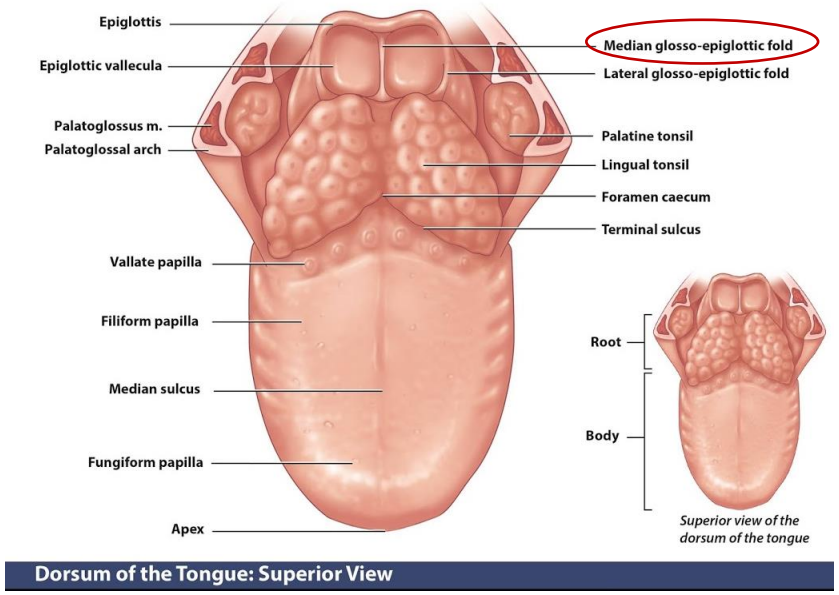
PHARYNX

PARS ORALIS PHARYNGIS (OROPHARYNX):

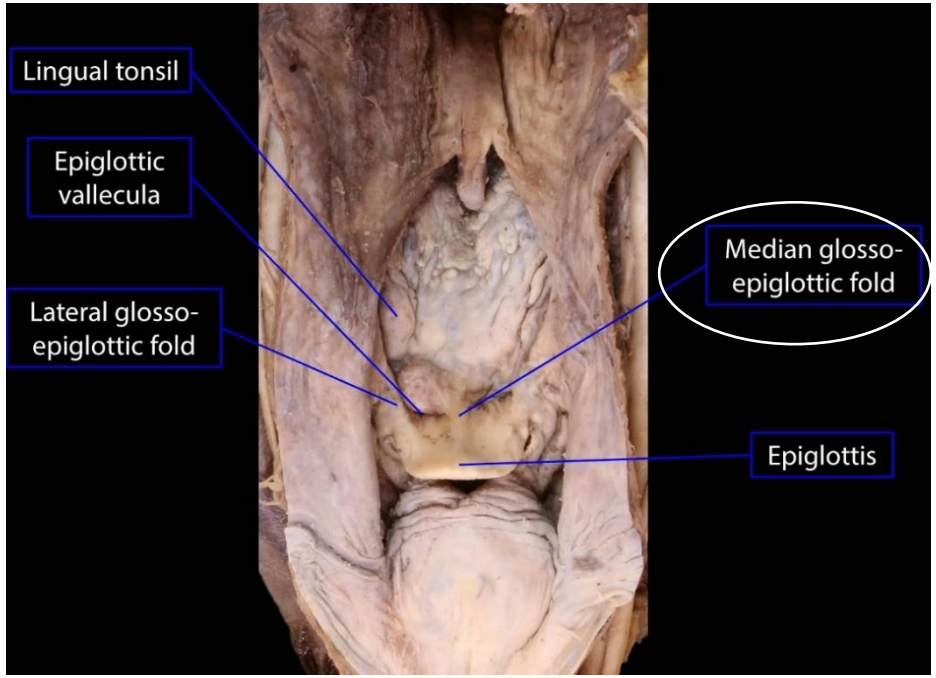
LATERAL WALL:

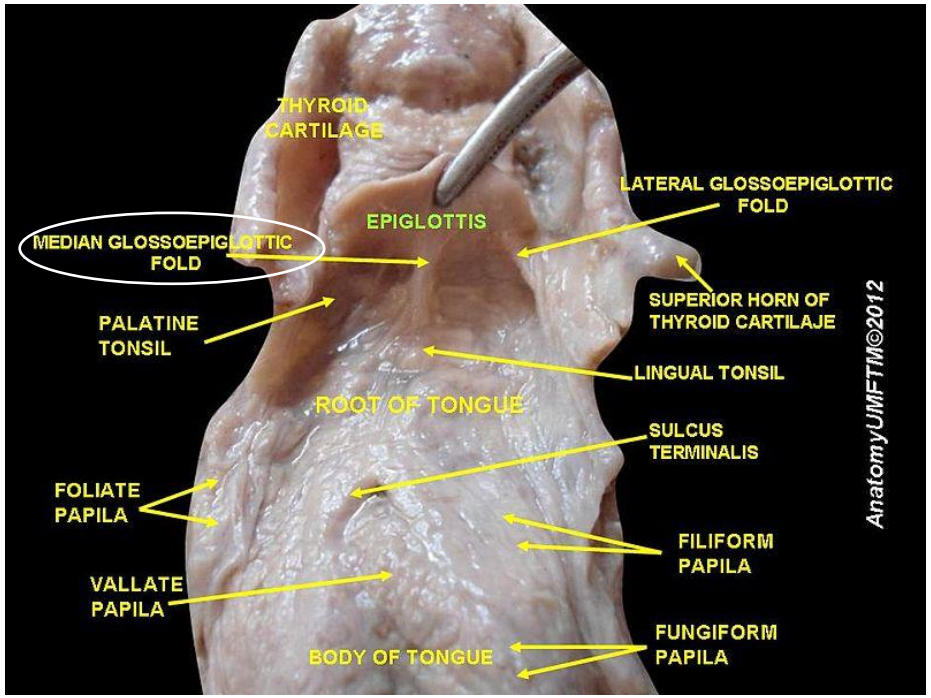
e. plica glossoepiglottica mediana:

- median fold from the tongue to the epiglottis



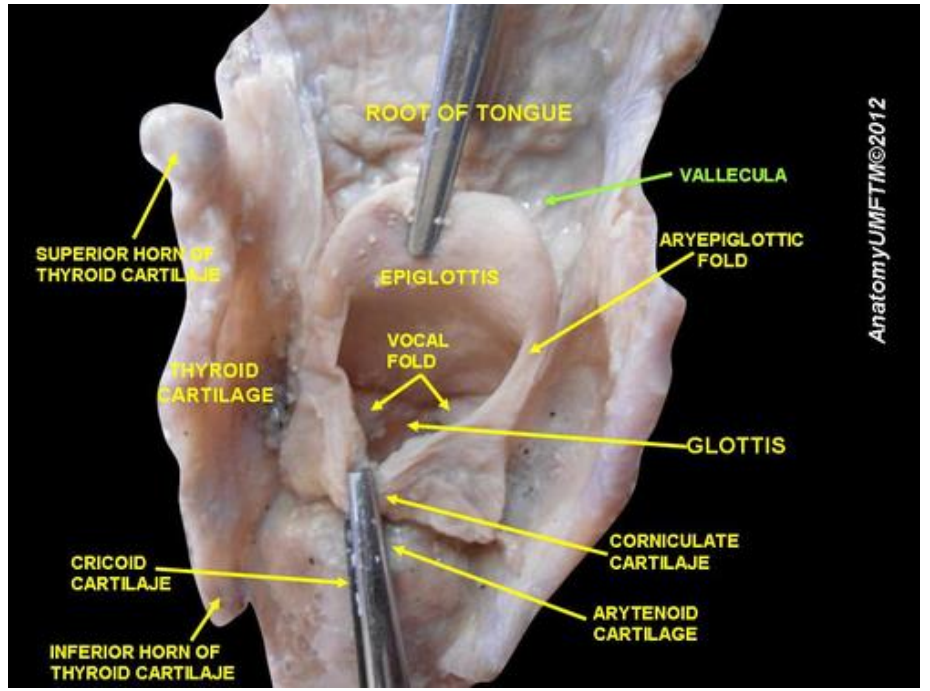
Dorsum of the Tongue: Superior View





https://sites.google.com/a/umich.edu/bluelink/curricula/sas/session-3-oral-cavity-and-pharynx/s3-oral-cavity-pharynx-lablink?tmpl=%2Fsystem%2Fapp%2Ftemplates%2Fprint%2F&showPrintDialog=1

https://fa.m.wikipedia.org/wiki/%D9%BE%D8%B1%D9%88%D9%86%D8%AF%D9%87:Slide2uuu.JPG



https://infodystonia.com/tag/swallowing-difficulties/

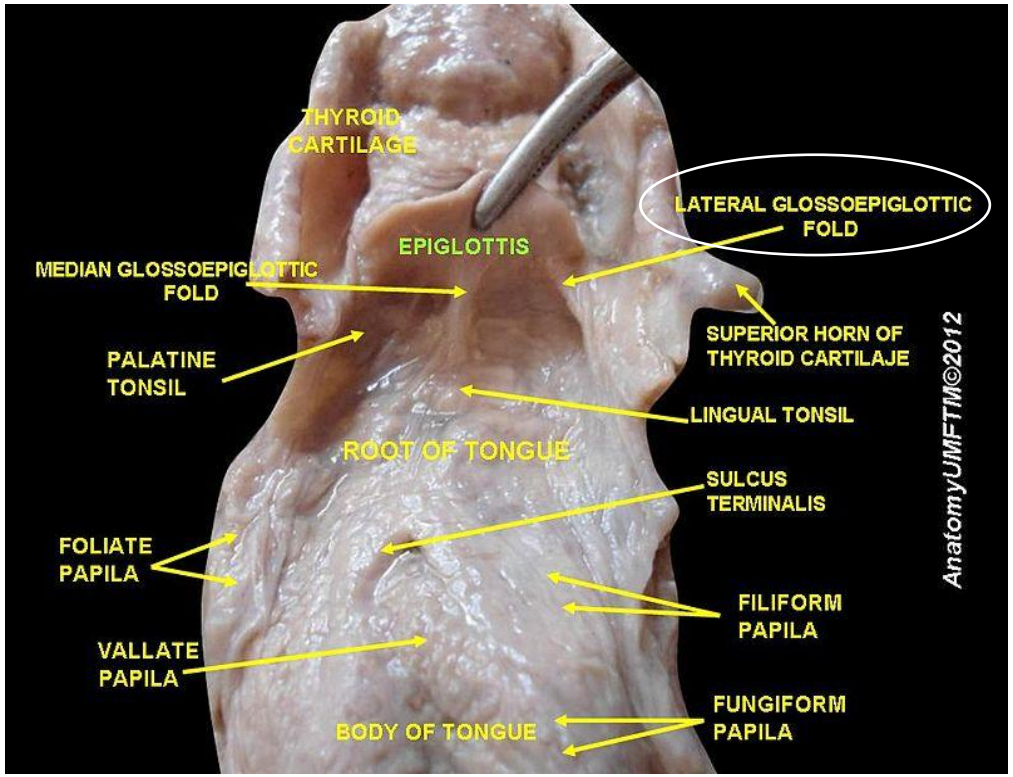
PHARYNX

PARS ORALIS PHARYNGIS (OROPHARYNX):

LATERAL WALL:

f. plica glossoepiglottica lateralis:

- lateral folds from the tongue to the epiglottis



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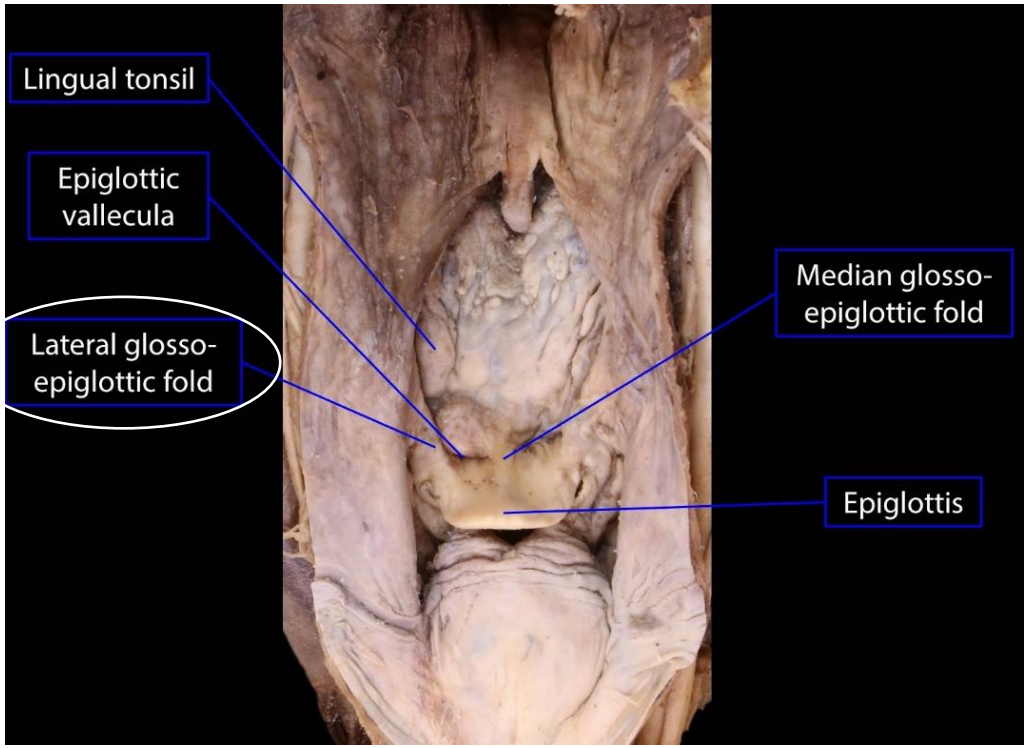
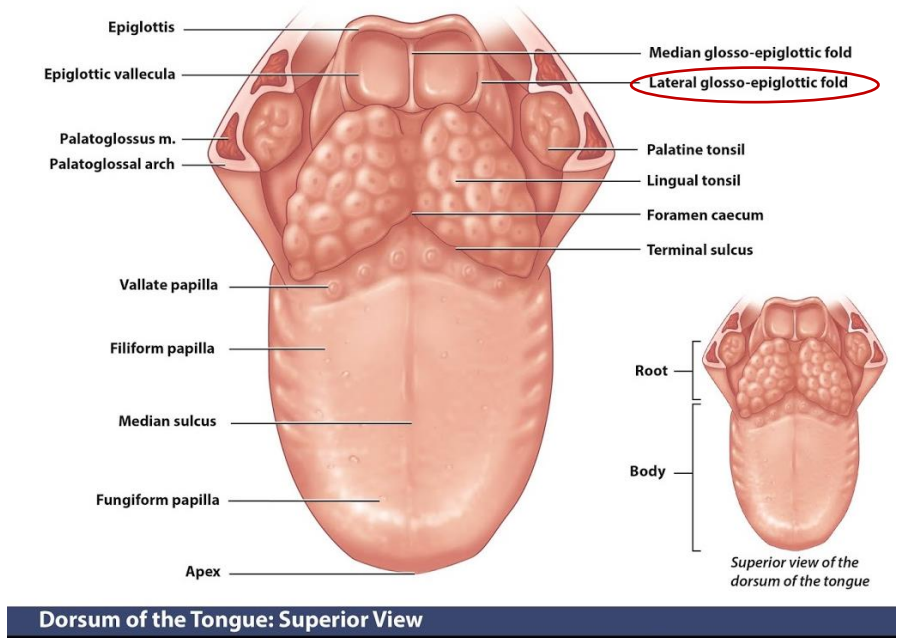




https://sites.google.com/a/umich.edu/blueelink/curricula/sas/session-3-oral-cavity-and-pharynx/s3-oral-cavity-pharynx-lablink?tmpl=%2Fsystem%2Fapp%2Ftemplates%2Fprint%2F&showPrintDialog=1

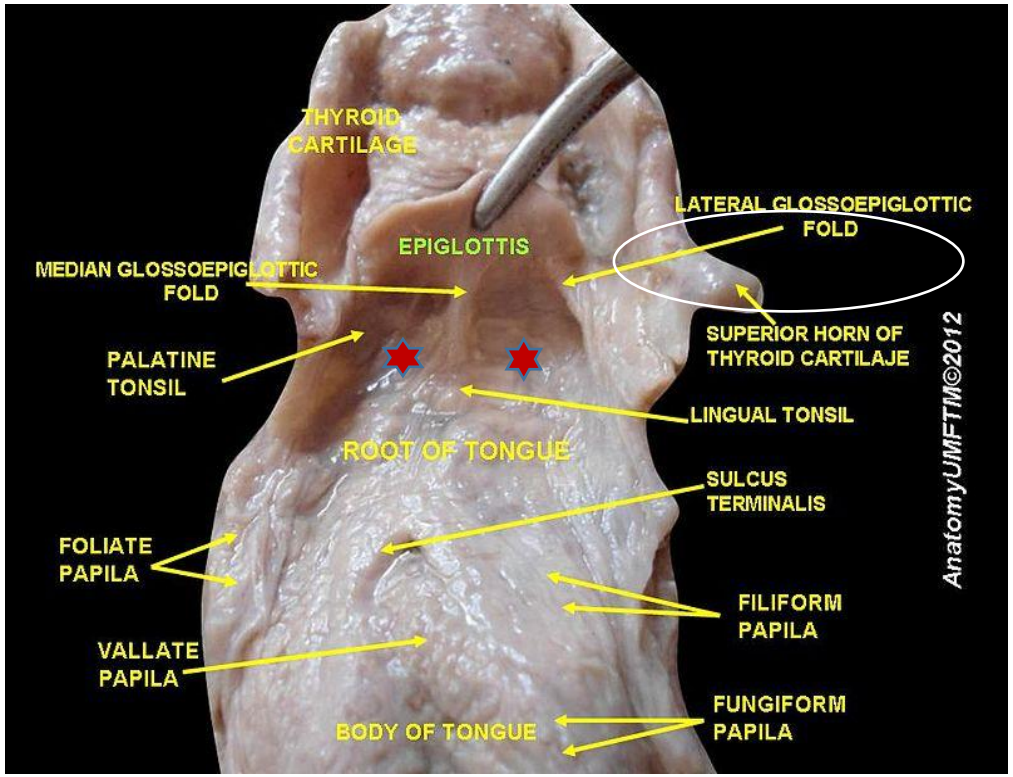
PHARYNX

PARS ORALIS PHARYNGIS (OROPHARYNX):

LATERAL WALL:

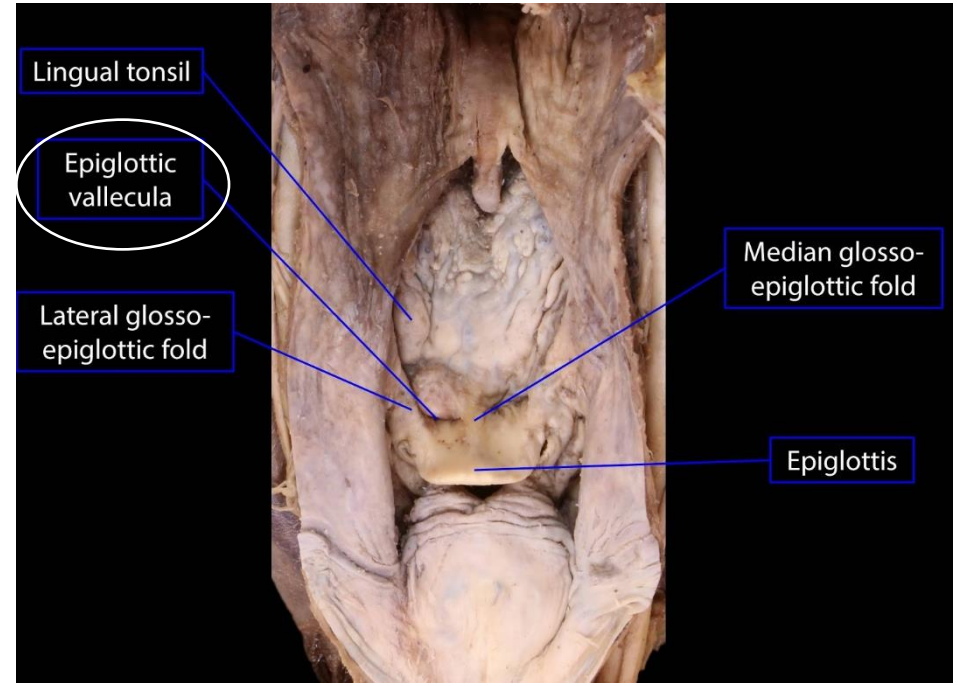
g. vallecula epiglottica:

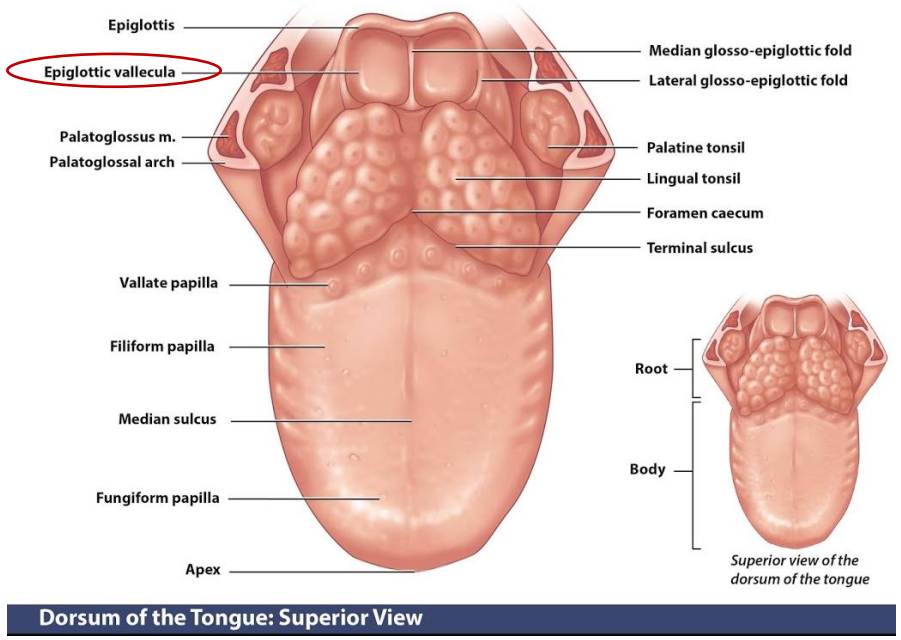
- **depression between the tongue and epiglottis**
- **depression between plica glossoepiglottica mediana et lateralis**



https://fa.m.wikipedia.org/wiki/%D9%BE%D8%B1%D9%88%D9%86%D8%AF%D9%87:Slide2uuu.JPG

vallecula epiglottica





Dorsum of the Tongue: Superior View

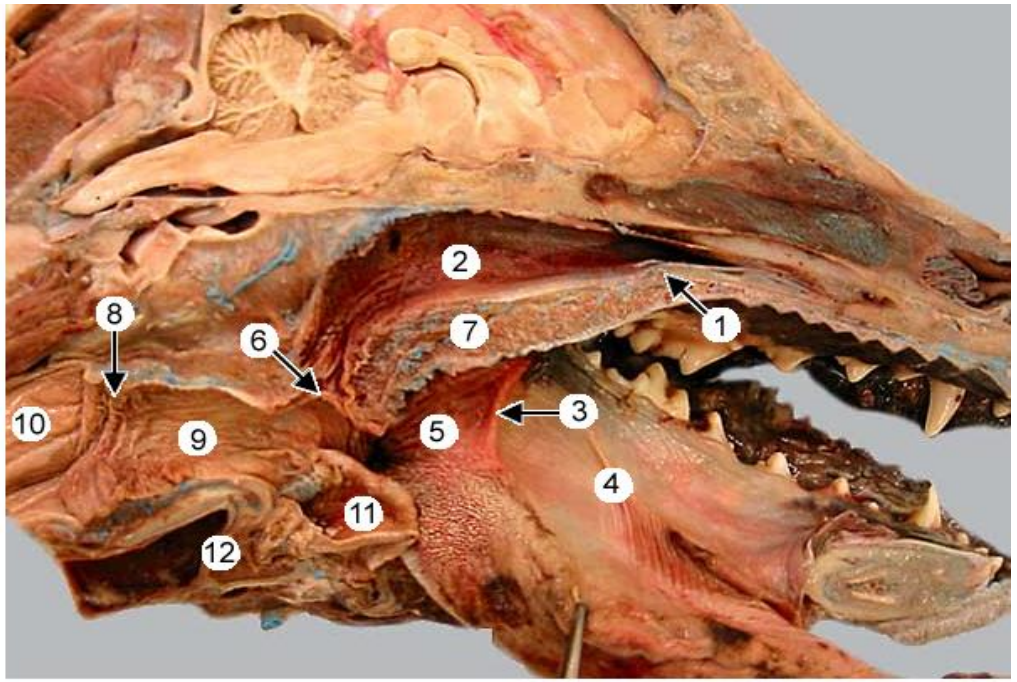
https://sites.google.com/a/umich.edu/bluelink/curricula/sas/session-3-oral-cavity-and-pharynx/s3-oral-cavity-pharynx-lablink?tmpl=%2Fsystem%2Fapp%2Ftemplates%2Fprint%2F&showPrintDialog=1

PHARYNX

PARS ORALIS PHARYNGIS (OROPHARYNX):

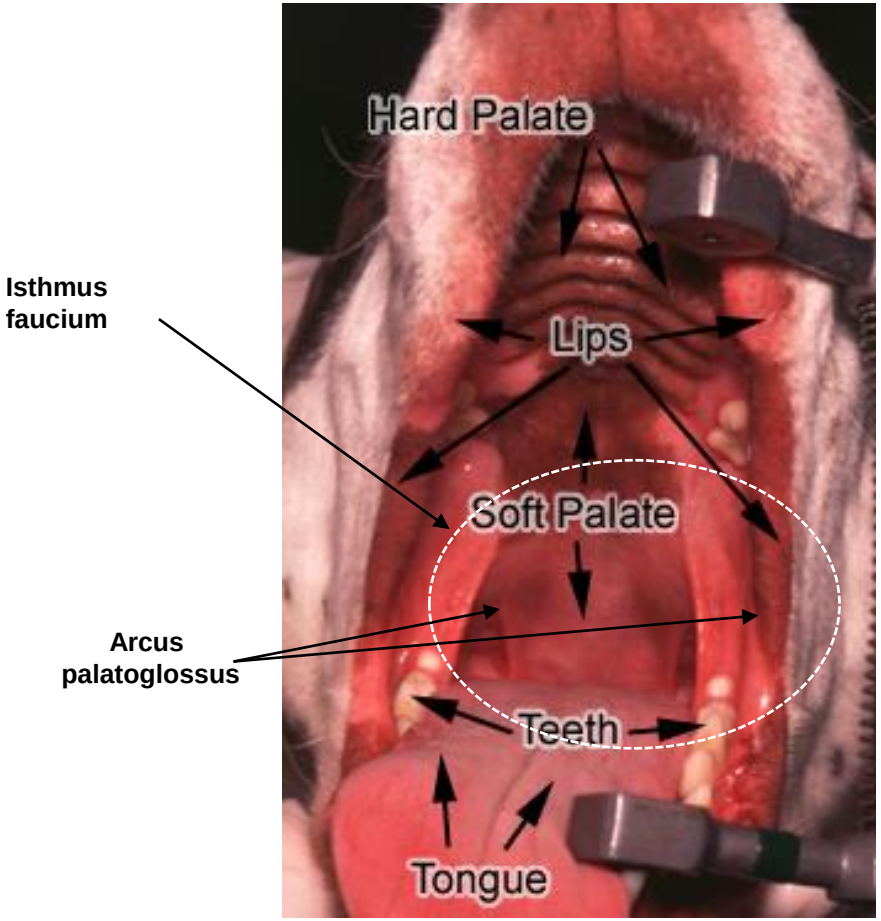
ISTHMUS FAUCIUM:

- orifice between oral cavity and oropharynx



Another view of the pharynx. Choanae (openings) at the caudal end of the hard palate (1) mark the boundary between nasal cavity and **nasopharynx** (2). The **palatoglossal arch** (3) marks the boundary between oral cavity (4) and **oropharynx** (5). The **palatopharyngeal arch** (6) marks the end of the **soft palate** (7). The **pharyngoesophageal limen** (8) marks the boundary between the **laryngopharynx** (9) and the esophagus (10). Identify the epiglottis (11) and other laryngeal cartilages (12).

http://vanat.cvm.umn.edu/carnLabs/Lab22/Img22-11.html

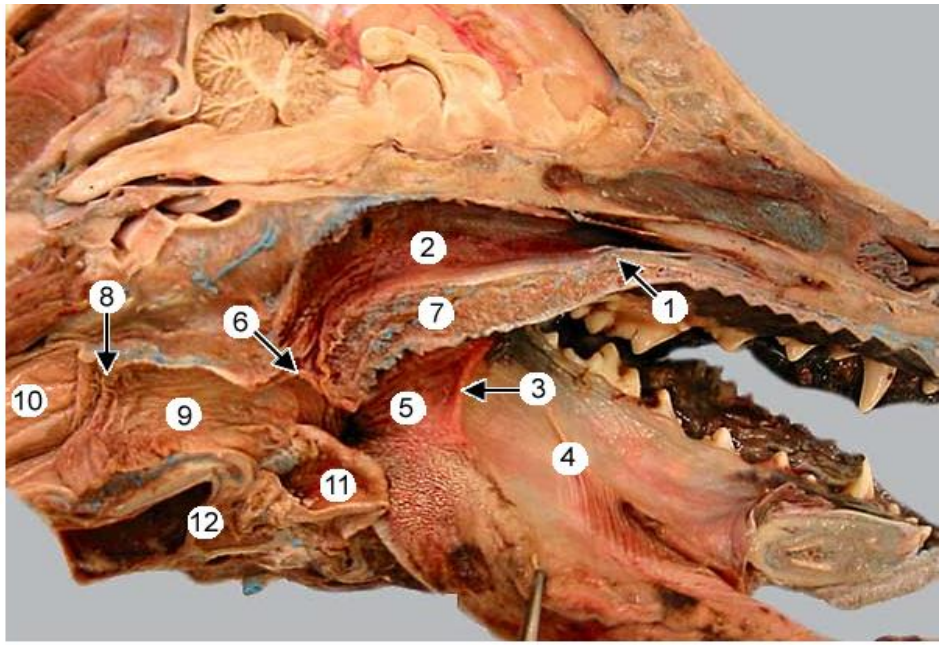


http://veterinary-online.blogspot.com/2013/02/

PHARYNX

PARS LARYNGEA PHARYNGIS (LARYNGOPHARYNX):

- **ventral to the ostium intrapharyngeum**
- **extends from the base of the epiglottis to the esophagus**



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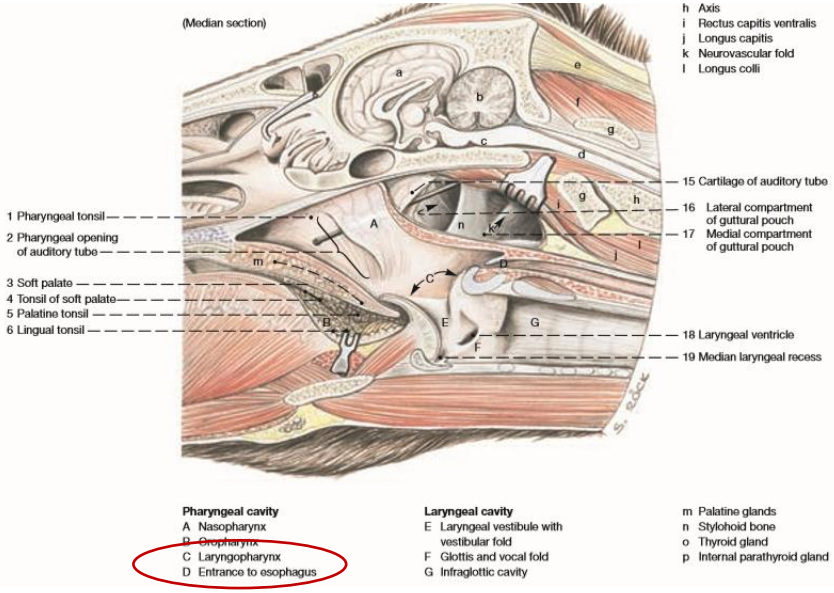
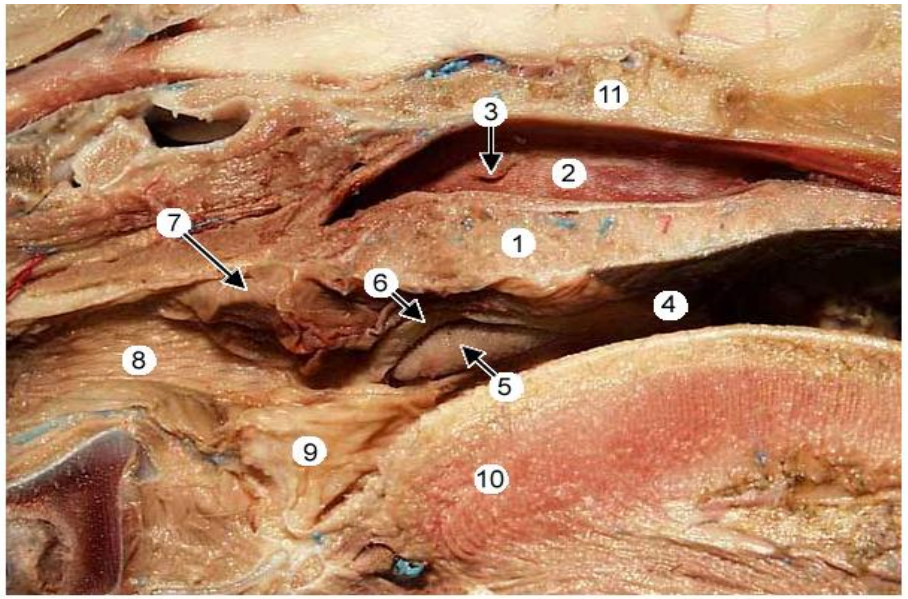
http://vanat.cvm.umn.edu/carnLabs/Lab22/Img22-11.html





Enlarged view of the pharynx. The pharynx is subdivided by the **soft palate** (1). The **nasopharynx** (2) contains the opening of the **auditory tube** (3). The **oropharynx** (4) contains the **palatine tonsil** (5) within a fossa normally covered by a semilunar fold (6). The **palatopharyngeal arch** (7) marks the caudal end of the soft palate. The **laryngopharynx** (8) is located caudal to the soft palate and dorsal to the larynx. Identify the epiglottis (9), root of the tongue (10), and bones of the floor of the cranial cavity (11).

http://vanat.cvm.umn.edu/carnLabs/Lab22/Img22-10.html

PHARYNX

PARS LARYNGEA PHARYNGIS (LARYNGOPHARYNX):

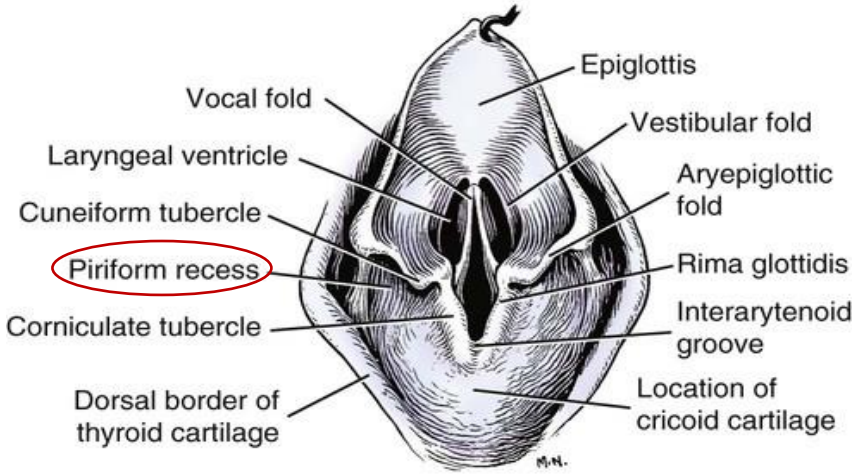
- food and liquid pass through the recess into the esophagus

a. recessus piriformis:

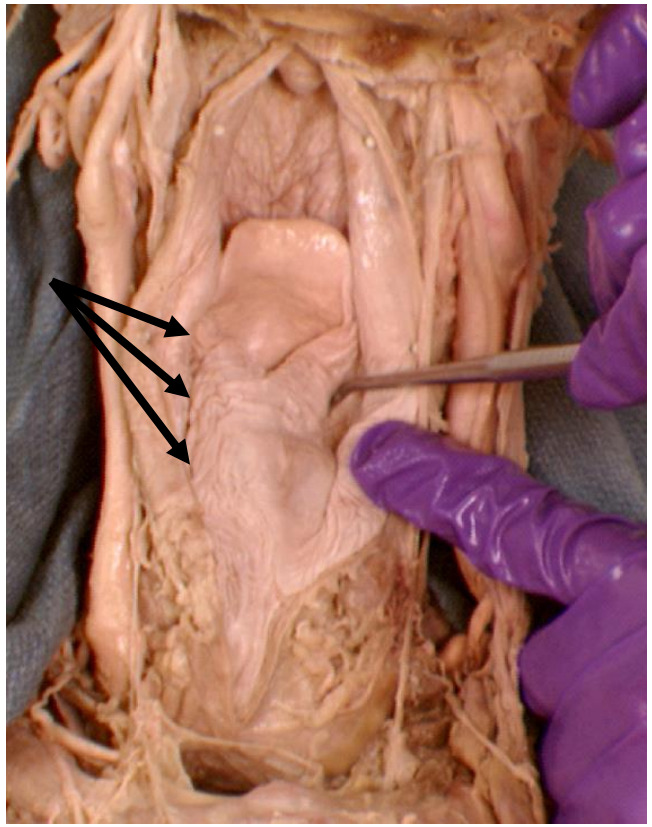
- on each side of the epiglottis

channel between:

1. **epiglottis**
2. **plica aryepiglottica**
3. **arythenoid cartilage medially**
4. **membrana thyrohyoidea**
5. **thyroid cartilage laterally**



https://veteriankey.com/the-respiratory-system/



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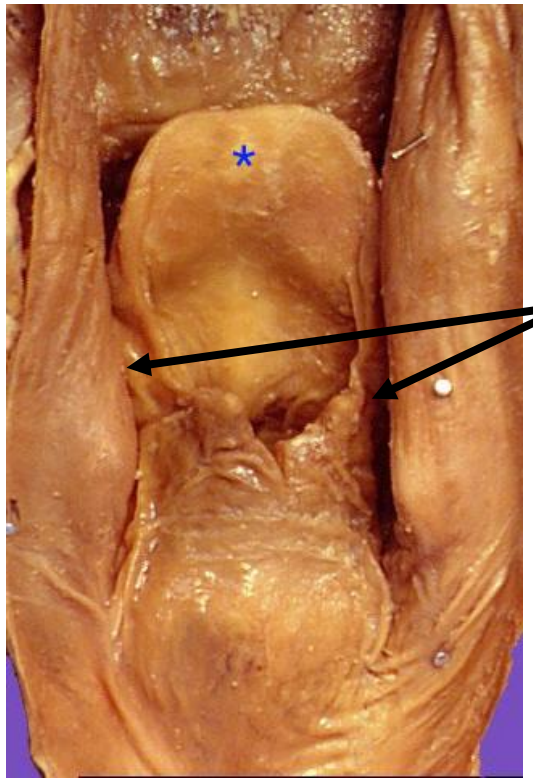


https://anatomy.elpaso.ttuhsc.edu/quizzes/practical/deepneck_practical/q3.html

PHARYNX

PARS LARYNGEA PHARYNGIS (LARYNGOPHARYNX):

VESTIBULUM ESOPHAGEI (PARS ESOPHAGEA):

- part of the laryngopharynx between the arythenoid cartilages and the biginning of esophagus

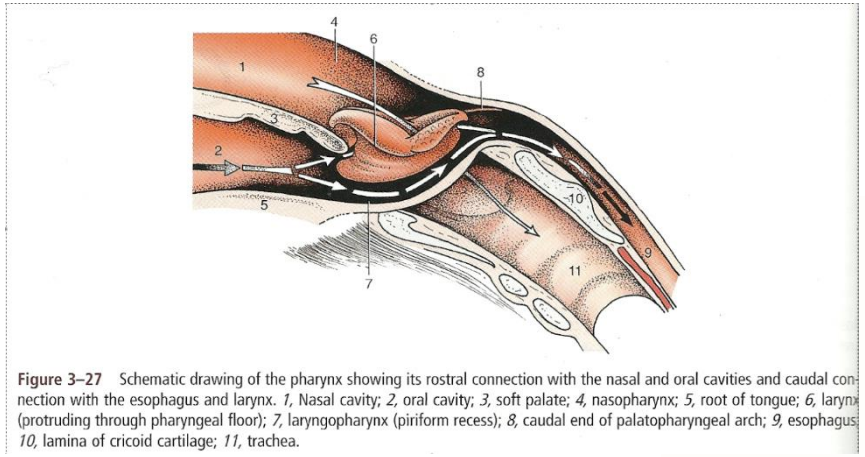
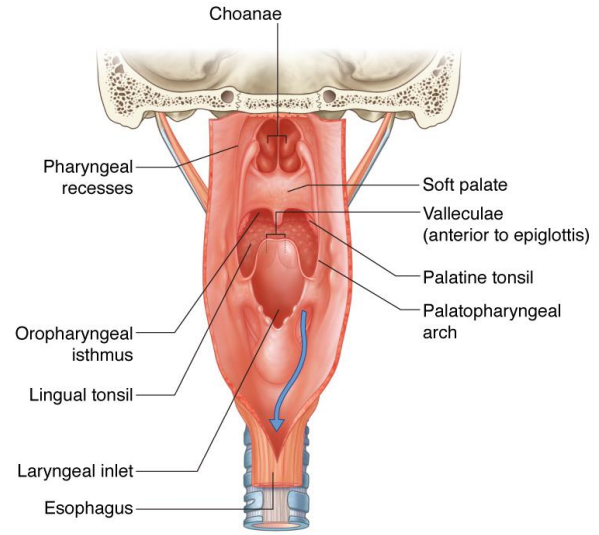
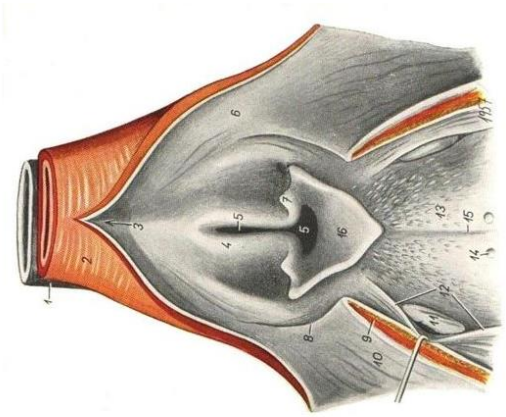
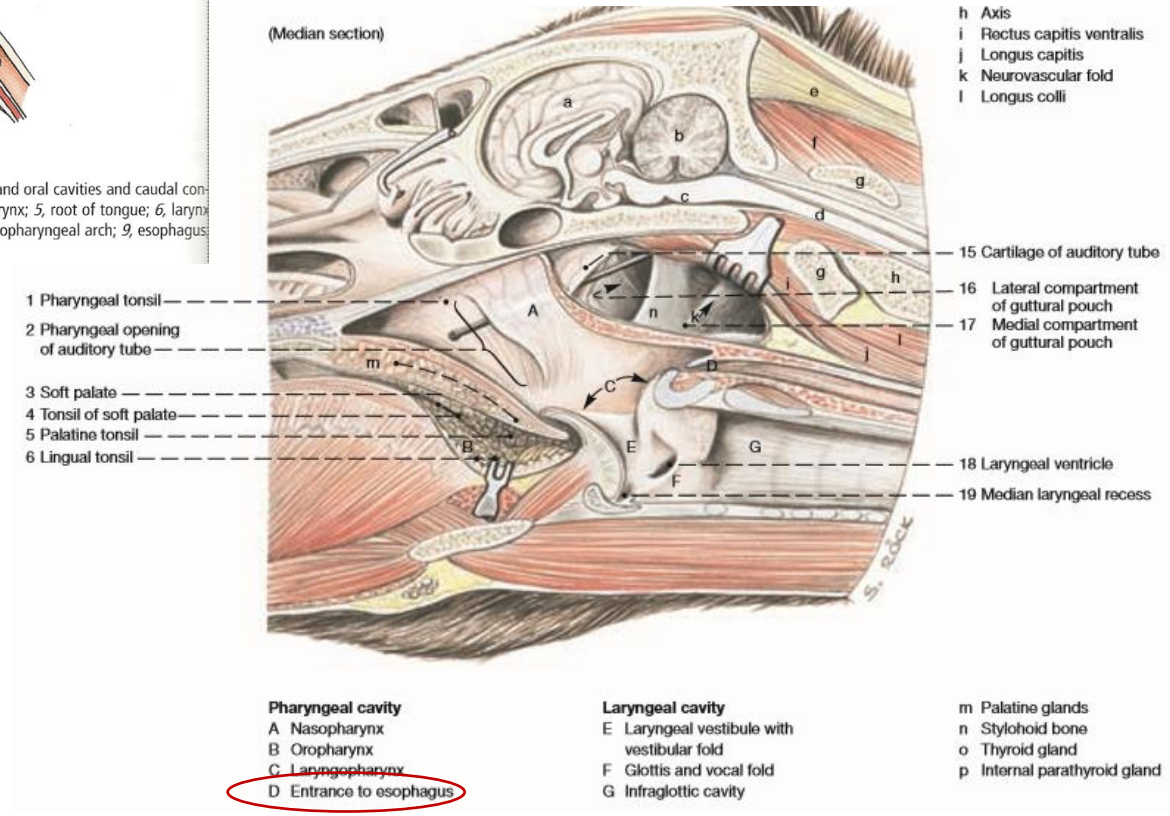


Figure 3–27 Schematic drawing of the pharynx showing its rostral connection with the nasal and oral cavities and caudal connection with the esophagus and larynx. *1,* Nasal cavity; *2,* oral cavity; *3,* soft palate; *4,* nasopharynx; *5,* root of tongue; *6,* larynx (protruding through pharyngeal floor); *7,* laryngopharynx (piriform recess); *8,* caudal end of palatopharyngeal arch; *9,* esophagus; *10,* lamina of cricoid cartilage; *11,* trachea.



1. Trachea
2. Oesophagus
3. Vestibulum oesoph
4. cart.arytenoidea
5. aditus laryngis
6. fornix pharyngis
7. cartilago corniculata.
9. velum palatini
11. tonsilla palatina
13 radix lingua
14 papilla vallata
16 epiglottis



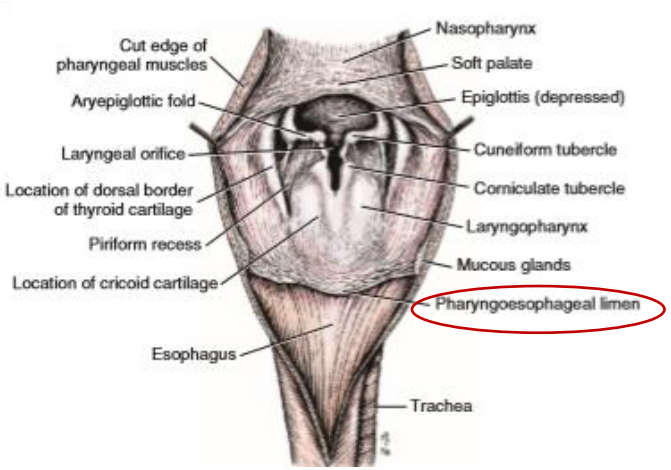


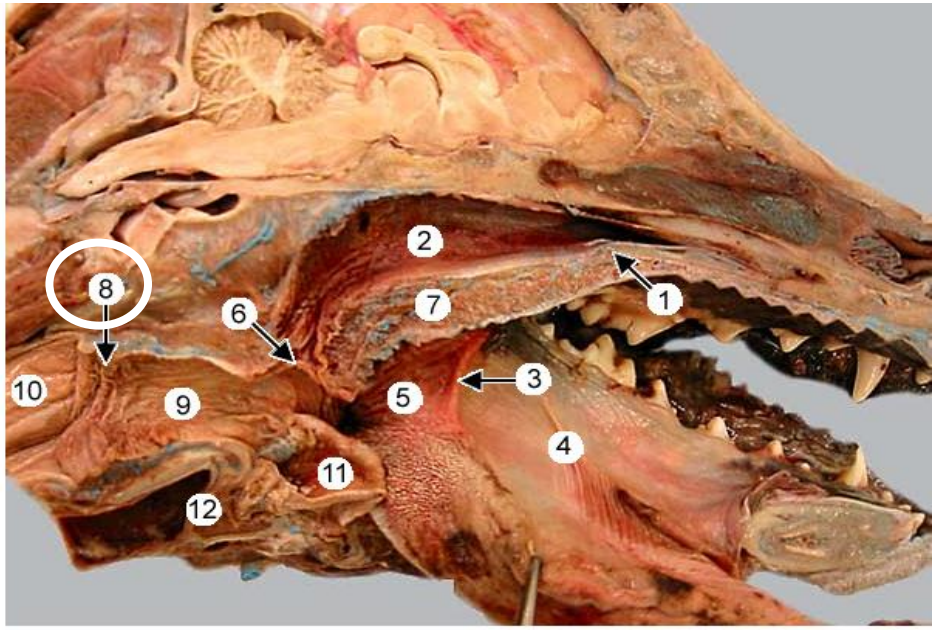
PHARYNX

PARS LARYNGEA PHARYNGIS (LARYNGOPHARYNX):

LIMEN PHARYNGOESOPHAGEUM:

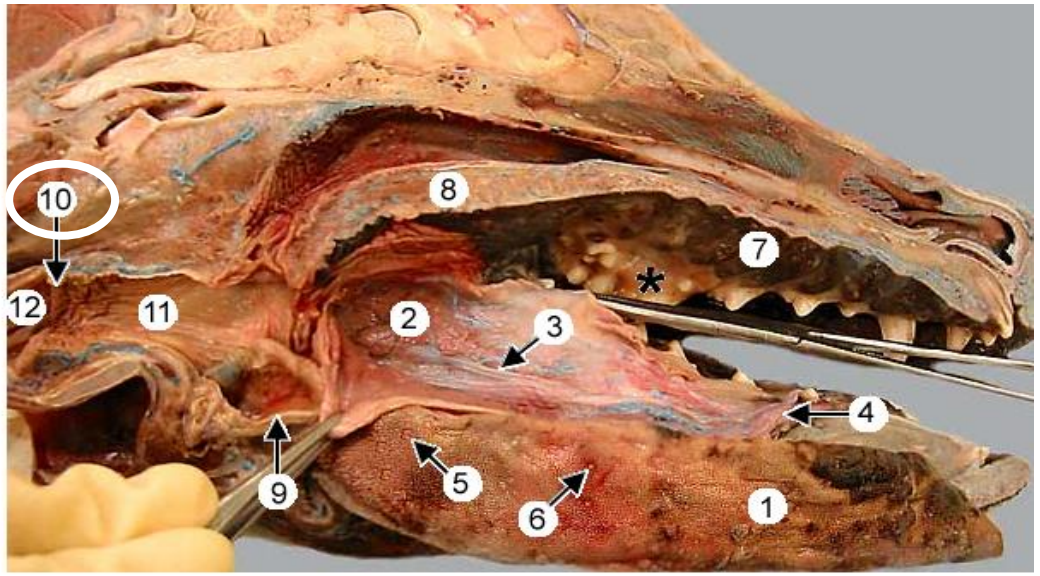
- **in Car**
- **annular fold of mucous membrane**
- **interior boundary between pharynx and esophagus**





Another view of the pharynx. Choanae (openings) at the caudal end of the hard palate (1) mark the boundary between nasal cavity and **nasopharynx** (2). The **palatoglossal arch** (3) marks the boundary between oral cavity (4) and **oropharynx** (5). The **palatopharyngeal arch** (6) marks the end of the **soft palate** (7). The **pharyngoesophageal limen** (8) marks the boundary between the **laryngopharynx** (9) and the esophagus (10). Identify the epiglottis (11) and other laryngeal cartilages (12).

http://vanat.cvm.umn.edu/carnLabs/Lab22/Img22-11.html



Oral cavity in a bisected cadaver. The **vestibule** is lateral to the teeth. Notice the large fourth premolar (asterisk). Within the oral cavity proper, the **tongue** (1) is reflected and floor mucosa has been incised to reveal the polystomatic **sublingual salivary gland** (2) and mandibular and sublingual salivary ducts (3) emptying at the sublingual caruncle (4). On the tongue, notice **vallate papillae** (5) and **fungiform papillae** (6) amidst a sea of filliform papillae.

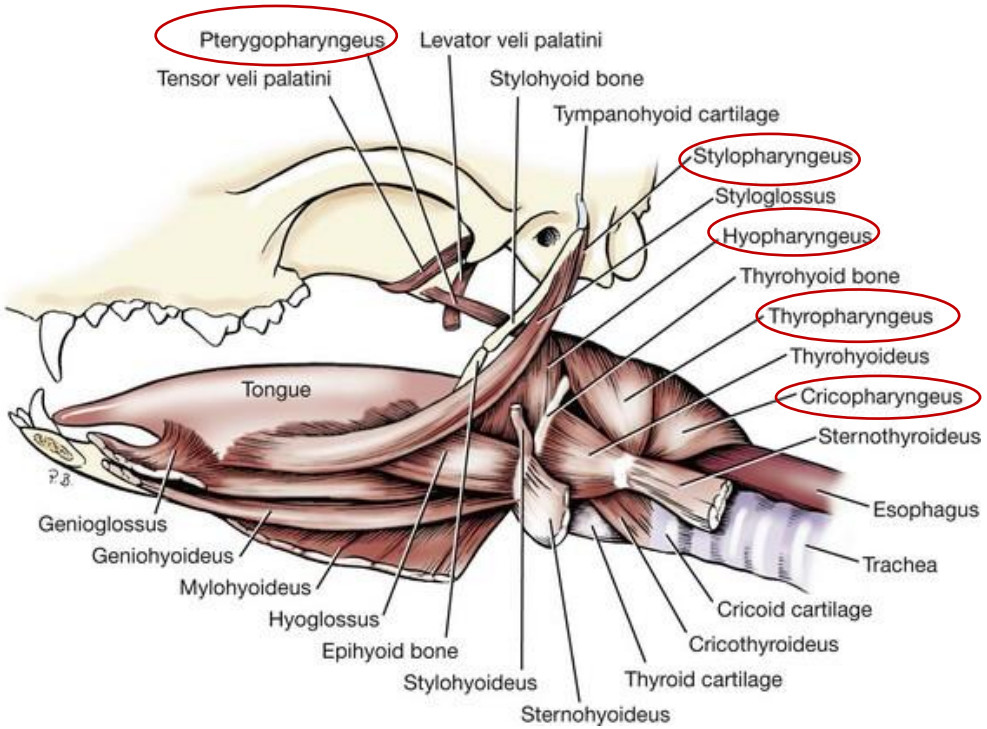
Also notice: hard palate (7), soft palate (8), epiglottis (9), and the border (10) between the pharynx (11) and esophagus (12).

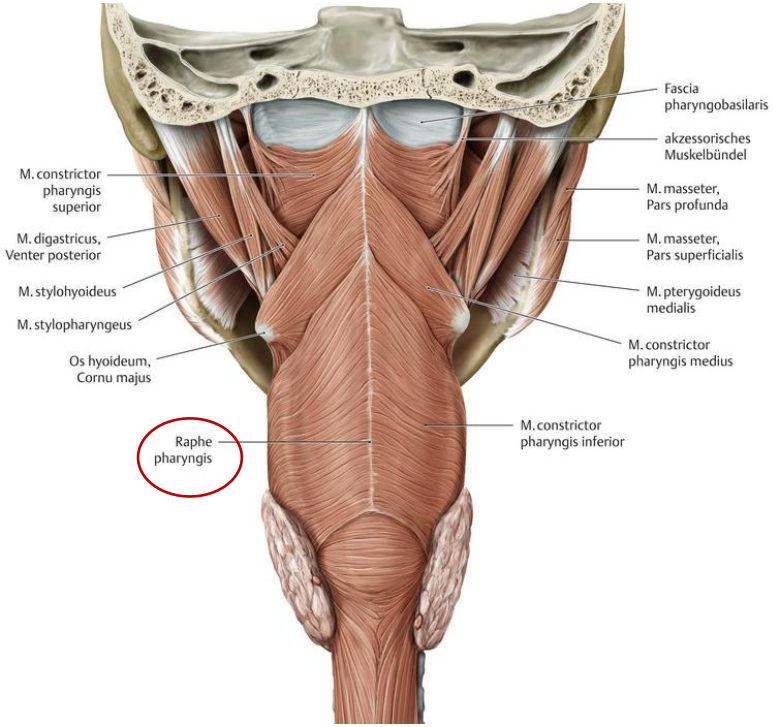
http://vanat.cvm.umn.edu/carnLabs/Lab22/Img22-5.html

STRUCTURES OF THE PHARYNGEAL WALL

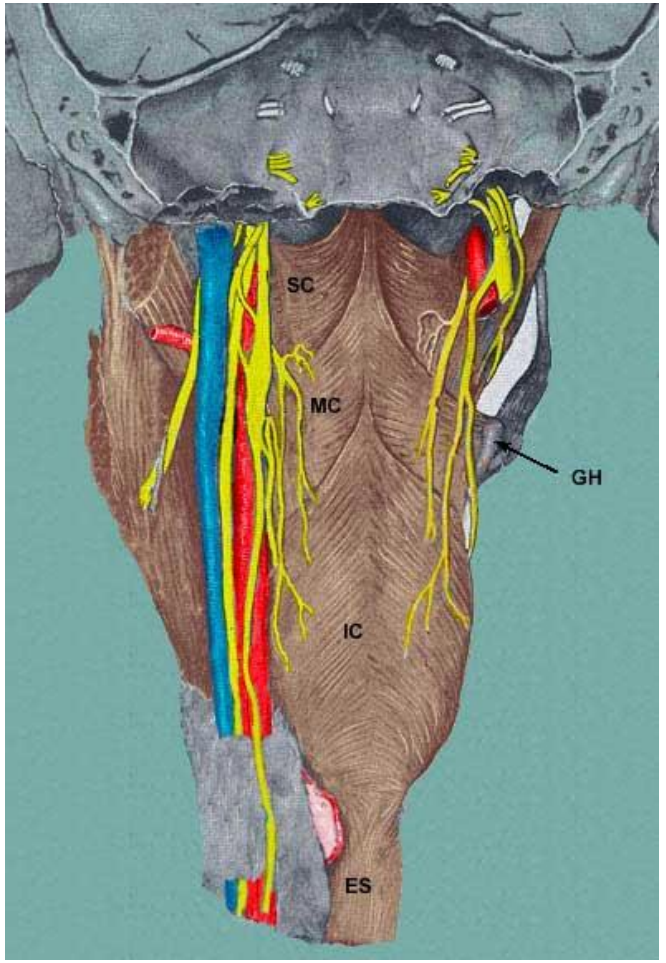
consist of from inside to outside:

1. **Mucous membrane**
2. **Pharyngeal muscles**
3. **Fascia pharyngis**
4. **Raphe pharyngis**





https://thegolfclub.info/related/posterior-midline-pharyngeal-raphe.html



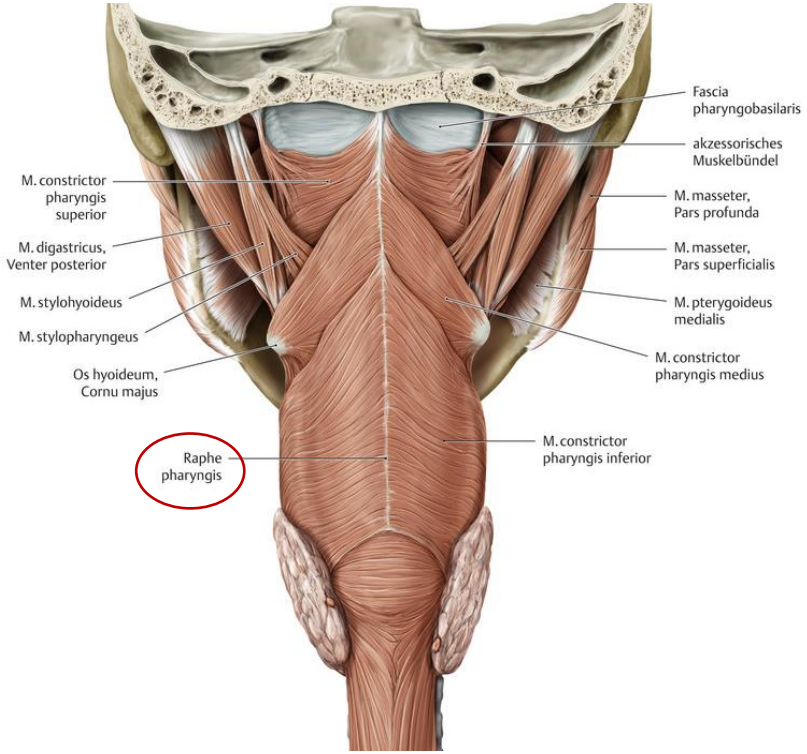
superior pharyngeal constrictor (SC)
middle pharyngeal constrictor (MC)
inferior pharyngeal constrictor (IC)
esophagus (ES)

http://www.wesnorman.com/lesson8.htm

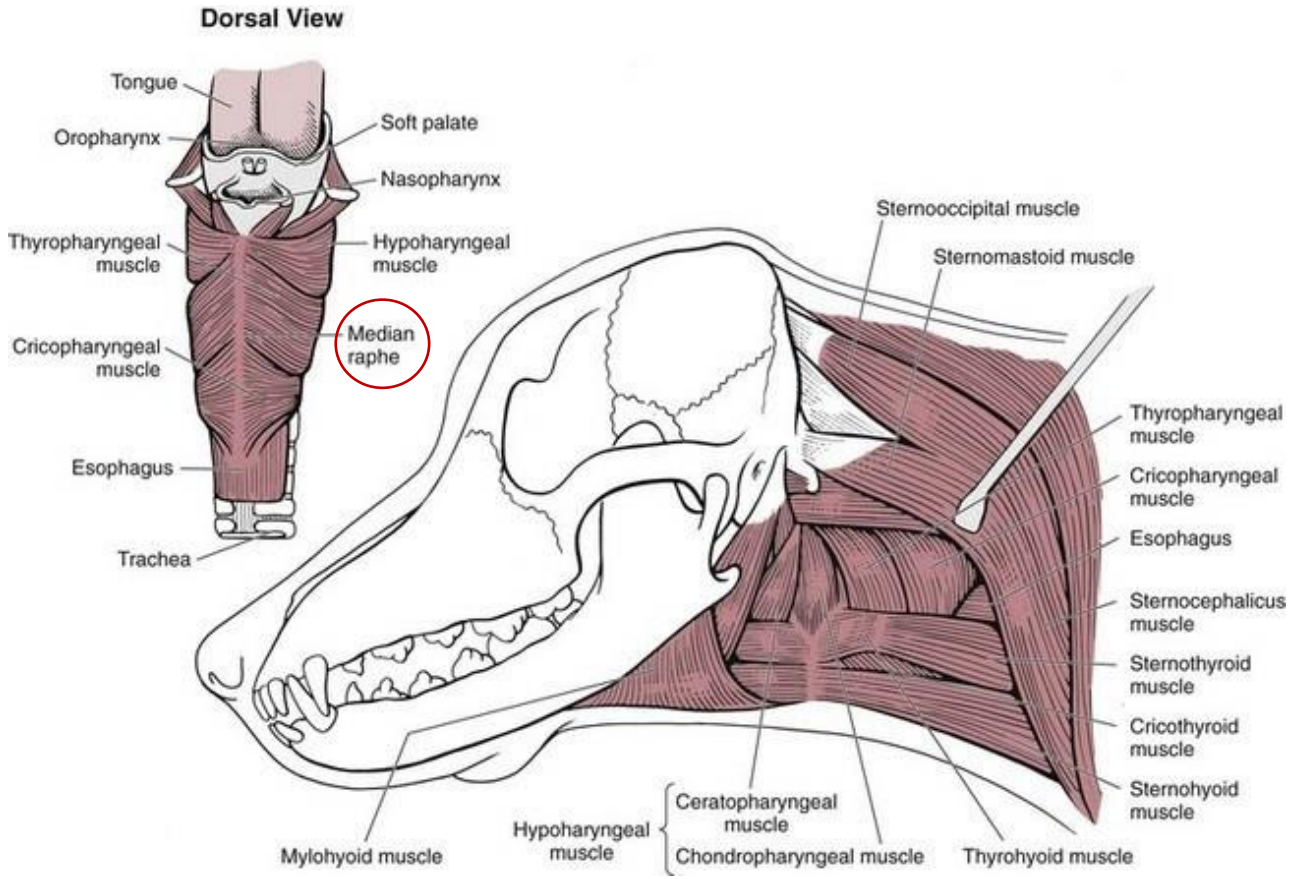
PHARYNGEAL MUSCLES

RAPHE PHARYNGIS:

- **median, dorsal line**
- **termination of constrictor muscles**



https://thegolfclub.info/related/posterior-midline-pharyngeal-raphe.html



https://veteriankey.com/esophagus-2/

PHARYNGEAL MUSCLES

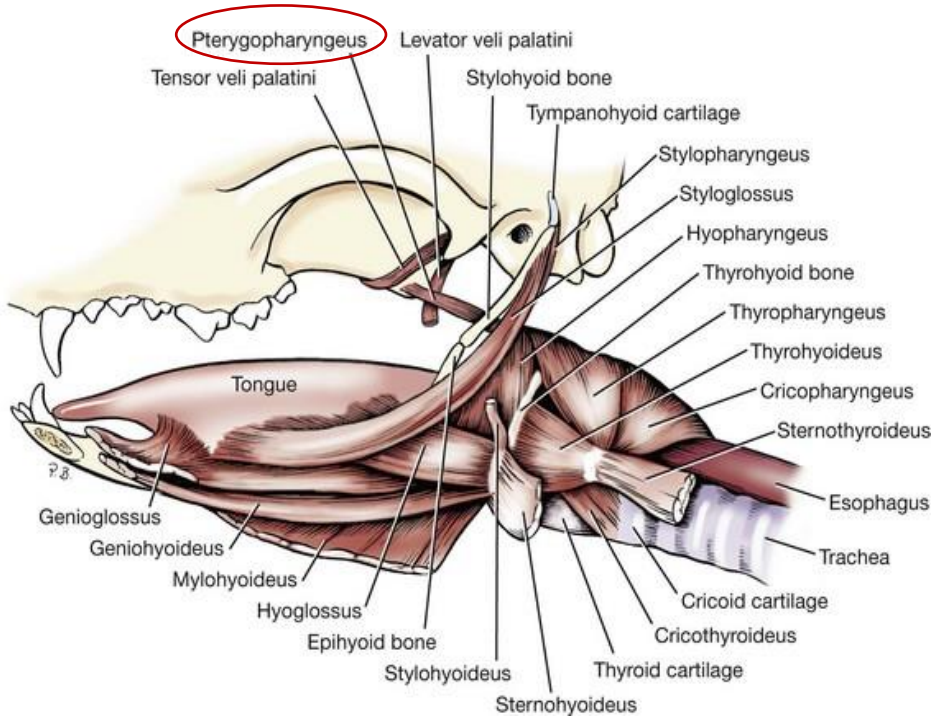
I. ROSTRAL PHARYNGEAL CONSTRICTOR MUSCLES (Mm. CONSTRICTORES PHARYNGIS ROSTRALIS):

1. M. pterygopharyngeus:

Origin: os pterygoideum, aponeurosis palatina (except Eq)

Insertion: raphe pharyngis

Action: spincter

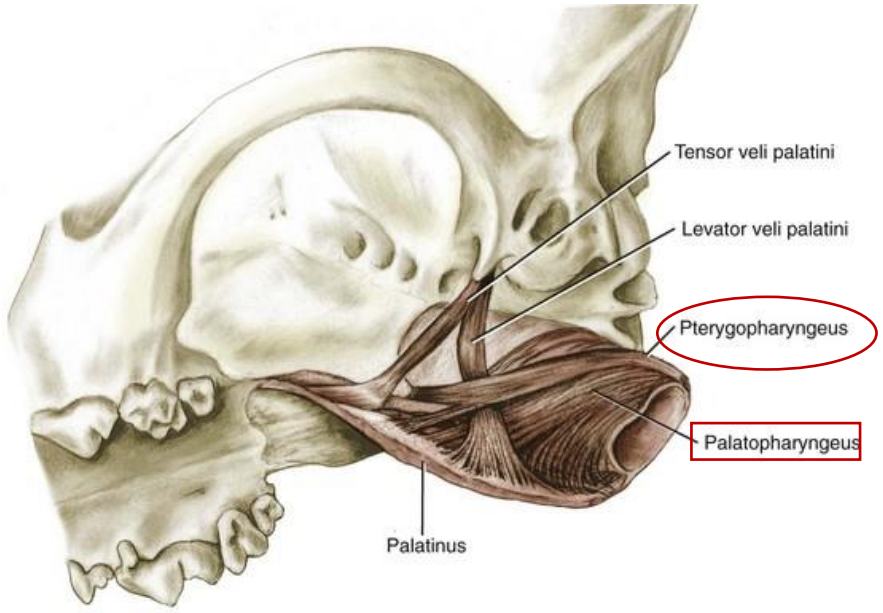


2. M. palatopharyngeus:

Origin: os palatinum et pterygoideum

Insertion: raphe pharyngis

Action: sphincter



PHARYNGEAL MUSCLES

I. ROSTRAL PHARYNGEAL CONSTRICTOR MUSCLES (Mm. CONSTRICTORES PHARYNGIS ROSTRALIS):

3. M. stylopharyngeus rostralis:

Origin: distal half of stylohyoideum

Insertion: raphe pharyngis

- **occurs in Ru**

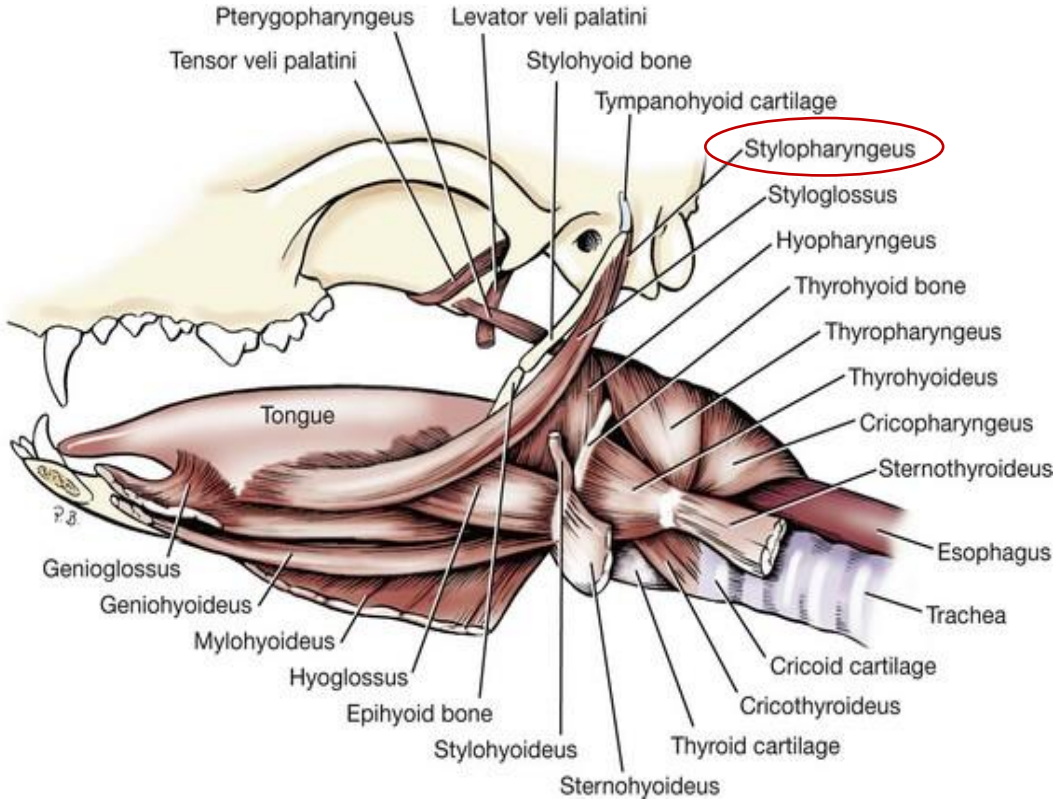
Action: sphincter

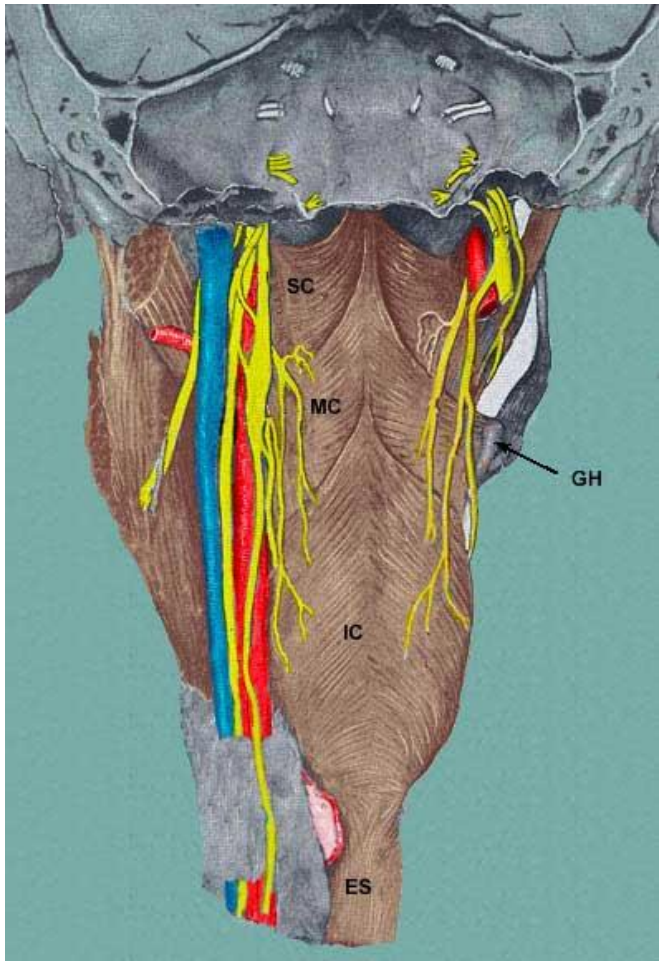
4. M. stylopharyngeus caudalis:

Origin: proximal half of stylohyoideum

Insertion: wall of pharynx

action: dilatator





superior pharyngeal constrictor (SC)
middle pharyngeal constrictor (MC)
inferior pharyngeal constrictor (IC)
esophagus (ES)

http://www.wesnorman.com/lesson8.htm

PHARYNGEAL MUSCLES

II. MIDDLE PHARYNGEAL CONSTRICTOR MUSCLES (Mm. CONSTRICTORES PHARYNGIS MEDIUS, M. HYPOPHARYNGEUS):

a. Musculus ceratopharyngeus

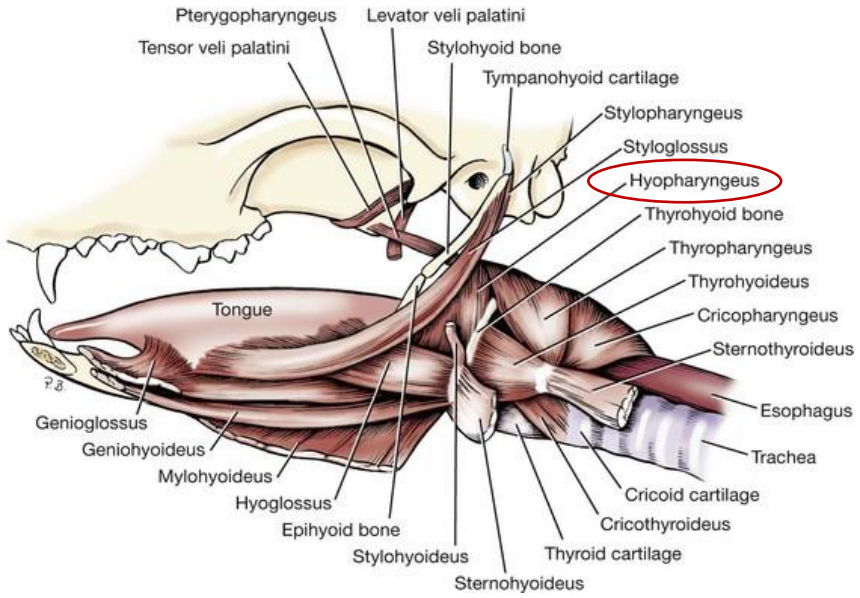
Origin: ceratohyoideum

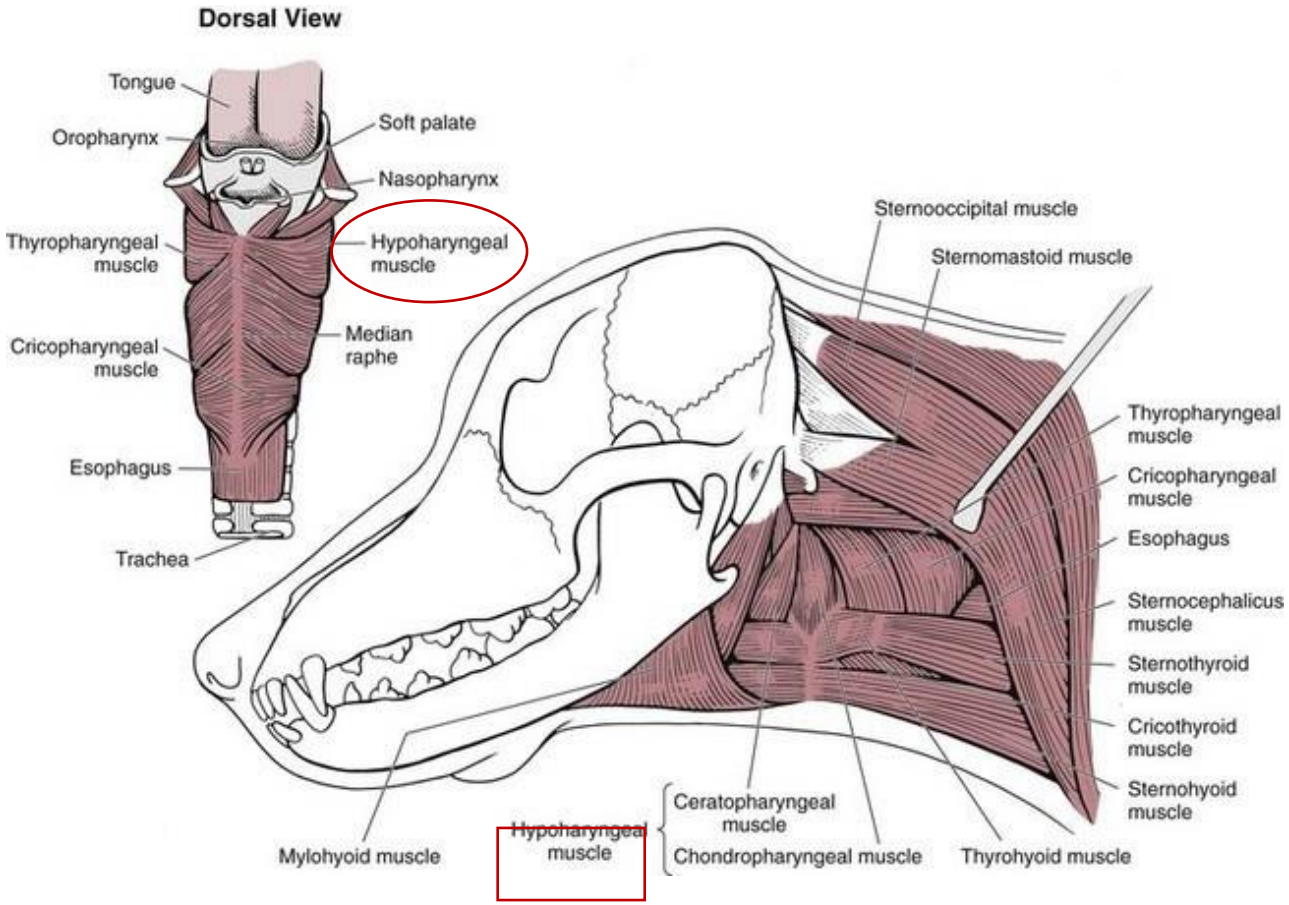
b. M. chondropharyngeus

Origin: thyrohyoideum

Insertion: raphe pharyngis

Action: sphnicter





https://veteriankey.com/esophagus-2/

PHARYNGEAL MUSCLES

III. CAUDAL PHARYNGEAL CONSTRICTOR MUSCLES (Mm. CONSTRICTORES PHARYNGIS CAUDALES):

1. M. thyropharyngeus:

Origin: linea obligua of the thyroid cartilage

Insertion: raphe pharyngis

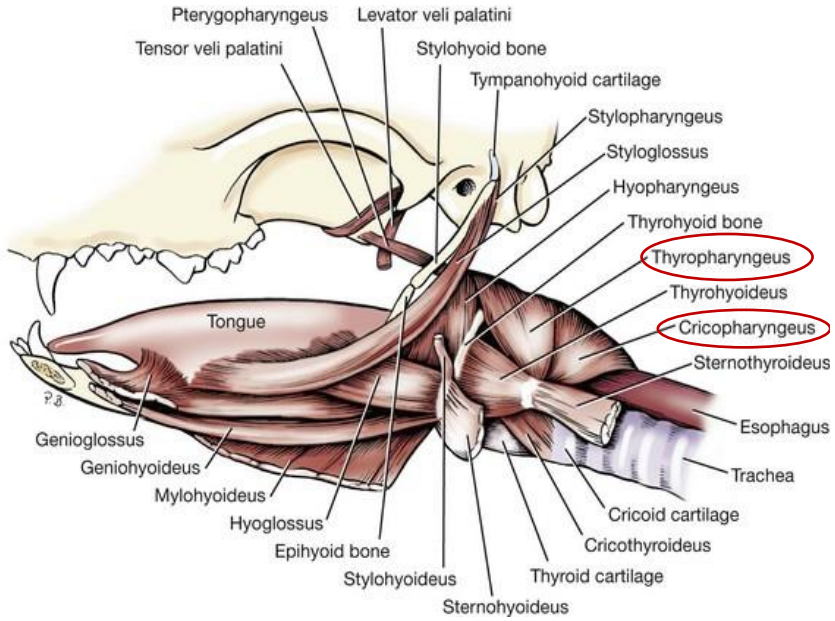
Action: sphincter

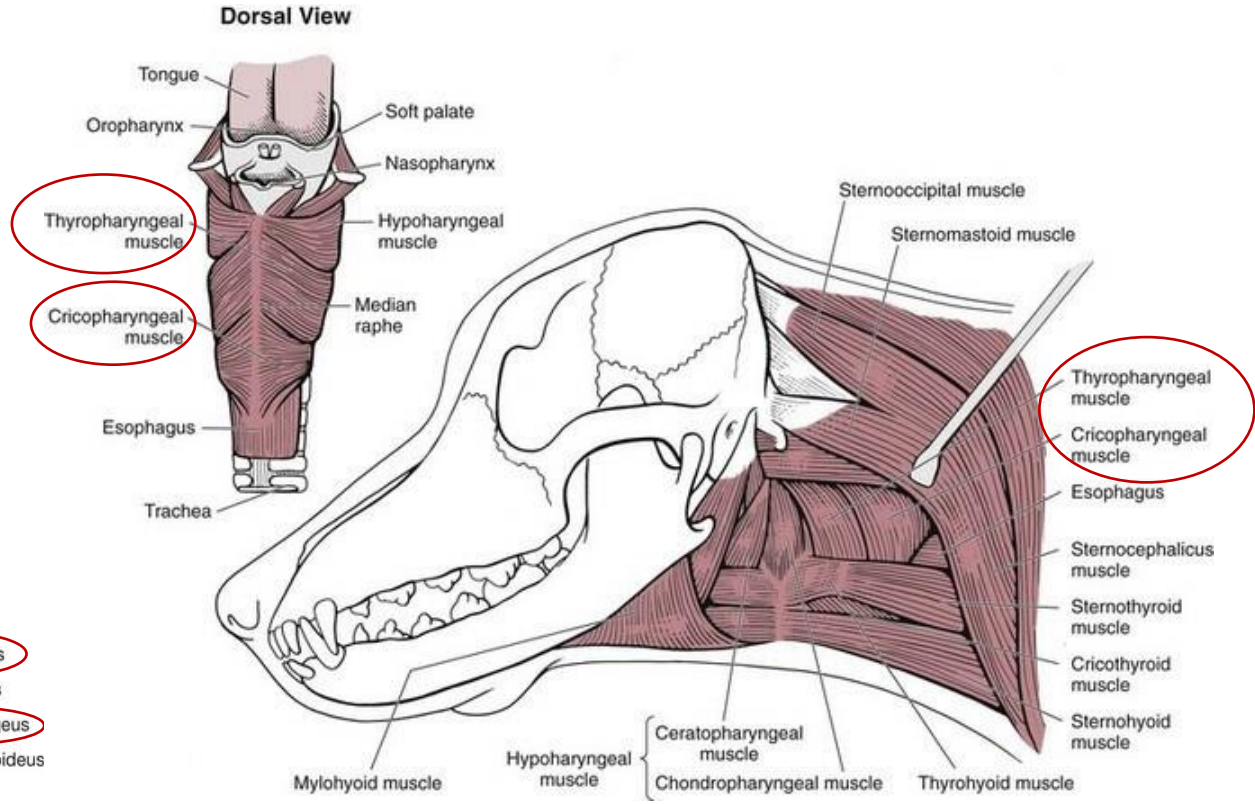
2. M. cricopharyngeus:

Origin: cricoid cartilage

Insertion: raphe pharyngis

Action: sphincter



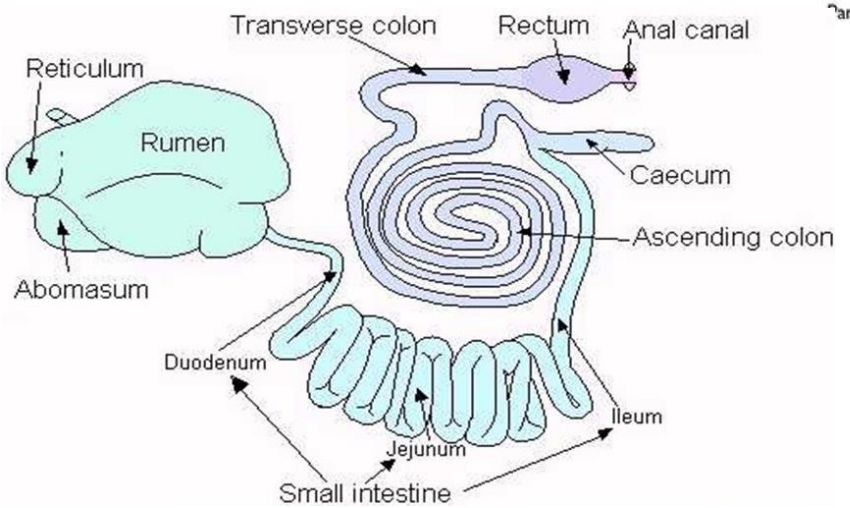


https://veteriankey.com/esophagus-2/

ALIMENTARY CANAL

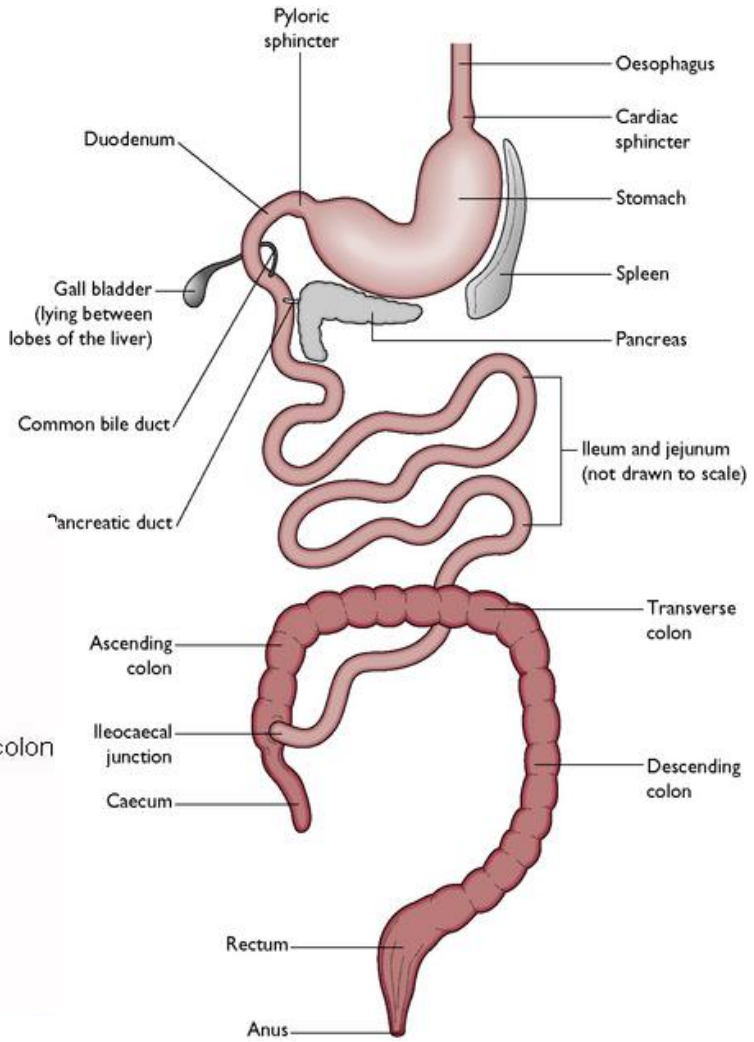
consists of the:

1. **ESOPHAGUS**
2. **STOMACH**
3. **SMALL INTESTINE**
4. **LARGE INTESTINE**



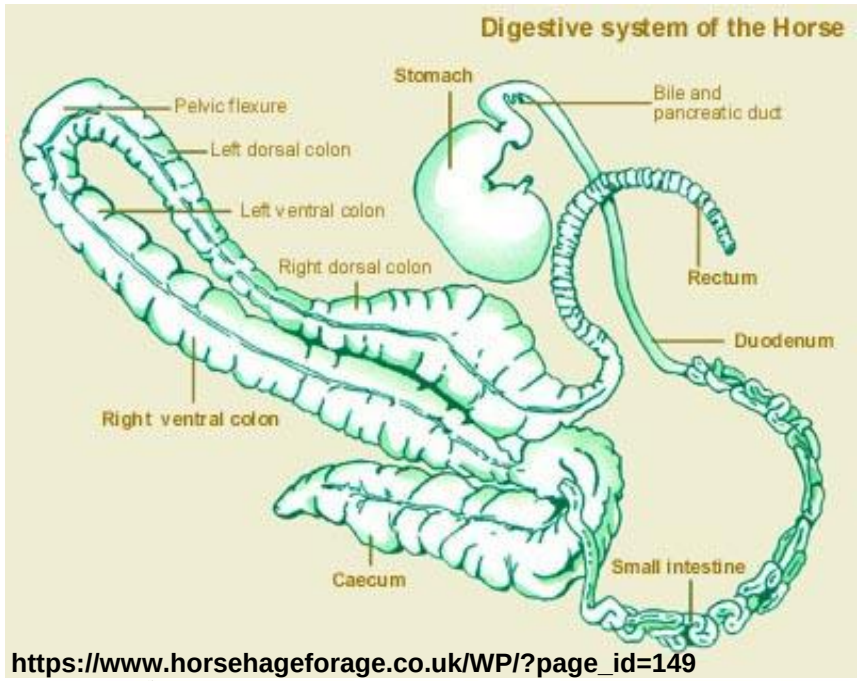
RUMINANT

https://slideplayer.com/slide/4157123/

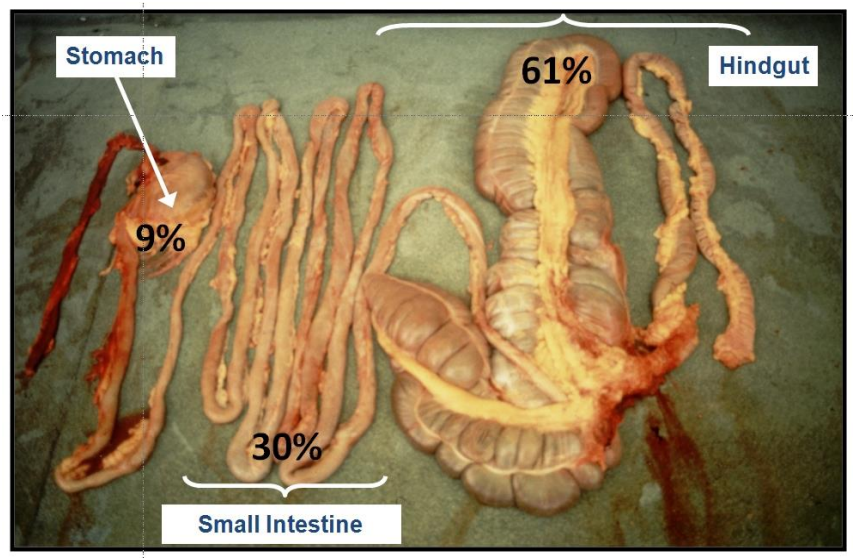


DOG

https://veteriankey.com/digestive-system/



https://www.horsehageforage.co.uk/WP/?page_id=149



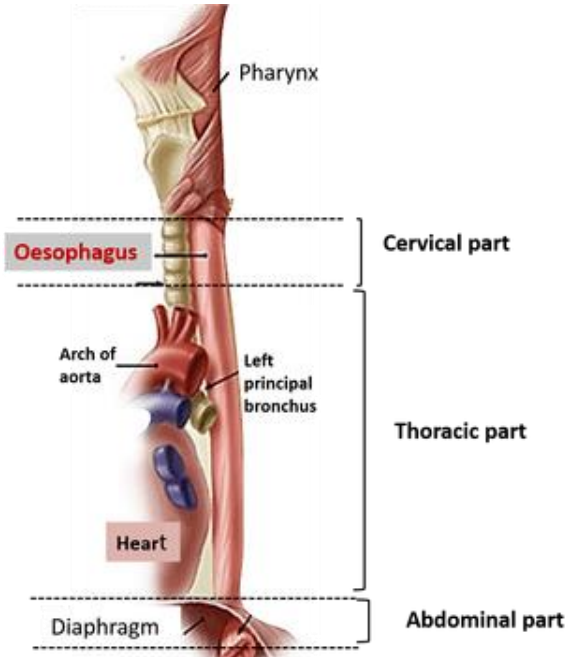
http://davidmarlin.co.uk/portfolio/2313/

ESOPHAGUS

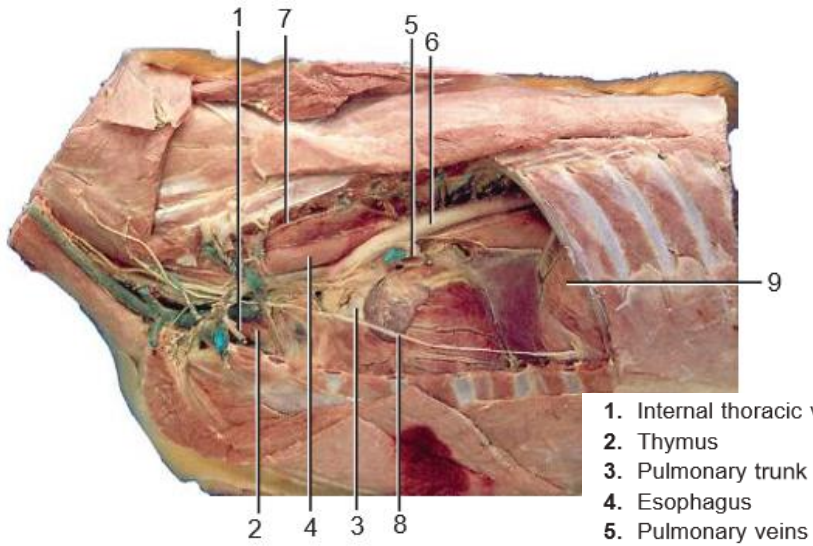
- **musculo – membranous tube**
- **connects the pharyngeal cavity with the stomach**
- **direct continuation of the laryngopharynx**

divided into:

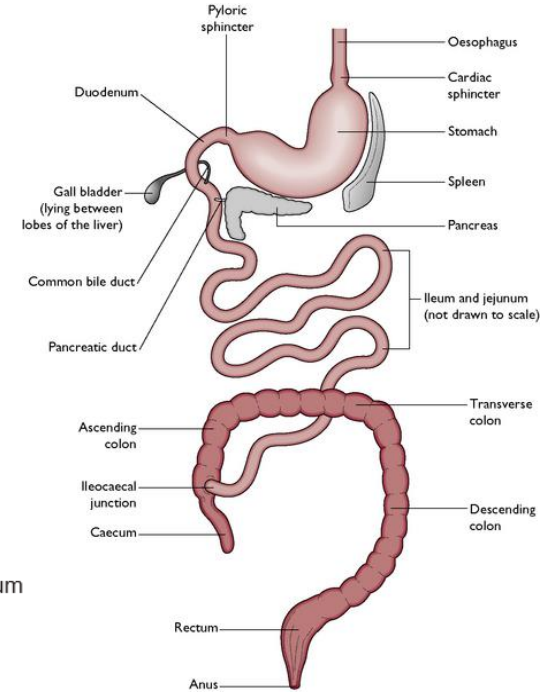
1. **CERVICAL (PARS CERVICALIS)**
2. **THORACAL (PARS THORACALIS)**
3. **ABDOMINAL PART (PARS ABDOMINALIS)**



http://www.anatomyqa.com/anatomy/thorax/oesophagus-anatomy-exam-questions/

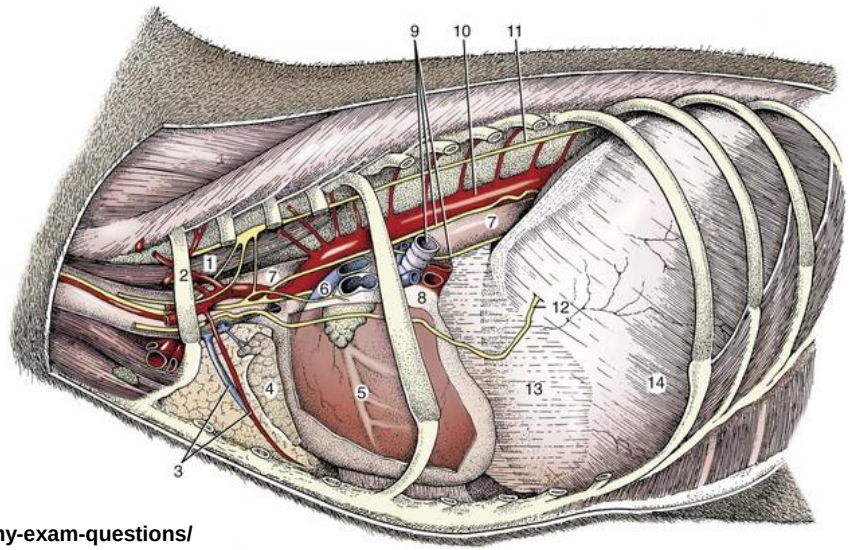


1. Internal thoracic vessels
2. Thymus
3. Pulmonary trunk
4. Esophagus
5. Pulmonary veins entering left atrium
6. Aorta
7. Sympathetic trunk
8. Phrenic nerve
9. Diaphragm



DOG

https://veteriankey.com/digestive-system/



Left lateral view of the canine thoracic cavity; the lung and much of the pericardium have been removed. *1,* Longus colli; *2,* left subclavian artery; *3,* internal thoracic vessels; *4,* thymus; *5,* vessels in paraconal interventricular groove; *6,* pulmonary trunk; *7,* esophagus; *8,* pulmonary veins entering left atrium; *9,* left principal bronchus and dorsal and ventral vagal trunks; *10,* aorta; *11,* sympathetic trunk; *12,*phrenic nerve; *13,* caudal mediastinum; and *14,* diaphragm. (From Dyce KM, Sack WO, Wensing CJ: Textbook of veterinary anatomy, ed 4, St Louis, 2010, Saunders/Elsevier.)

https://veteriankey.com/esophagus-2/

ESOPHAGUS

CERVICAL PART (PARS CERVICALIS) :

- **part from the pharynx to the first rib**

RELEATIONS:

a) **common carotid artery**

b) **internal jugular vein**

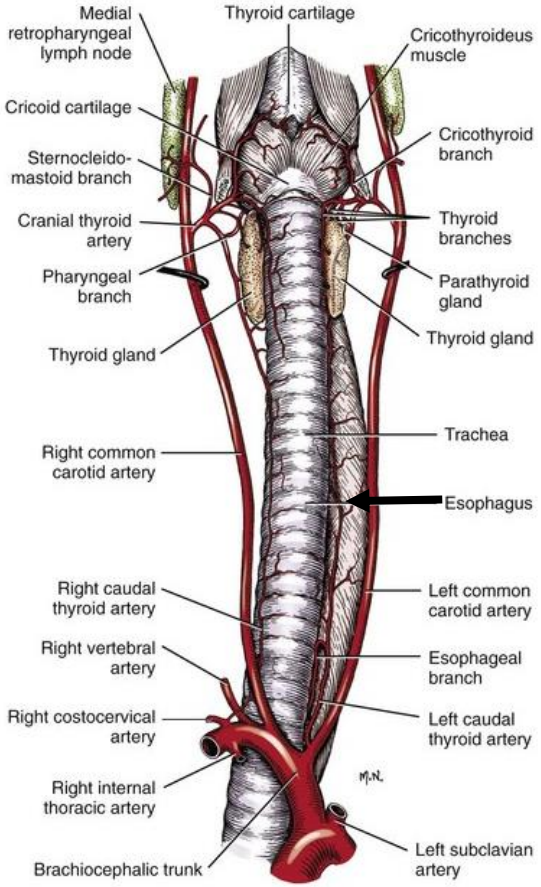
c) **tracheal duct**

d) **cervical lymph nodes**

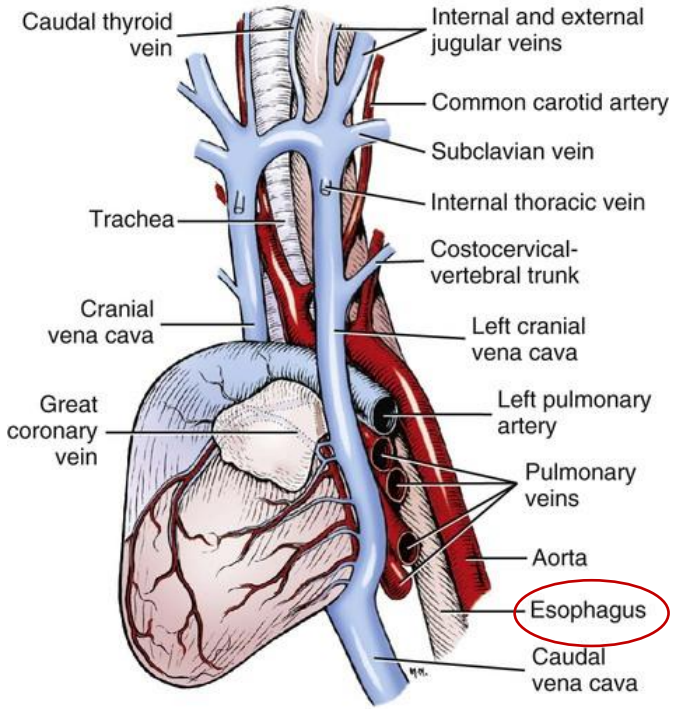
e) **vagosympatetic trunk**

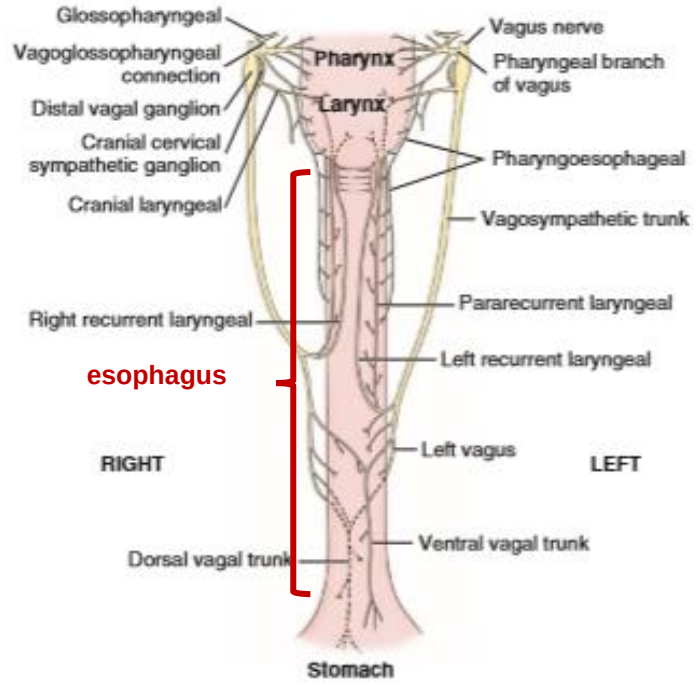
f) **recurrent laryngeal nerve**

g) **thymus – in young animals**



https://veteriankey.com/trachea-and-bronchi/

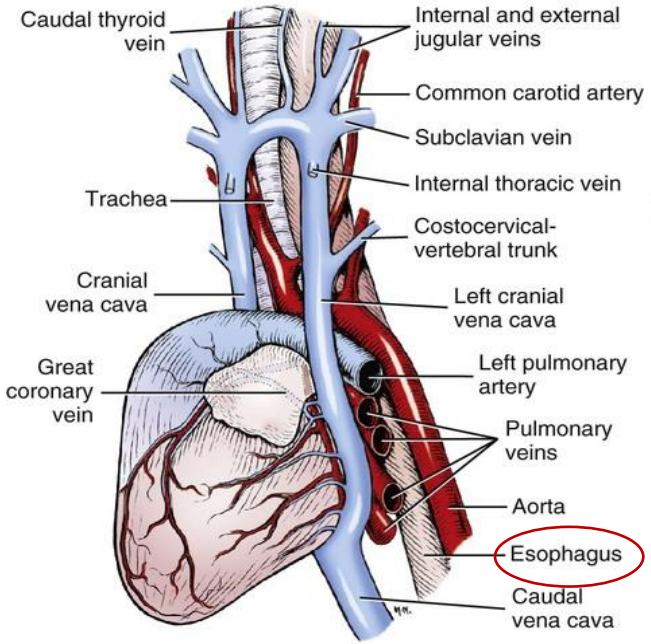


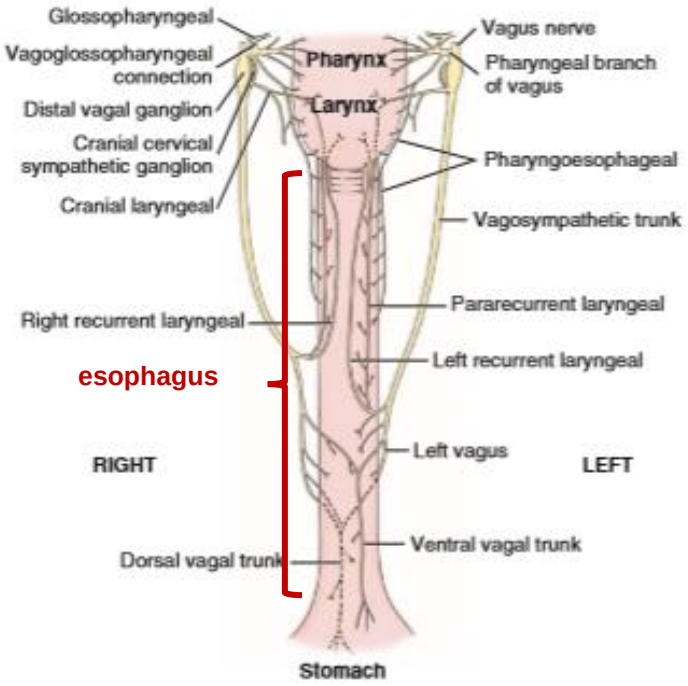


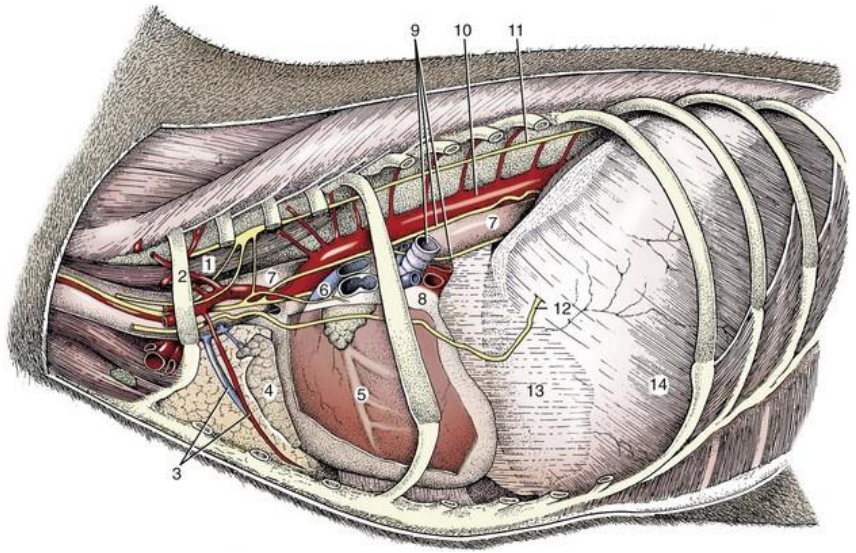
ESOPHAGUS

THORACAL PART (PARS THORACALIS):

- **part from the first rib to the diaphragm**
- **runs caudally in the dorsal mediastinum**
- **passes dorsal to the tracheal bifurcation**
- **crosses the right side of the aortic arch**
- **lies between the lungs ventral to the aortic arch**
- **accompinied by the dorsal and ventral branches of the nervus vagus**
- **passes thorugh the hiatus esophageus of the diaphragm**



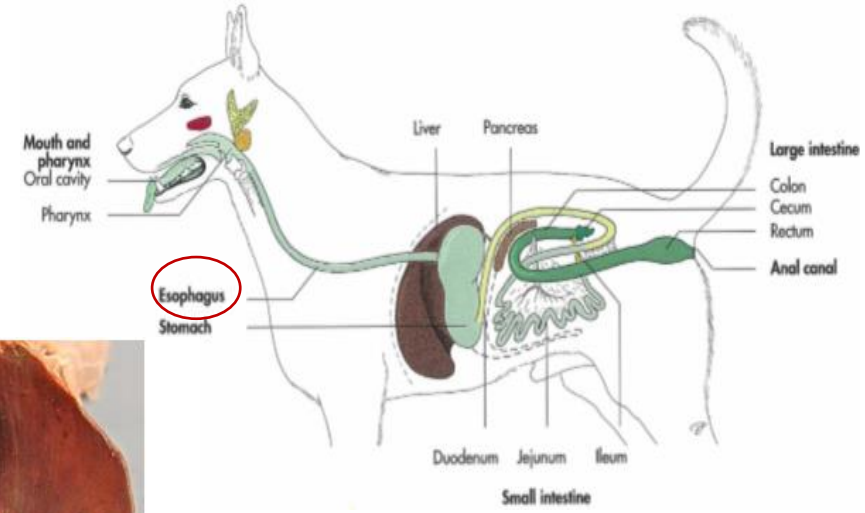




Left lateral view of the canine thoracic cavity; the lung and much of the pericardium have been removed. *1,* Longus colli; *2,* left subclavian artery; *3,* internal thoracic vessels; *4,* thymus; *5,* vessels in paraconal interventricular groove; *6,* pulmonary trunk; *7,* esophagus; *8,* pulmonary veins entering left atrium; *9,* left principal bronchus and dorsal and ventral vagal trunks; *10,* aorta; *11,* sympathetic trunk; *12,*phrenic nerve; *13,* caudal mediastinum; and *14,* diaphragm. (From Dyce KM, Sack WO, Wensing CJ: Textbook of veterinary anatomy, ed 4, St Louis, 2010, Saunders/Elsevier.)

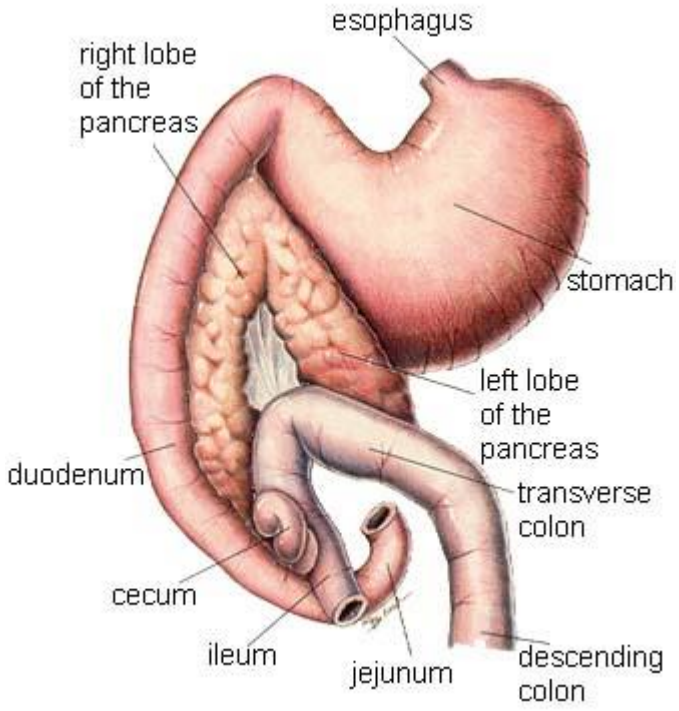
https://veteriankey.com/esophagus-2/

ESOPHAGUS

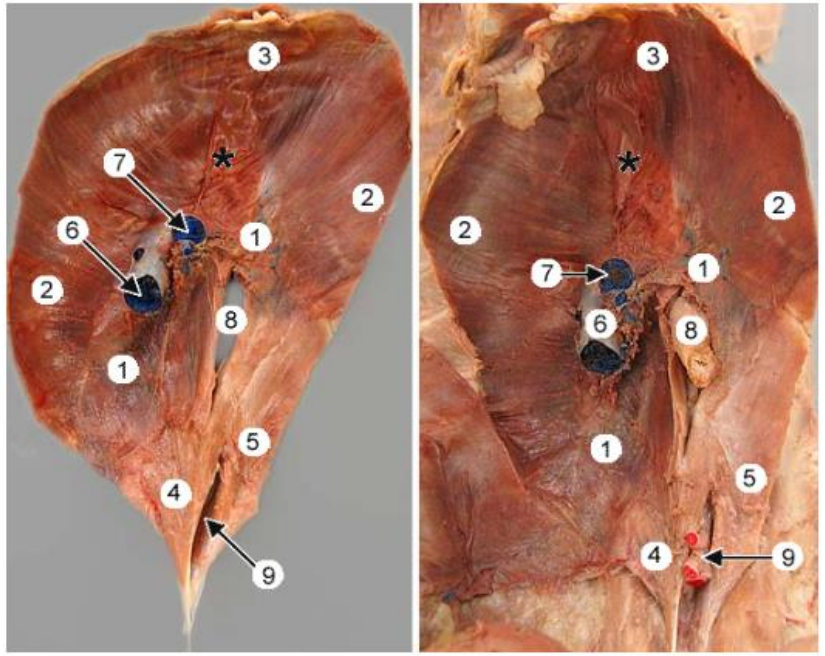


ABDOMINAL PART (PARS ABDOMINALIS):

- **short**
- **between diaphragm and cardia of the stomach**



https://www.vetmed.wsu.edu/outreach/Pet-Health-Topics/categories/cat-and-dog-anatomy/digestive-system-of-the-dog



The **diaphragm** (viewed from the abdomen with ventral at the top) is shown removed from the cadaver (left) and *in situ* (right). The diaphragm has a horse-shoe shaped **tendinous center** (1) that separates an outer rim of skeletal muscle from muscular crura. The outer diaphragmatic muscle can be divided into costal (2) and sternal (3) regions. Dorsal to the tendinous center, notice that the **right crus** (4) and the **left crus** (5) have tendons (which attach to the bodies of lumbar vertebrae).

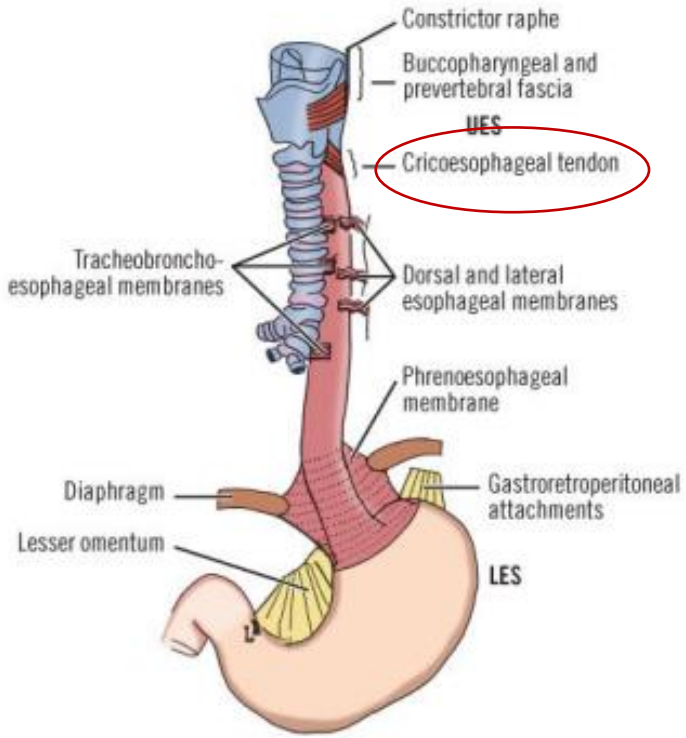
The tendinous center region contains a **caval foramen** through which the caudal vena cava (6) passes (also a hepatic vein (7) joining the caudal vena cava and the falciform ligament (asterisk) are evident). Between the crura, the esophagus passes through the **esophageal hiatus** (8) and the aorta passes through the **aortic hiatus**(9).

http://vanat.cvm.umn.edu/carnLabs/Lab16/Img16-8.html

ESOPHAGUS

TENDO CRICOESOPHAGEUS:

- atteches the esophageal musculature to the cricoid and arythenoid cartiliges



http://docshare03.docshare.tips/files/24567/245678916.pdf

MUSCLES OF ESOPHAGUS

- **straited muscles, except a caudal segment of smooth muscle in Fe, Su, Eq**

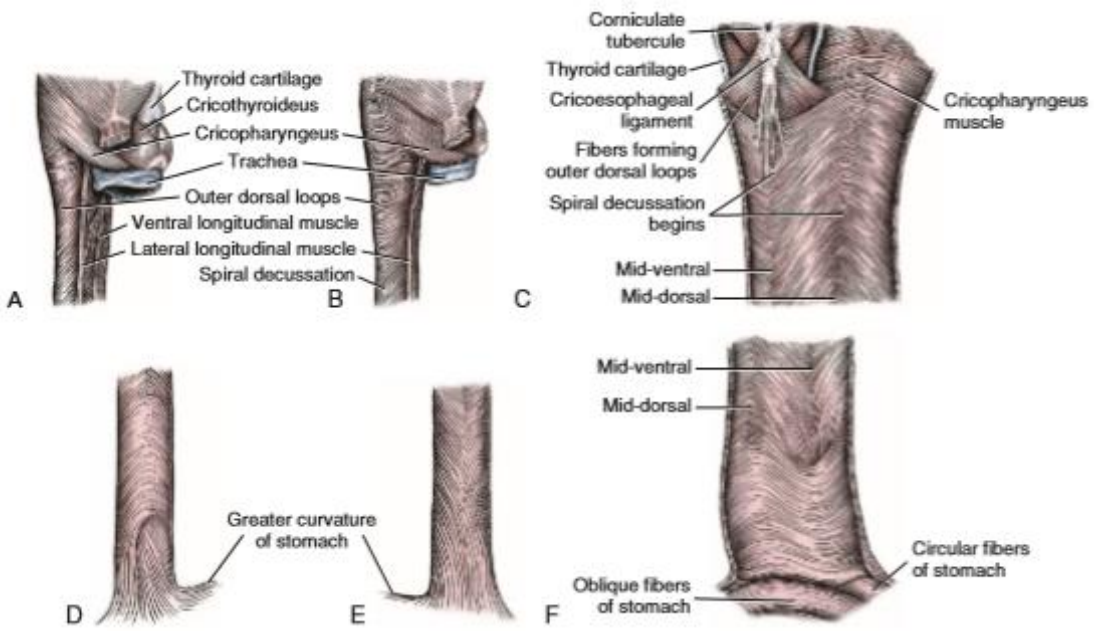
1. M. esophageus longitudinalis dorsalis in Ru, Eq

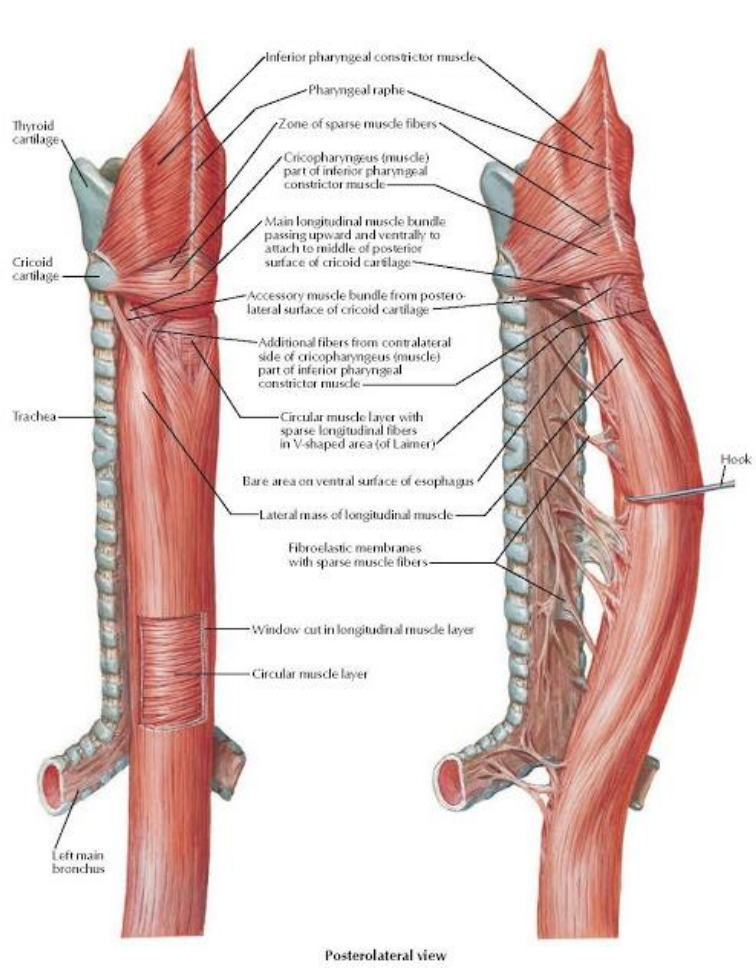
2. M. esophageus longitudinalis lateralis

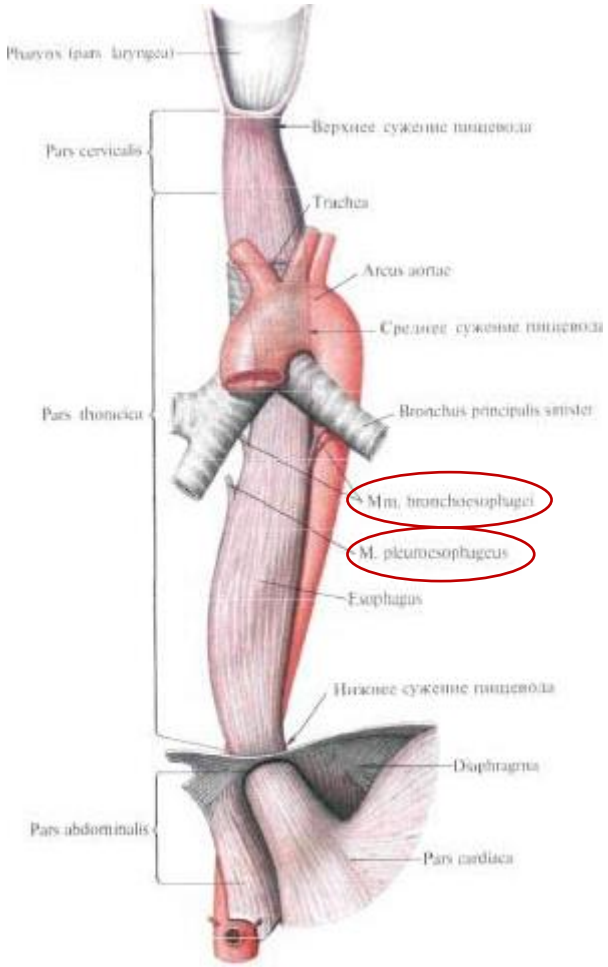
3. M. esophageus longitudinalis ventralis

4. M. bronchoesophageus

5. M. pleuroesophageus







https://www.pediagenosis.com/2018/10/musculature-of-esophagus-anatomy.html

http://en.shram.kiev.ua/health/anatomy/page_378.shtml

CONSTRICTONS OF ESOPHAGUS

1. ISTHMUS OESOPHAGEI:

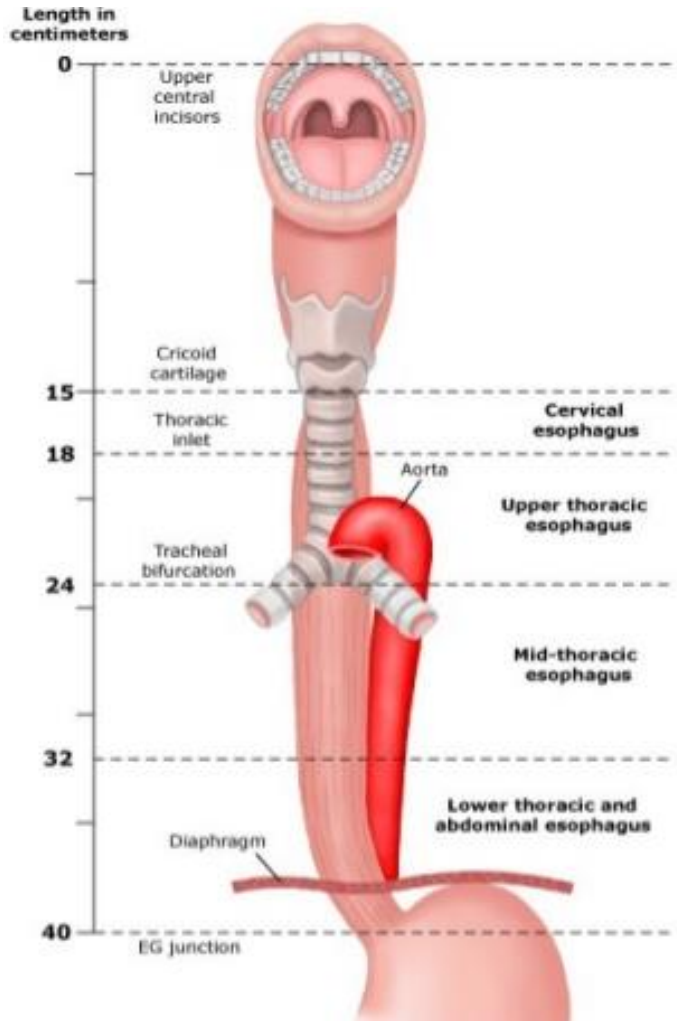
- **above the larynx**

2. ISTHMUS THORACALIS:

- **at the level of C7**
- **passes dorsal to the trachea**
- **the esophagus moves from the left side of the trachea, above the trachea**

3. DIAPHRAGMATIC ISTHMUS:

- **the esophageal hiatus - where it passes through the diaphragm in the posterior mediastinum**



BLOOD VESSELS OF ESOPHAGUS

I. CERVICAL PART:

a. rr. esophagei of the common carotid artery

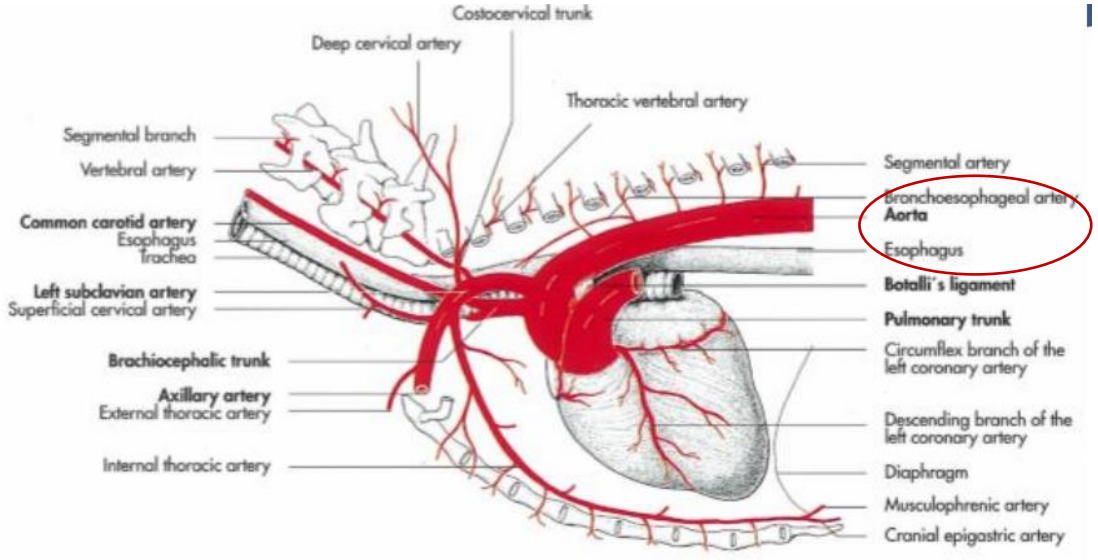
b. veins of the cervical part enter the external jugular vein

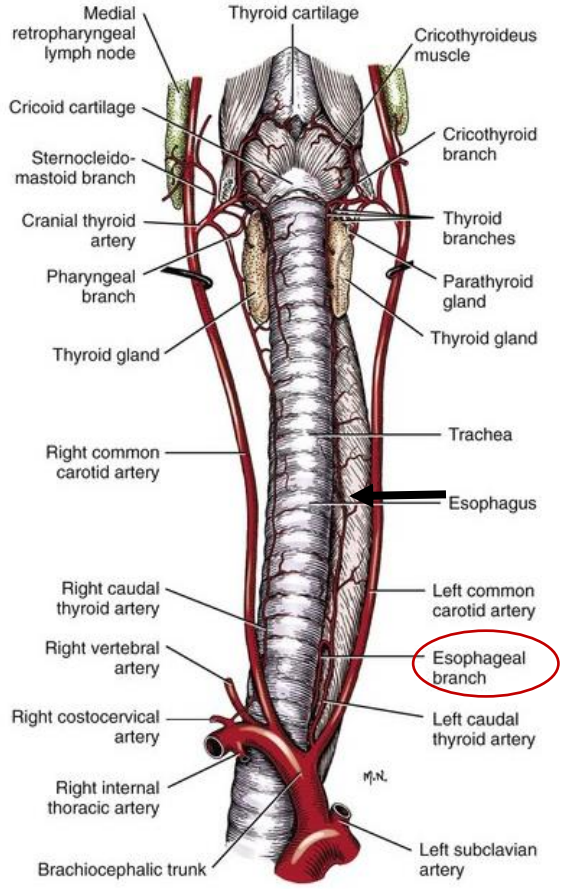
II. THORACIS PART:

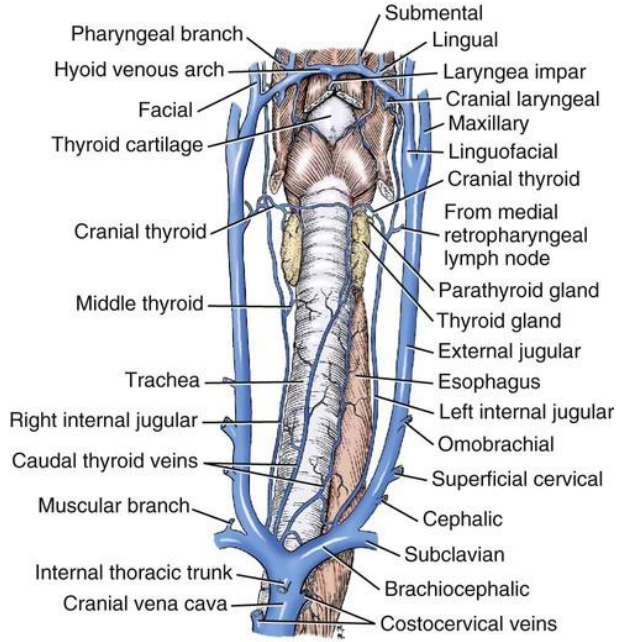
a. A. bronchoesophageles

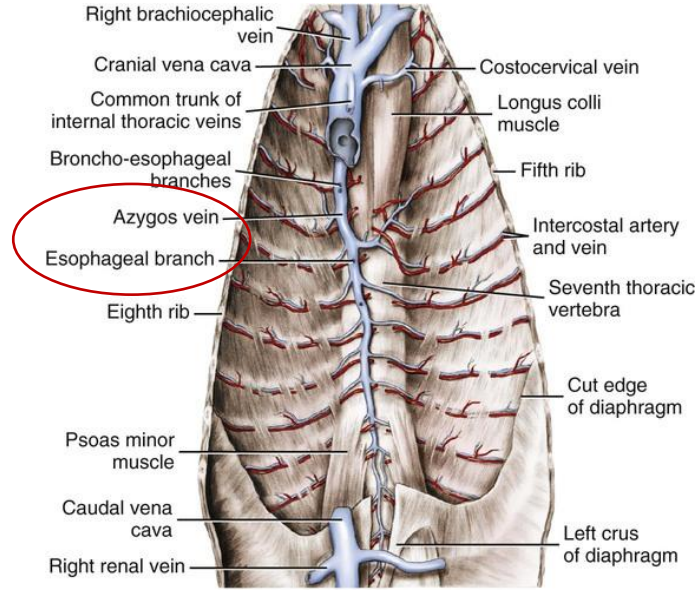
b. veins enter the azygos vein

c. in Car. - esophageal veins – bronchoesophageal veins – v. azygos





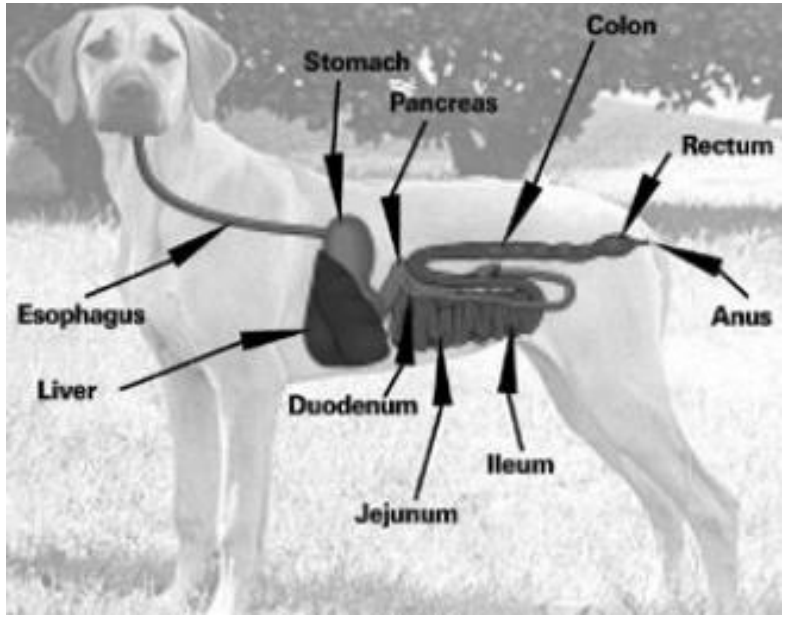




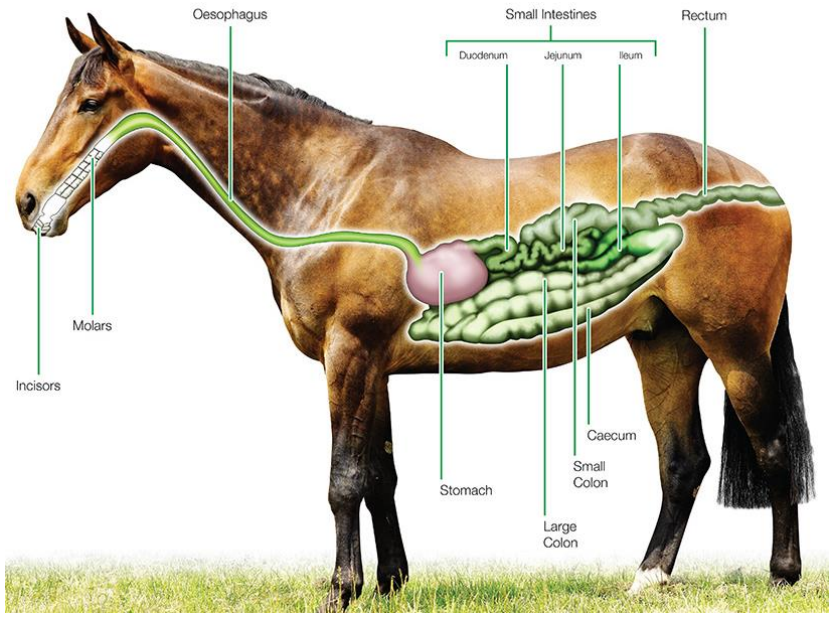
https://veteriankey.com/trachea-and-bronchi/

STOMACH (VENTRICULUS, GASTER)

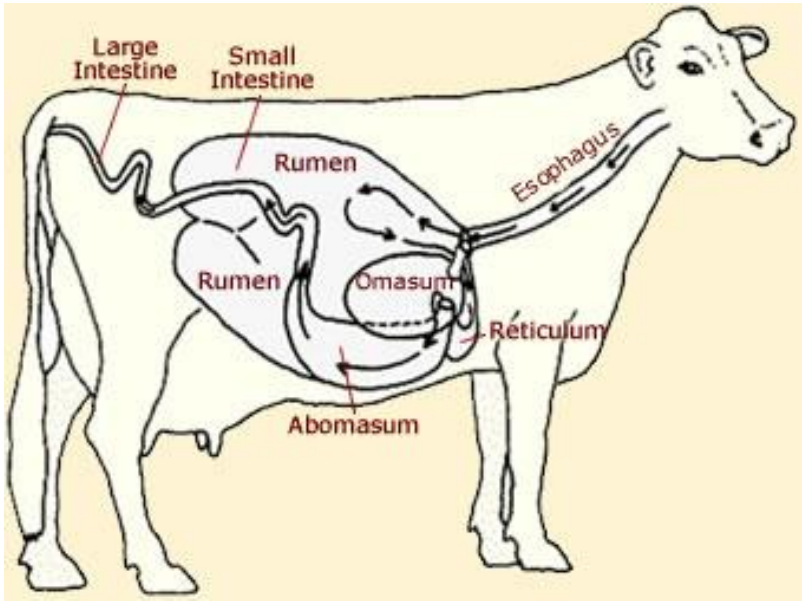
- **receives insalivated boluses of food from the esophagus**
- **boluses of food temporarily stored in stomach**
- **ingesta mixed with gastric juice**
- **ingesta moved into the duodenum**



https://www.whole-dog-journal.com/issues/8_3/features/The-Canine-Digestion-Process_15699-1.html



https://www.horsehageforage.co.uk/WP/?page_id=149



http://www.cattle-empire.net/blog/115/what-cud-and-why-do-cattle-chew-it

STOMACH (VENTRICULUS, GASTER)

I. SIMPLE STOMACH:

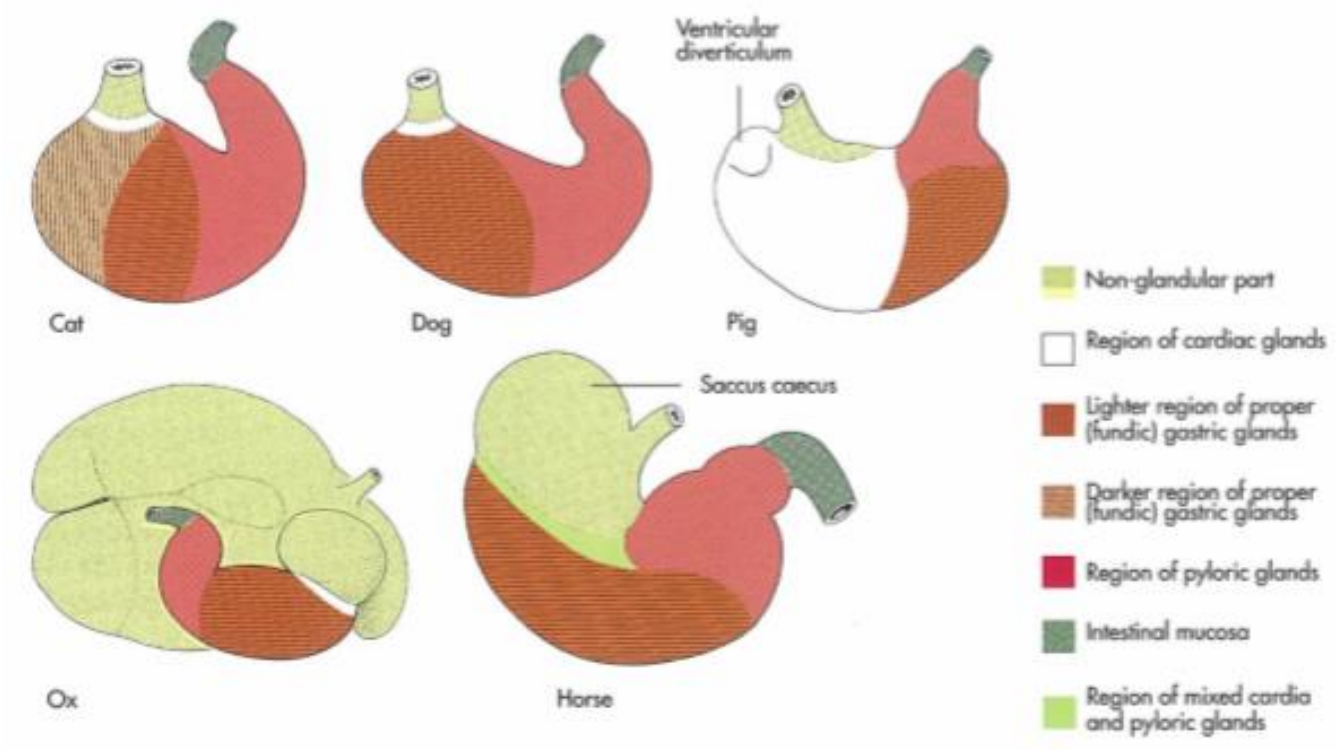
- have only one compartment

1. **carnivores**
2. **pig**
3. **horse**

II. COMPLEX STOMAC:

- have several compartments

1. ruminants



STOMACH (VENTRICULUS, GASTER)

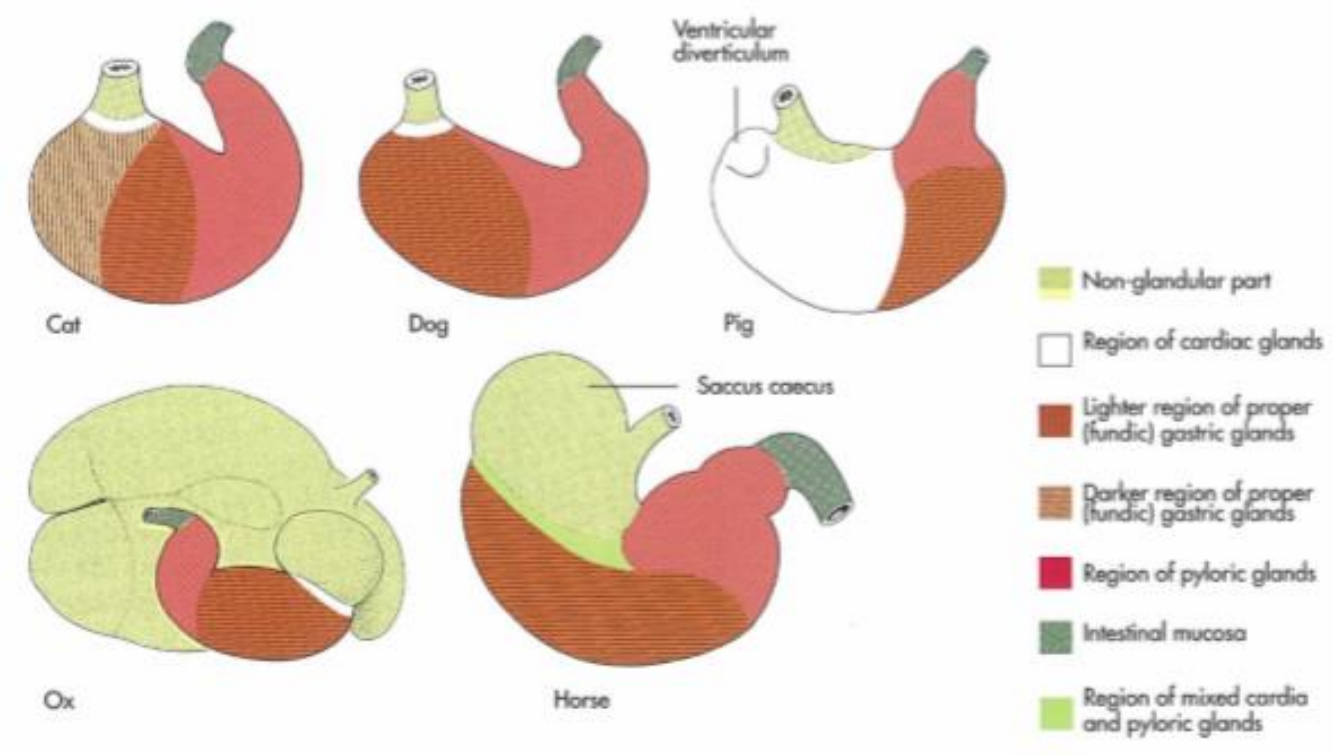
Regards the MUCOSAL LINING OF THE STOMACH:

I. GLANDULAR MUCOSA:

- **covered with simple columnar epithelium**
- **glands**
- **stomach lined by glandular mucosa – glandular stomach**

II. NON – GLANDULAR MUCOSA:

- **covered with stratified squamous epithelium**
- **no glands**



STOMACH (VENTRICULUS, GASTER)

I. GLANDULAR STOMACH:

- **stomach lined by glandular mucosa**

II. COMPOSITE STOMACH:

- **stomach lined by glandular and non-galndular mucosa**

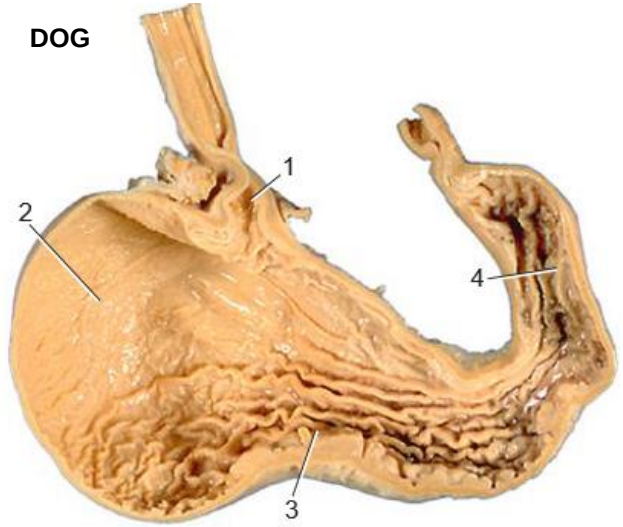
a. NON-GLANDULAR PART

- **the part lined with non- glandular mucosa**

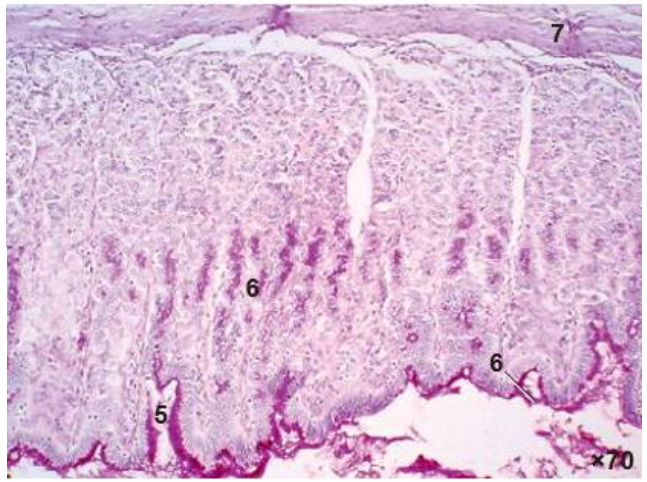
b. GLANDULAR PART:

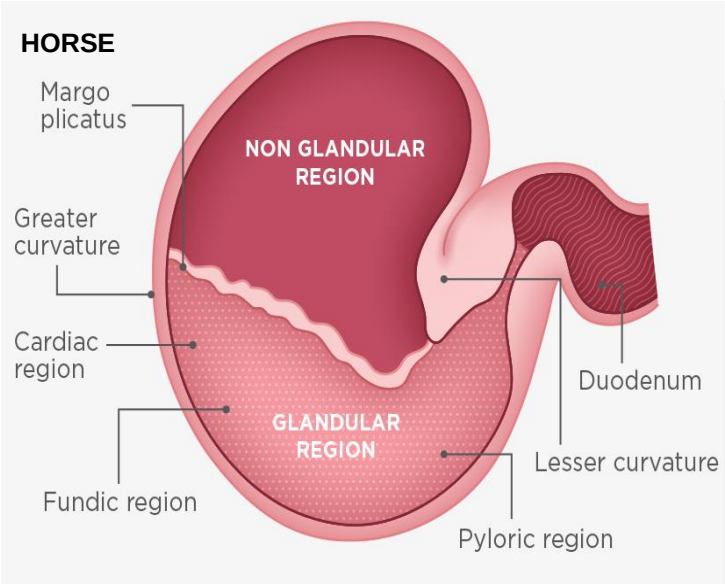
- **the part lined with glandular mucosa**

DOG

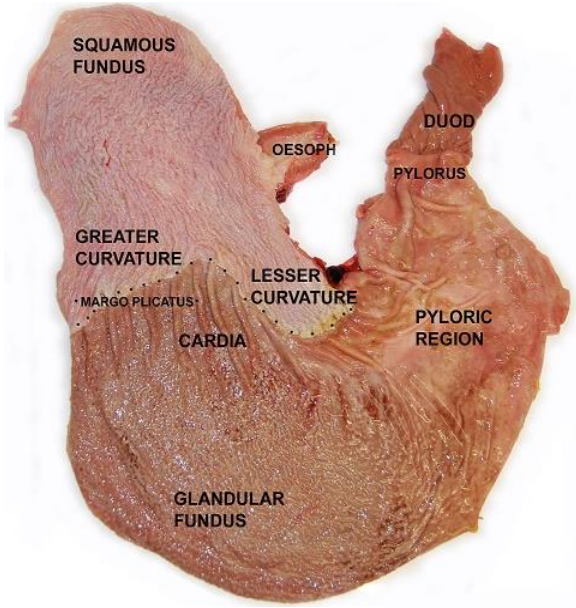


1. Cardiac opening
2. Fundus
3. Pyloric antrum
4. Pyloric canal
5. Gastric pit
6. Mucopolysaccharide-secreting cells
7. Lamina muscularis mucosae





https://todaysveterinarynurse.com/articles/featureequine-medicinegastric-ulcers-in-performance-horses/



https://www.bwequinevets.co.uk/187/equine-gastric-ulcers-explained-specialist/

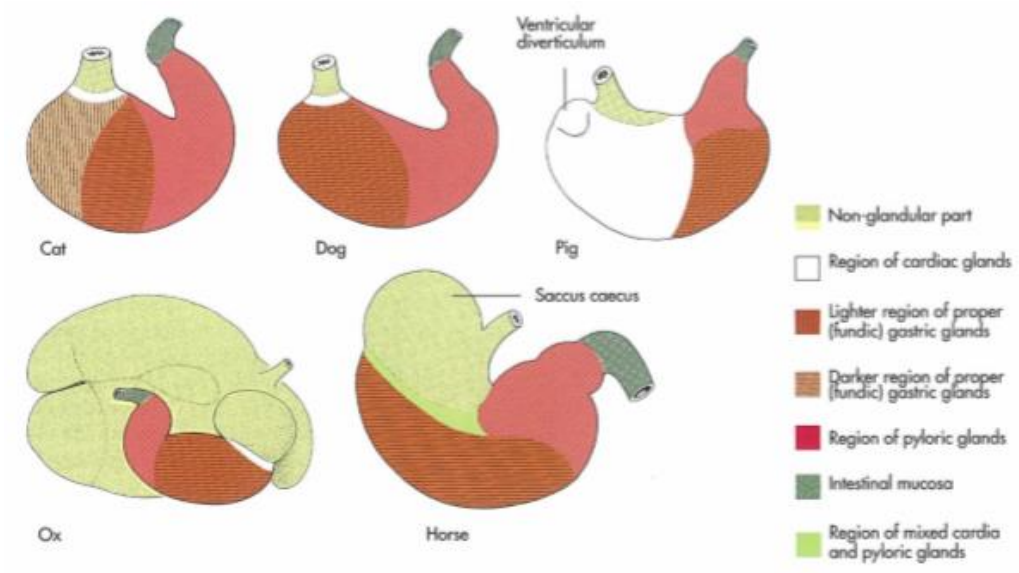
STOMACH (VENTRICULUS, GASTER)

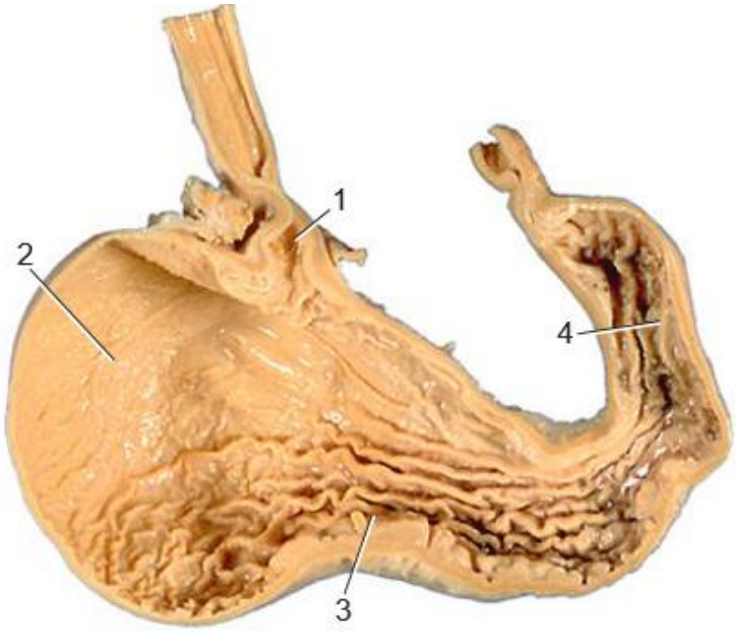
CARNIVORES:

- **simple, glandular stomach**

HORSE, PIG:

- **simple, composite stomach**
- **majority of stomach lined by glandular mucosa**
- **small, cranial portion of stomach lined by non- glandular mucosa**





DOG

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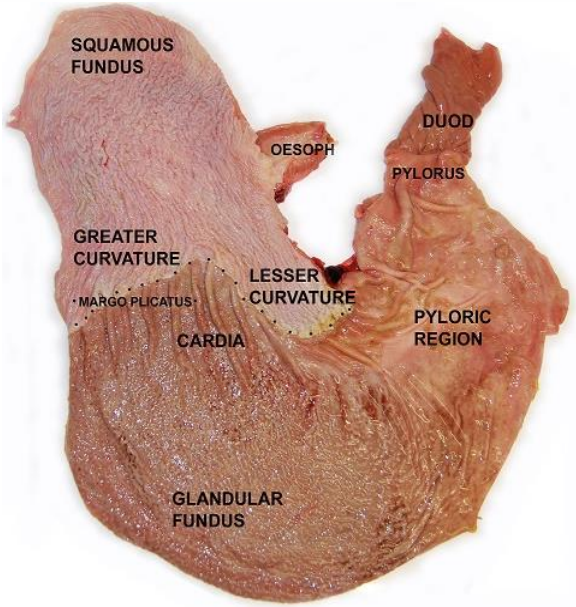

HORSE

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STOMACH (VENTRICULUS, GASTER)

RUMINANTS:

- **complex, composite stomach**

a. non - glandular part (forestomach, proventriculus)

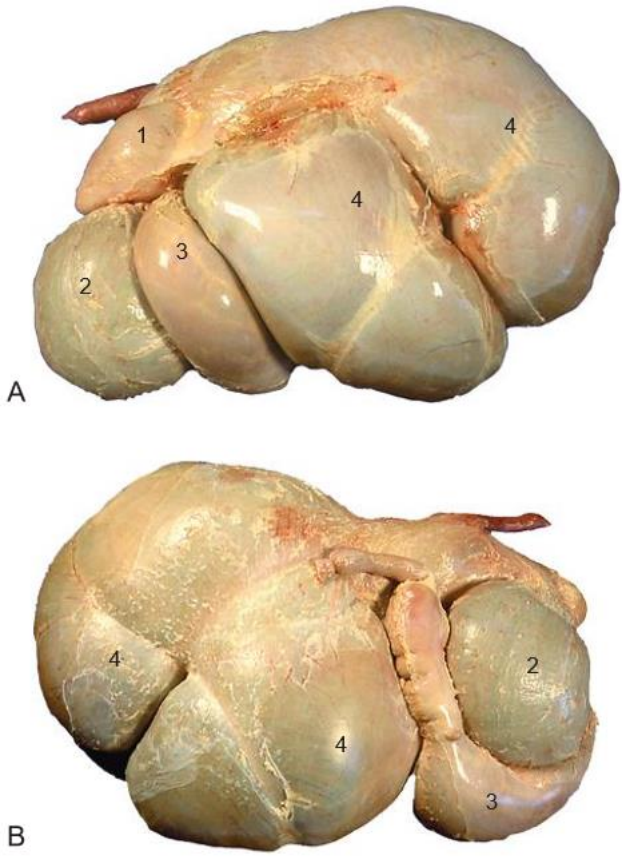
three parts:

1. rumen

2. reticulum

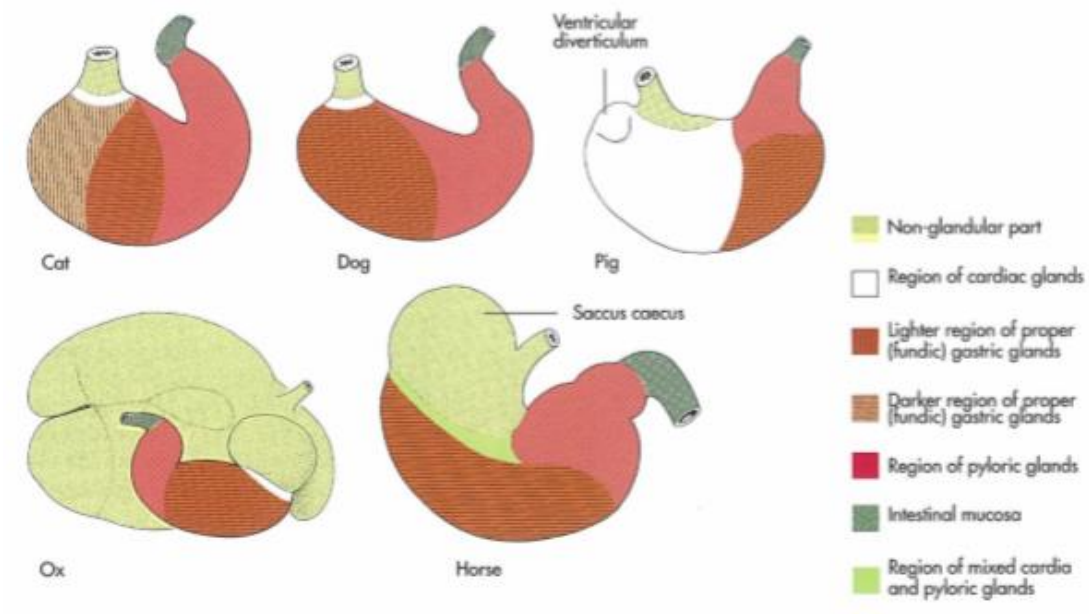
3. omasum

b. glandular part - abomasum



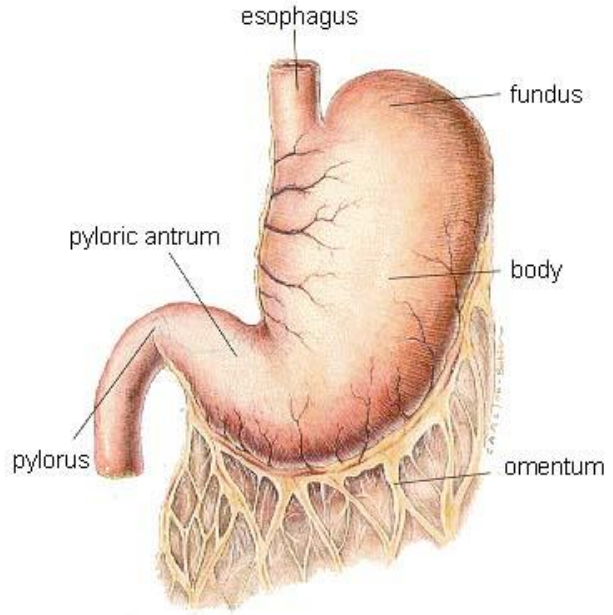
1. Reticulum
2. Omasum
3. Abomasum
4. Rumen

Note: A, Left side. **B,** Right side.

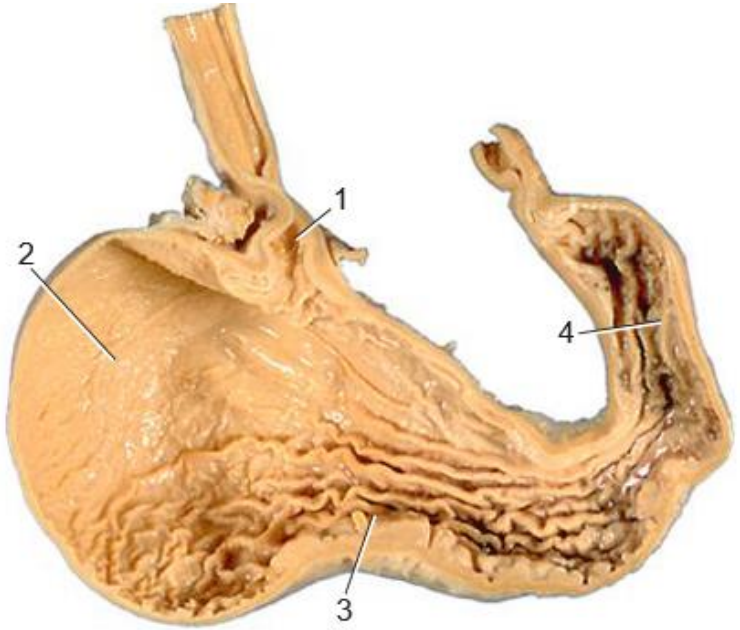


THE SIMPLE STOMACH

- **saclike enlargement of the alimentary canal**
- **J- shaped, curved sac**
- **flattened craniocaudally**
- **covered by peritoneum viscerale**



https://www.vetmed.wsu.edu/outreach/Pet-Health-Topics/categories/cat-and-dog-anatomy/digestive-system-of-the-dog



DOG

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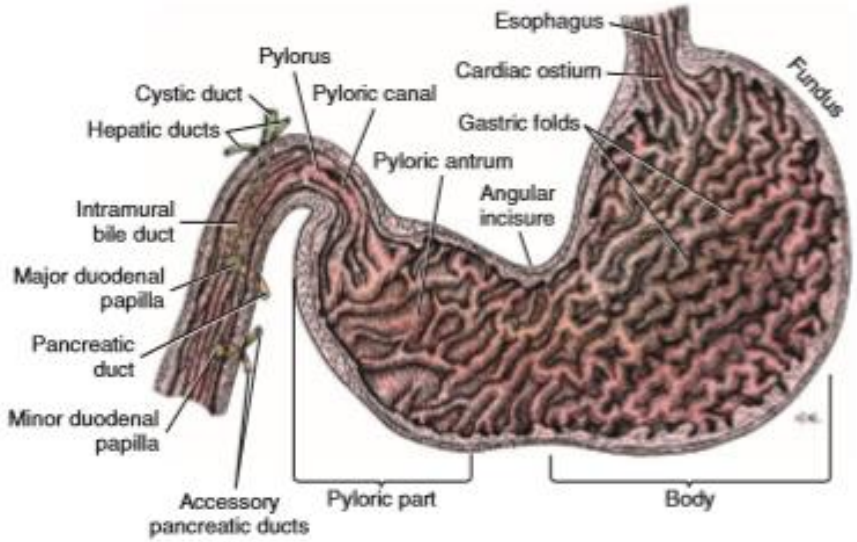


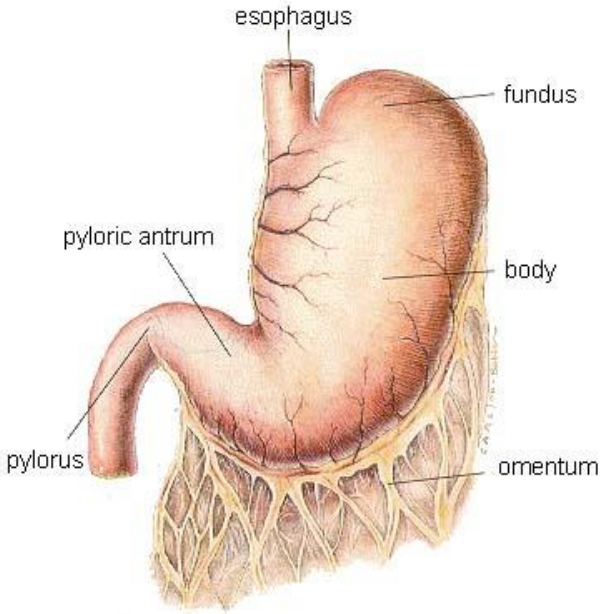
THE SIMPLE STOMACH

a. FACIES PARIETALIS:

- **surface faces the abdominal wall and liver**

b. FACIES VISCERALIS:

- surface faces the intestines



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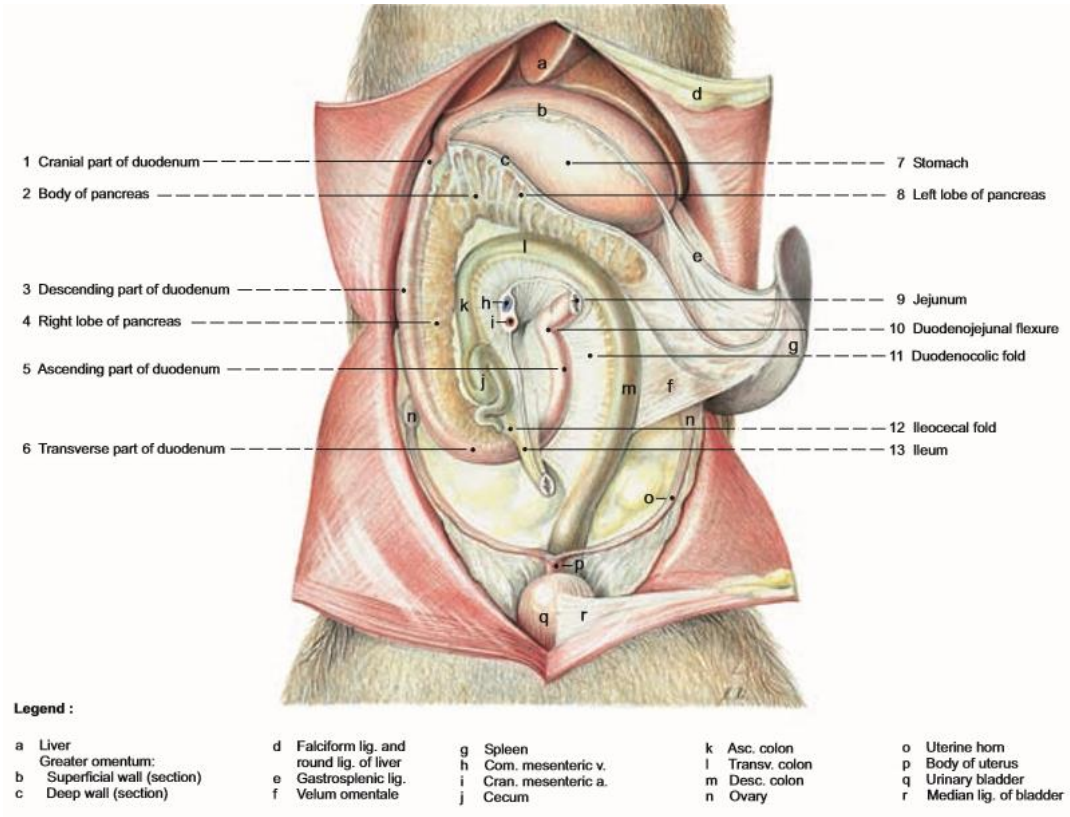


http://bvetmed1.blogspot.com/2013/03/canine-abdomen-lecture-140.html

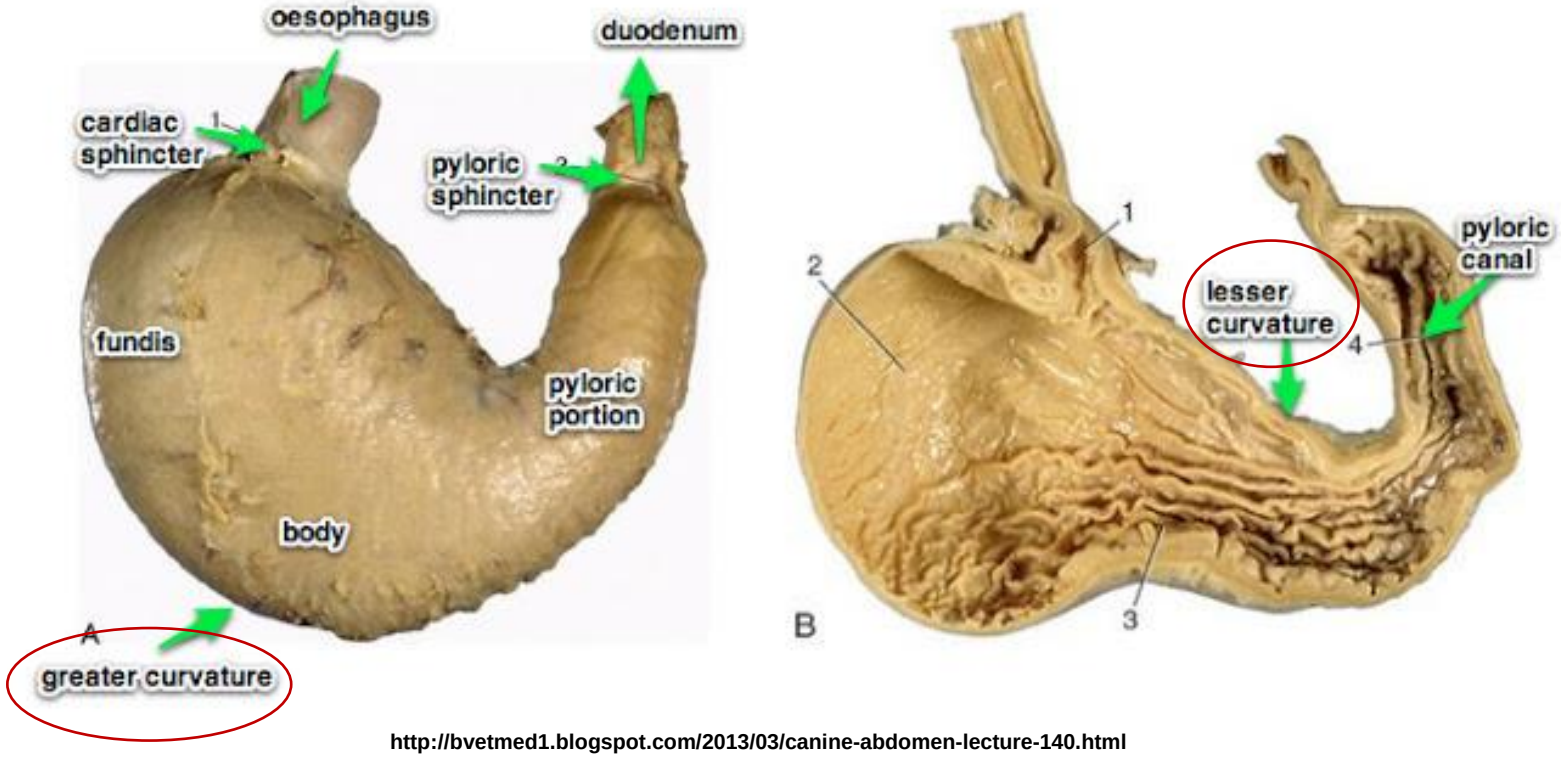
THE SIMPLE STOMACH

c. CURVATURA VENTRICULI MINOR:

- **lesser curvature**
- **extends from the cardia to the pylorus**

d. CURVATURA VENTRICULI MAJOR:

- **greater curvature**
- **extends from the cardia to the pylorus**



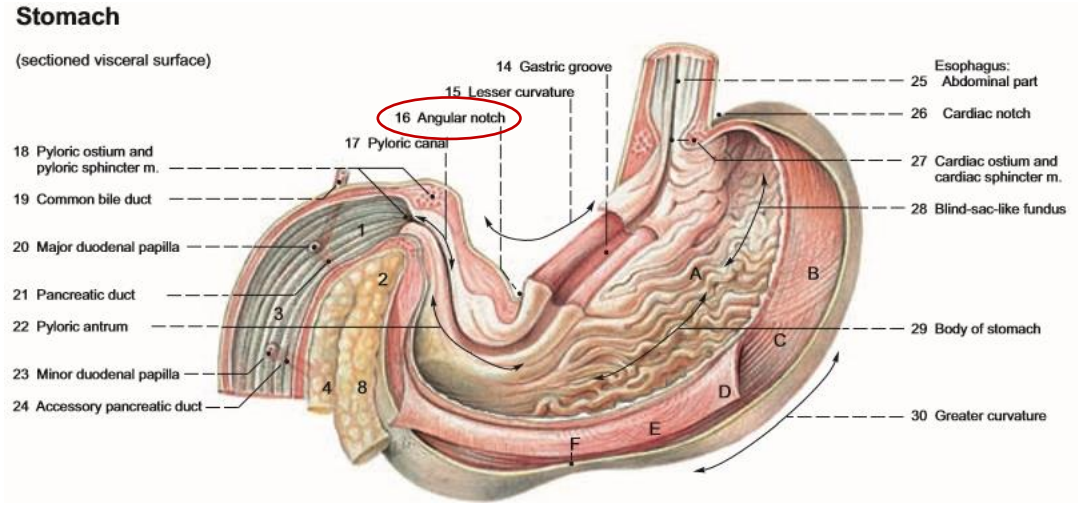
http://bvetmed1.blogspot.com/2013/03/canine-abdomen-lecture-140.html

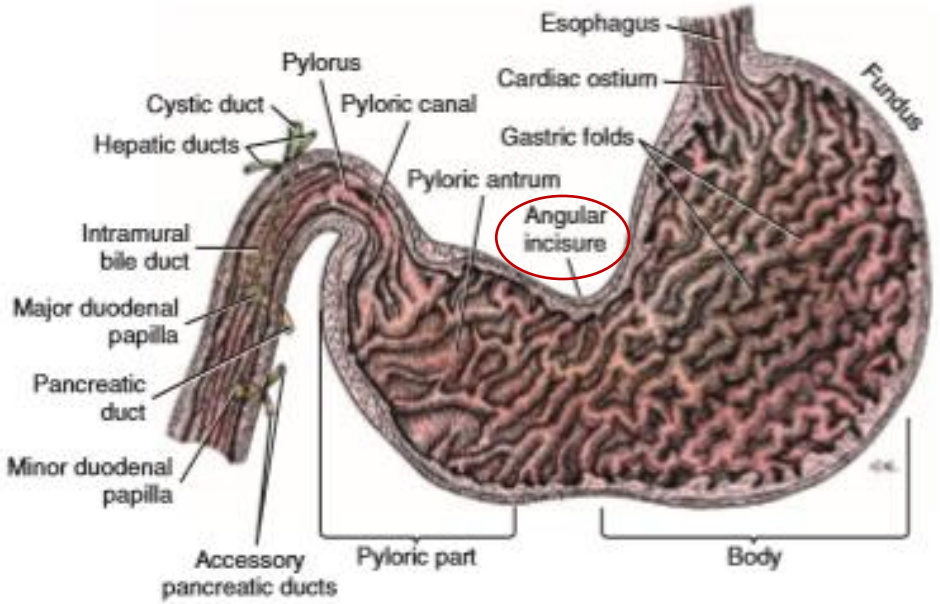
THE SIMPLE STOMACH

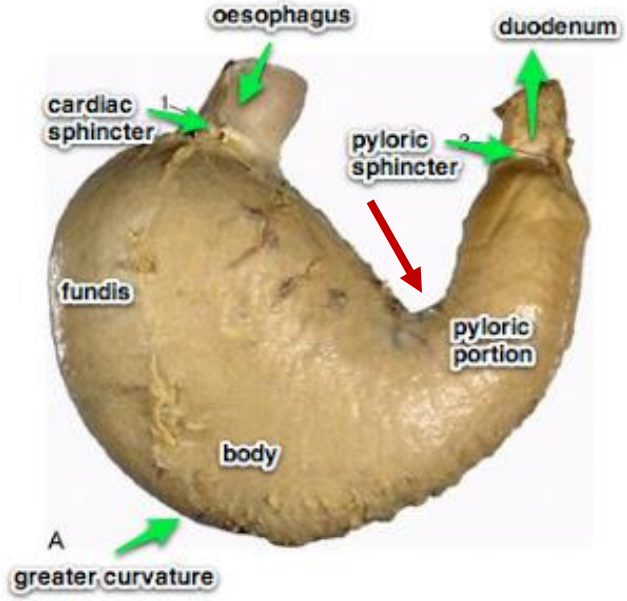
e. INCISURA ANGULARIS:

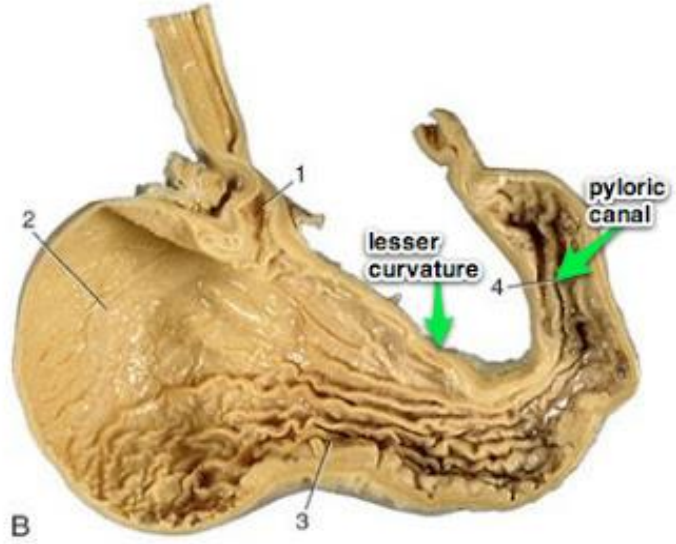
- notch on the curvatura minor

- between corpus ventriculi and pars pylorica









http://bvetmed1.blogspot.com/2013/03/canine-abdomen-lecture-140.html

THE SIMPLE STOMACH

DIVISIONS:

1. **PARS CARDIACA (CARDIA, cardial portion)**
2. **FUNDUS VENTRICULI**
3. **CORPUS VENTRICULI**
4. **PARS PYLORICA (PYLORUS, pyloric portion)**

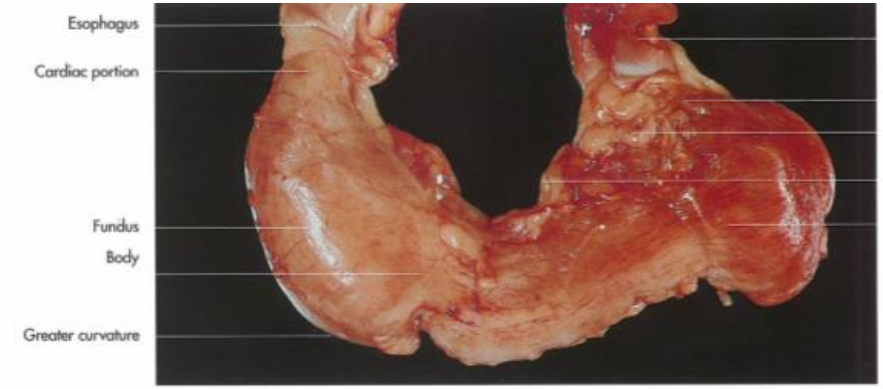
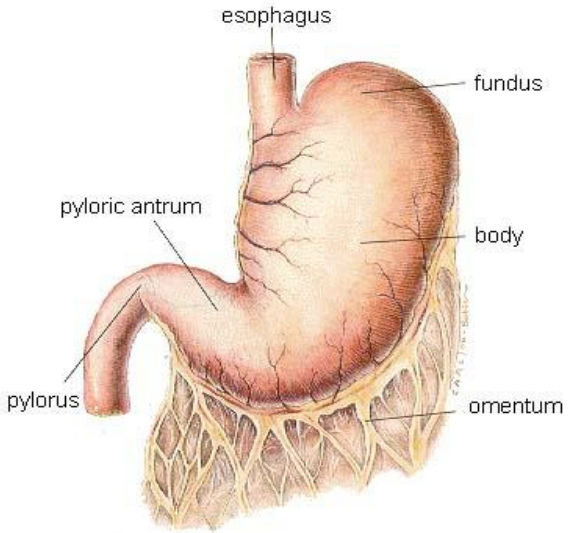
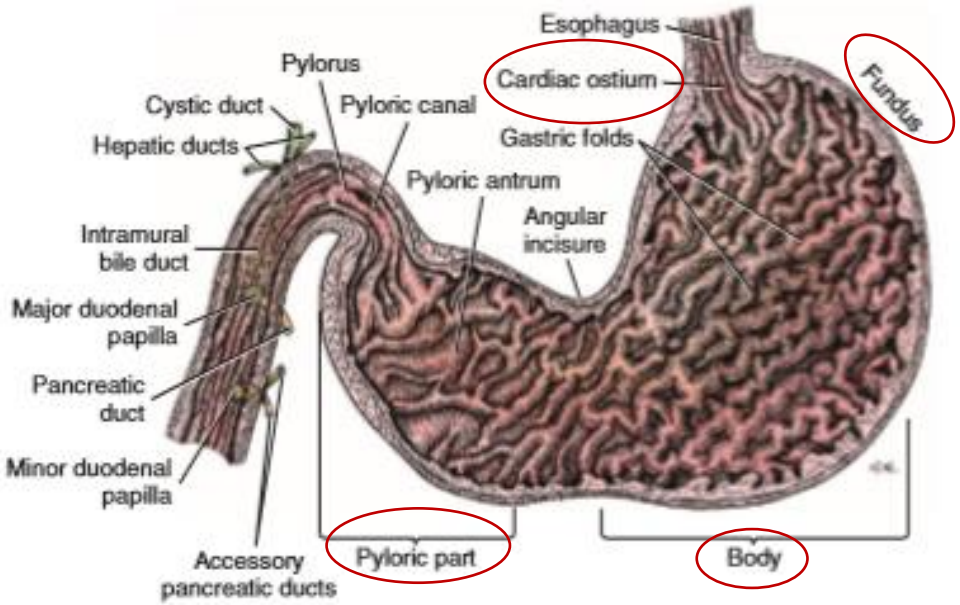
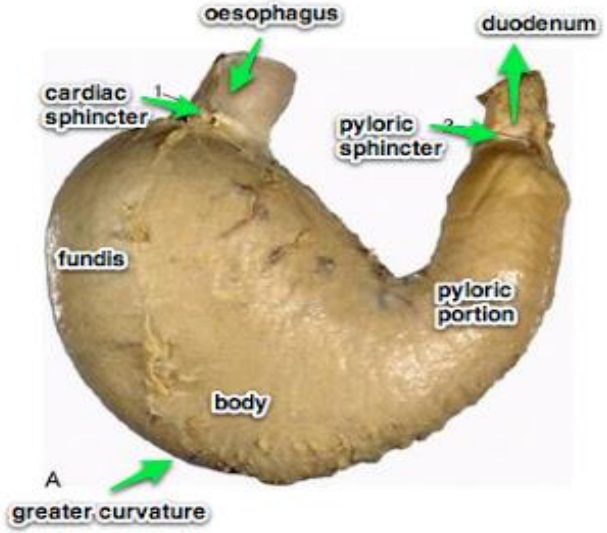


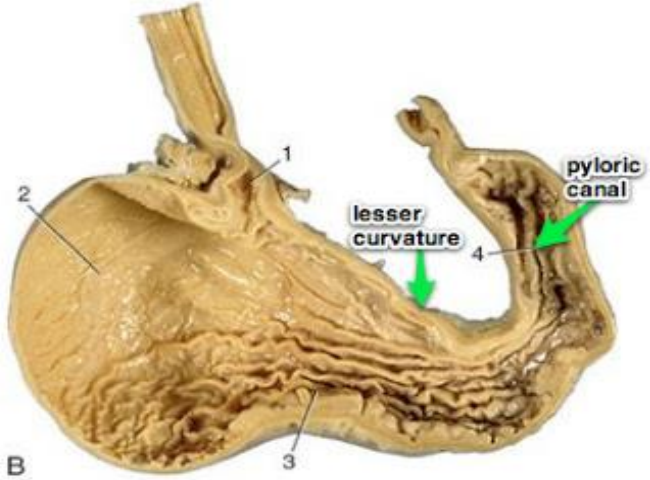
Fig 7-57. Stomach of a dog, caudal aspect.



https://www.vetmed.wsu.edu/outreach/Pet-Health-Topics/categories/cat-and-dog-anatomy/digestive-system-of-the-dog







http://bvetmed1.blogspot.com/2013/03/canine-abdomen-lecture-140.html

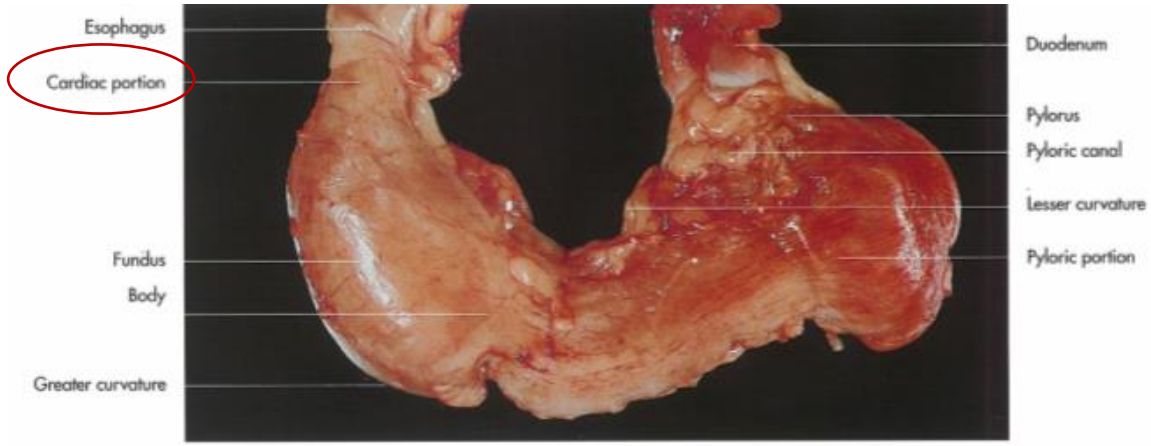
THE SIMPLE STOMACH

PARS CARDIACA (CARDIA, cardial portion):

- **region around the esophageal opening**

a. OSTIUM CARDIACUM:

- opening between the esophagus and the stomach



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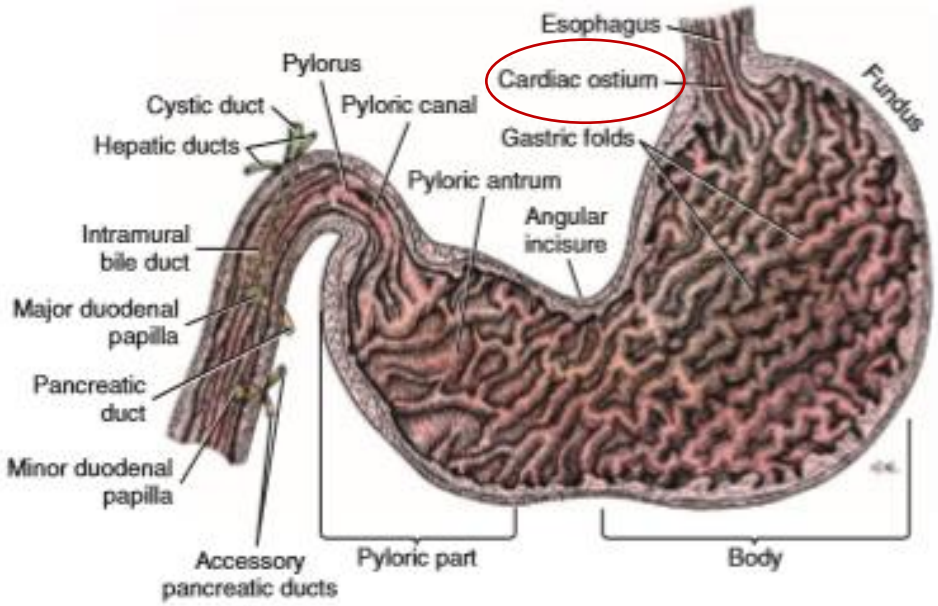
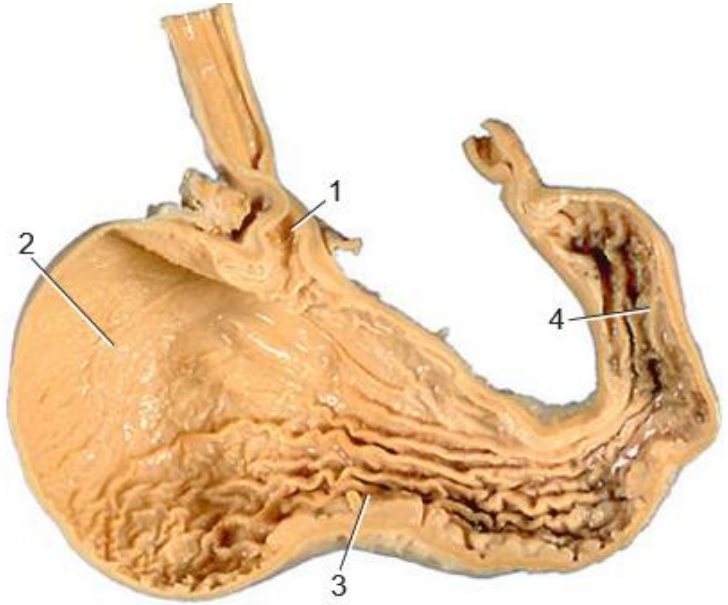




DOG

1. Cardiac opening
2. Fundus
3. Pyloric antrum
4. Pyloric canal
5. Gastric pit
6. Mucopolysaccharide-secreting cells
7. Lamina muscularis mucosae

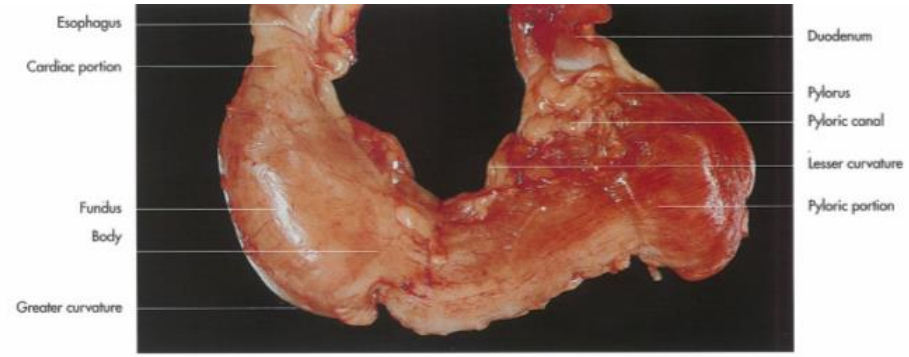
THE SIMPLE STOMACH

PARS CARDIACA:

INCISURA CARDIACAE:

- cardiac notch

- between esophagus and fundus



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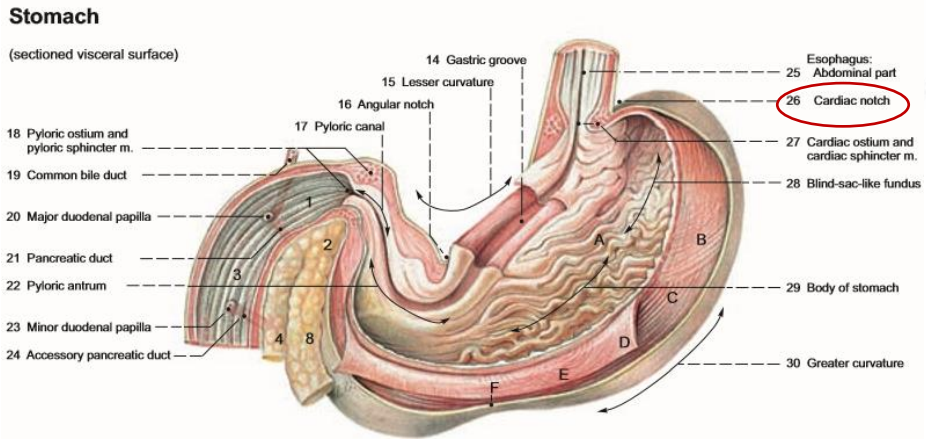

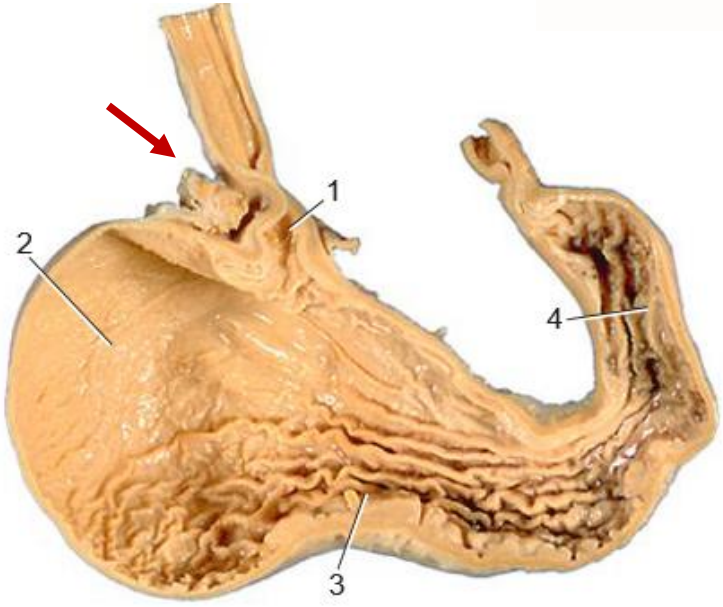

DOG

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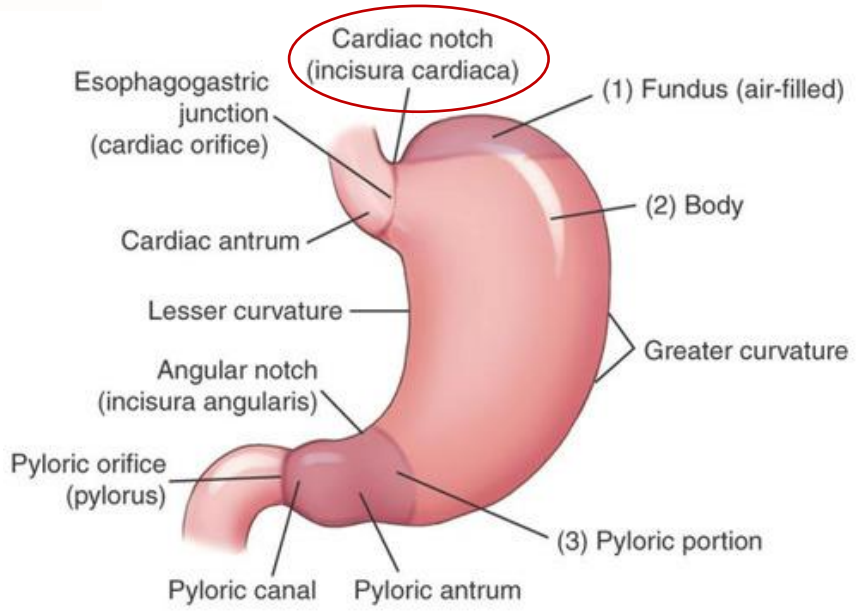
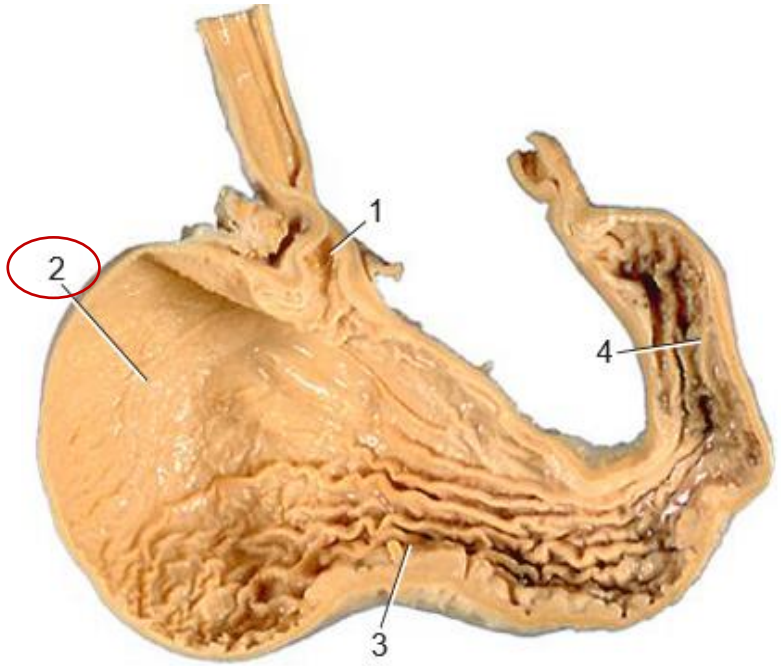


https://quizlet.com/332654961/lower-digestion-flash-cards/

THE SIMPLE STOMACH

FUNDUS VENTRICULI:

- **blind sac on the left of the cardiac part**
- **lined by gastric glands in Car**
- **non - galndular in Su and Eq**



DOG

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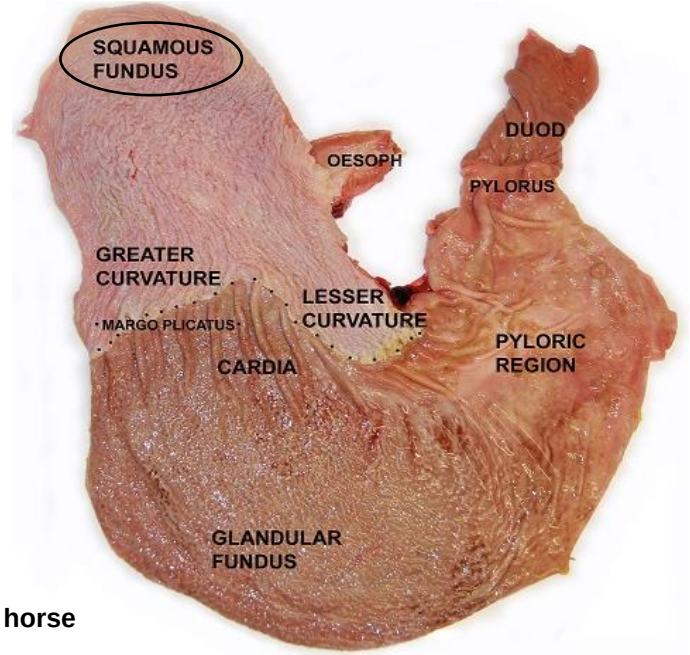
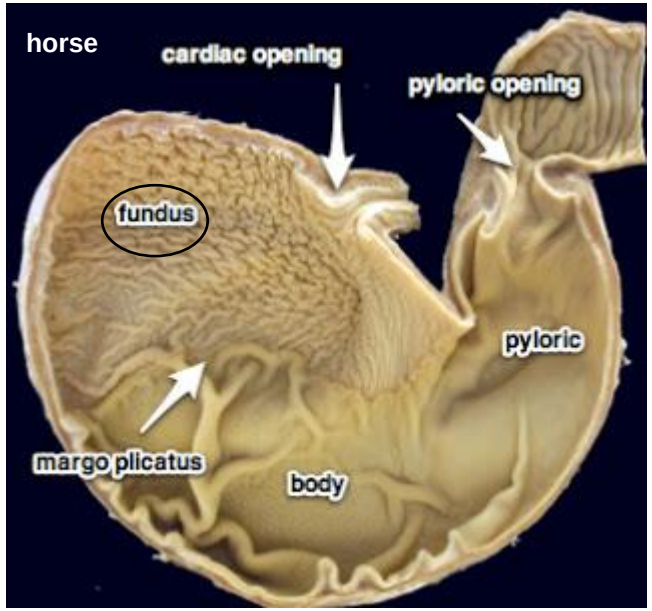


horse

https://www.bwequinevets.co.uk/187/equine-gastric-ulcers-explained-specialist/



http://bvetmed1.blogspot.com/2013/03/horse-and-pig-abdomen-lecture-164.html

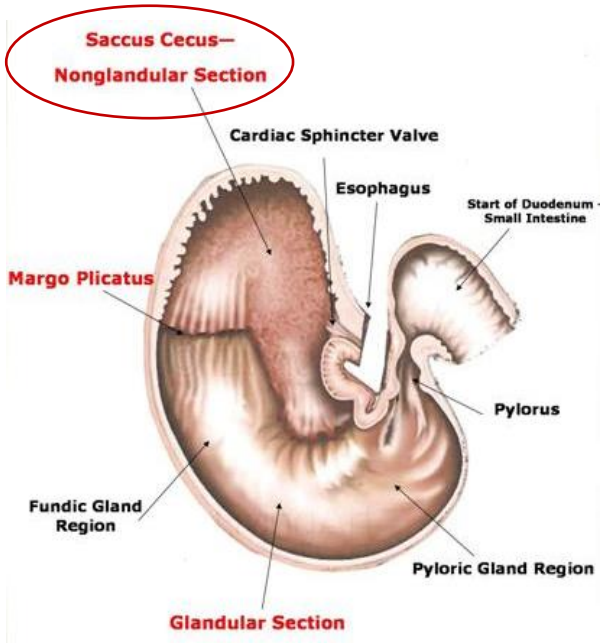
THE SIMPLE STOMACH

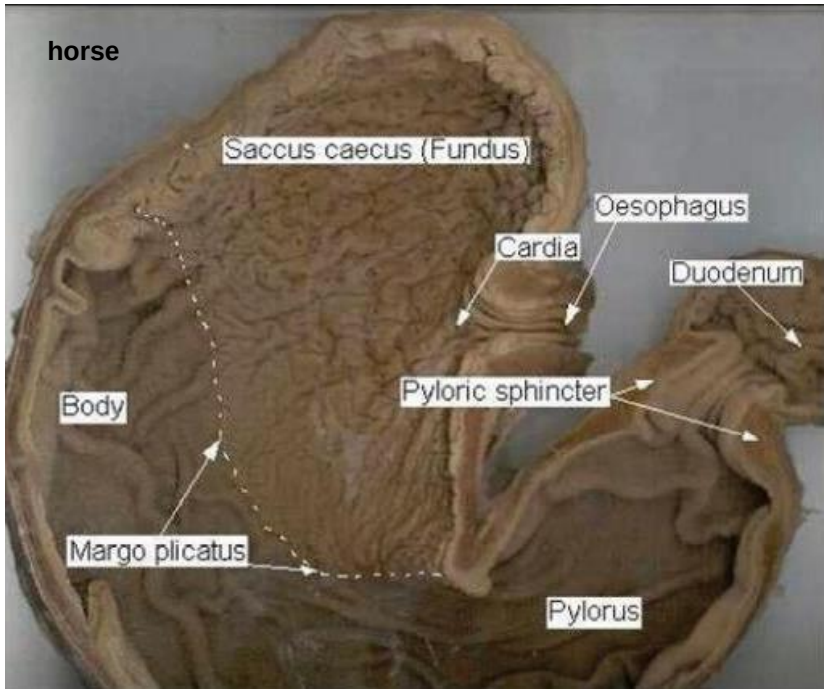
FUNDUS VENTRICULI:

SACCUS CAECUS VENTRICULI (BLIND SAC):

- **in Eq.**
- **large fundus ventriculi**

- saccus caecus, pars cardiaca, adjacent part of the corpus ventriculi lined by non- glandular epithelium





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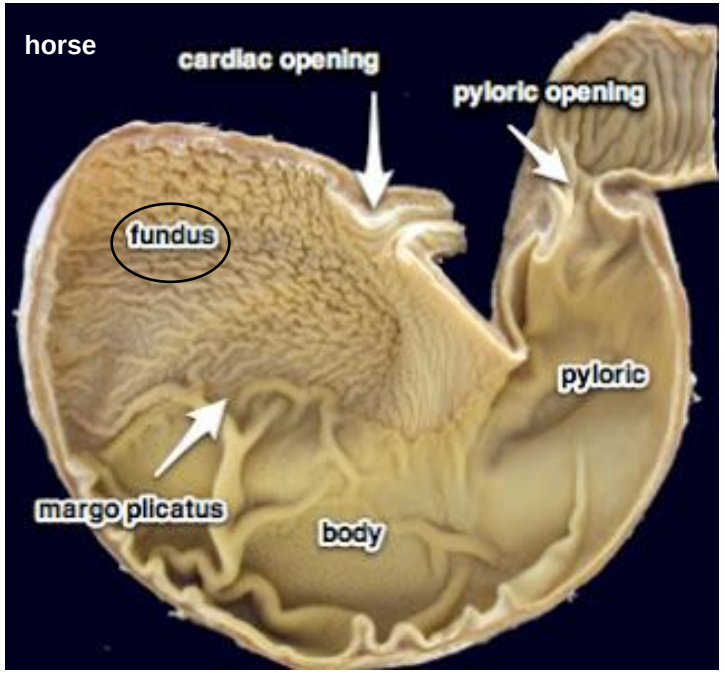


http://bvetmed1.blogspot.com/2013/03/horse-and-pig-abdomen-lecture-164.html

http://www.horsecoursesonline.com/college/nutrition/lesson_one_900.htm

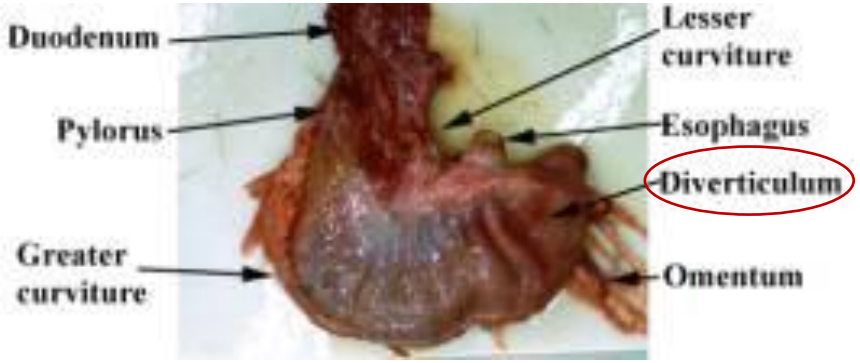
THE SIMPLE STOMACH

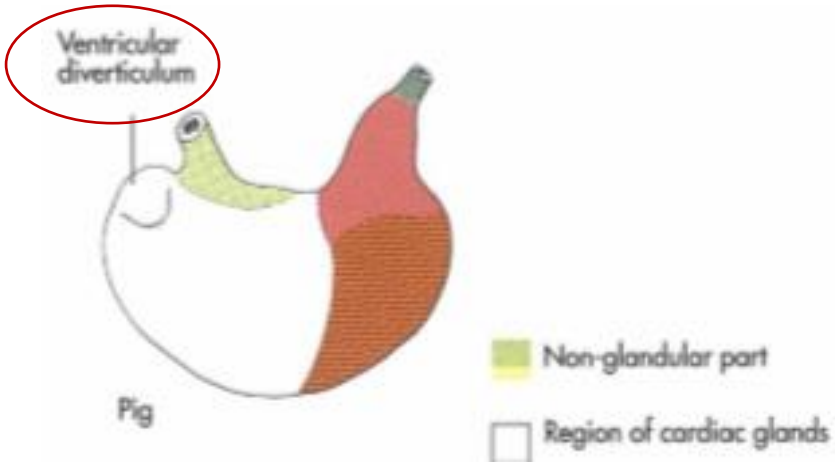
FUNDUS VENTRICULI:

DIVERTICULUM VENTRICULI:

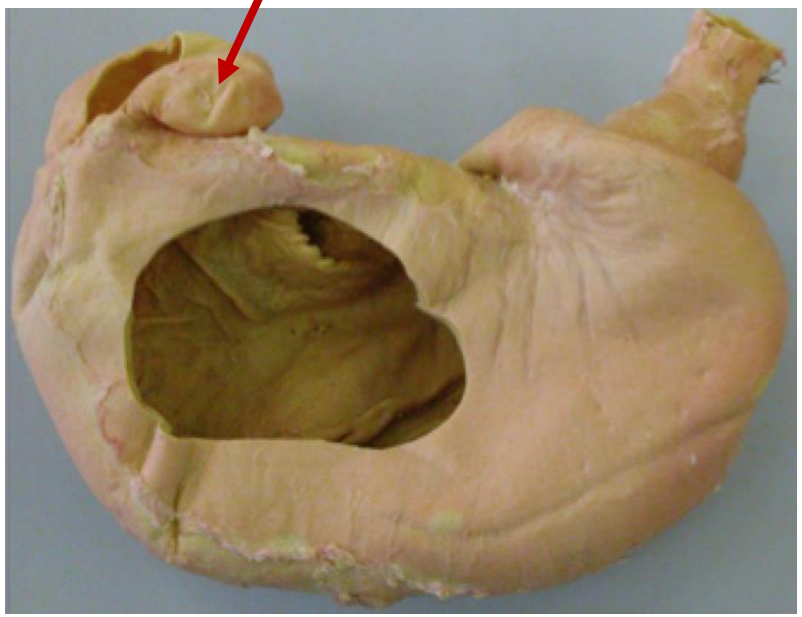
- **flattened conical pouch of the fundus**
- **projects caudally and to the right**
- **lined by cardiac gland**

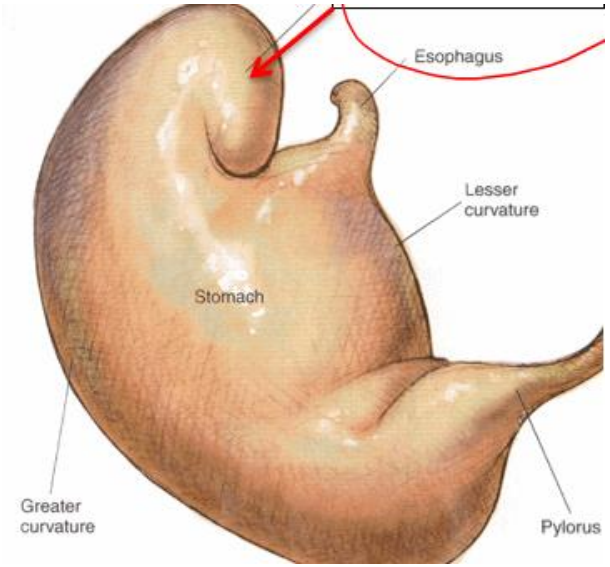
- in Su





diverticulum ventriculi





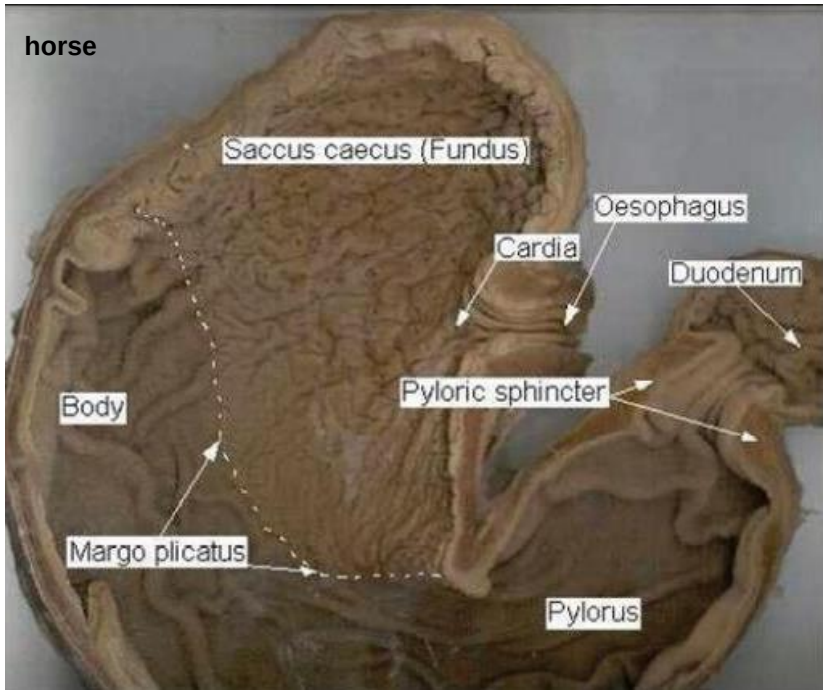
http://www.carrsconsulting.com/thepig/disorders/intestinal/anatomy/anatomyoftheintestinaltract.htm

https://www.memorangapp.com/flashcards/39973/Anatomy-+Bovine%2C+ruminant+and+horse+skull/

THE SIMPLE STOMACH

CORPUS VENTRICULI:

- **main part of the stomach**
- **between fundus and pars pylorica**
- **lined by glandular mucosa**



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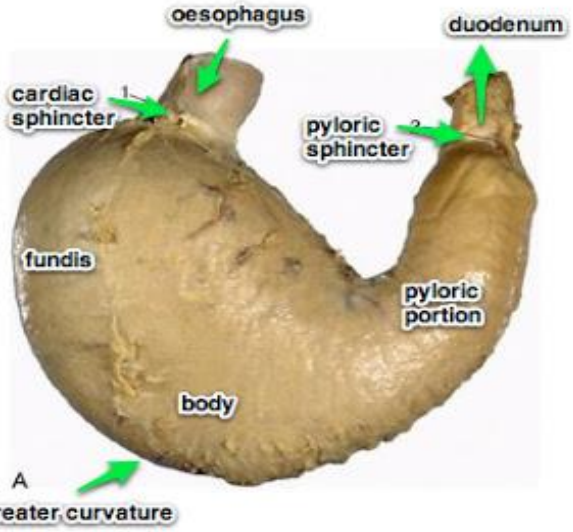

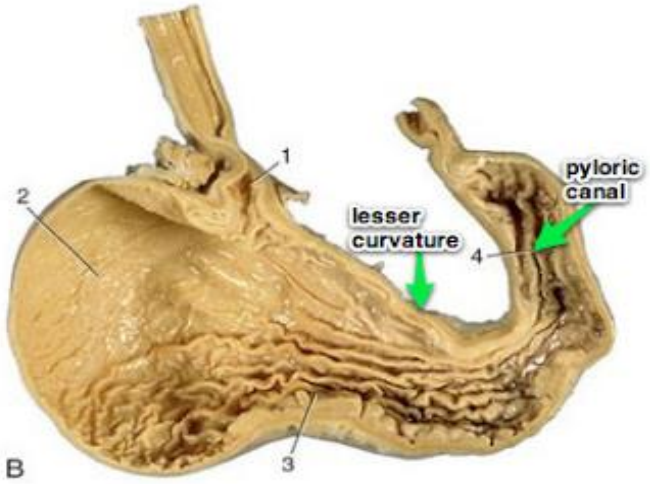

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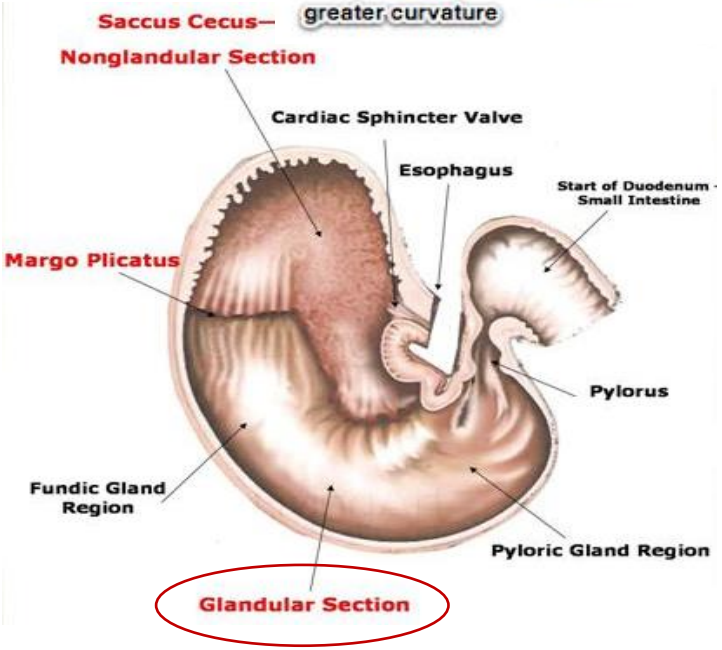

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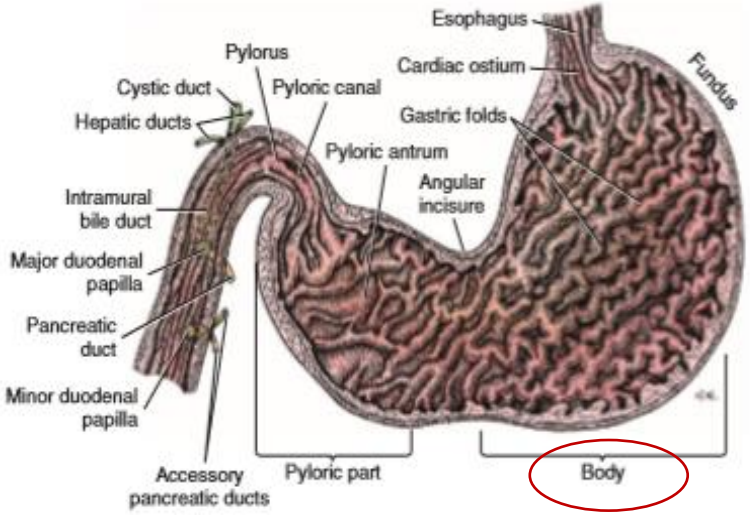
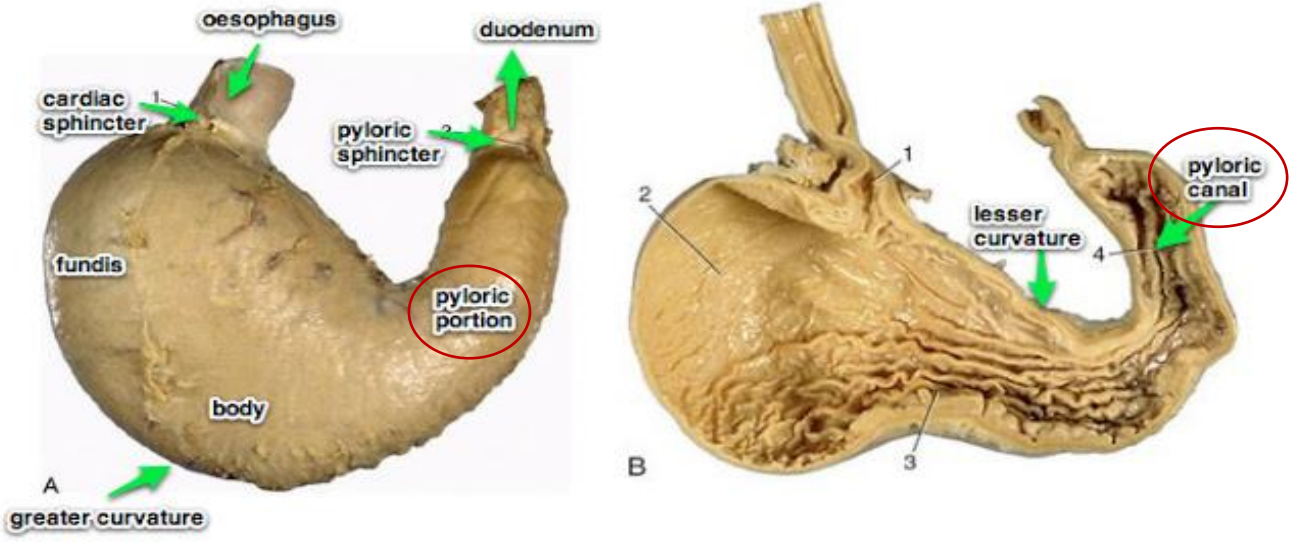


THE SIMPLE STOMACH

PARS PYLORICA:

- **pyloric part of the stomach**
- **between incisura angularis and pylorus**



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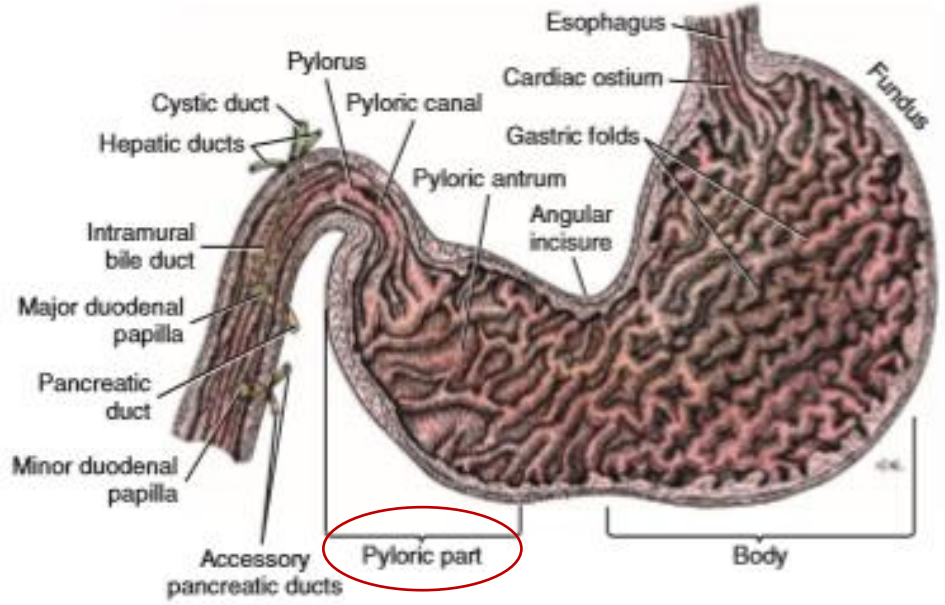
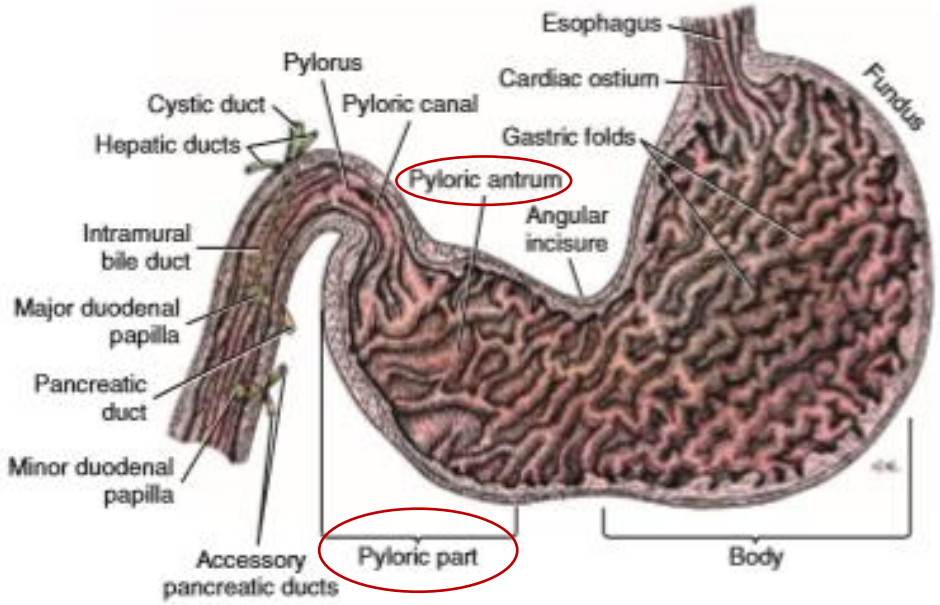


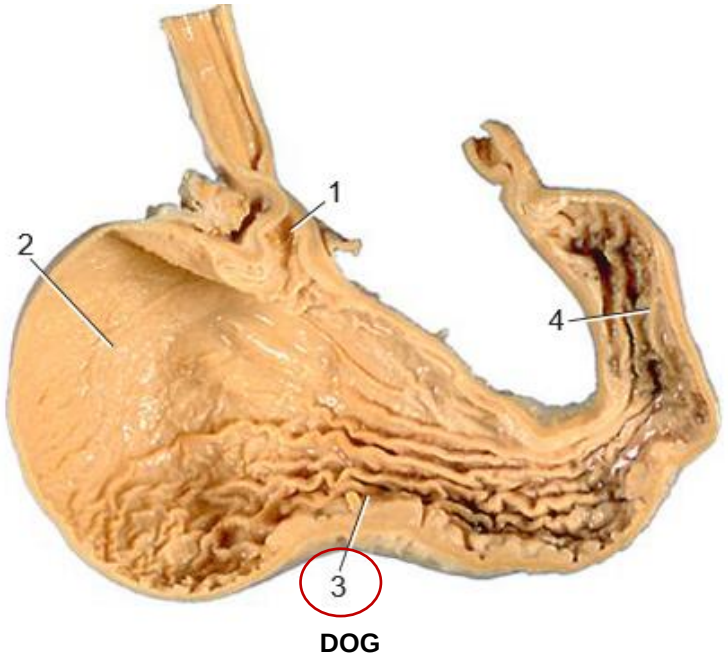
THE SIMPLE STOMACH

PARS PYLORICA:

a. ANTRUM PYLORICUM:

- **first, proximal portion of pars pylorica**
- **wider portion**





DOG

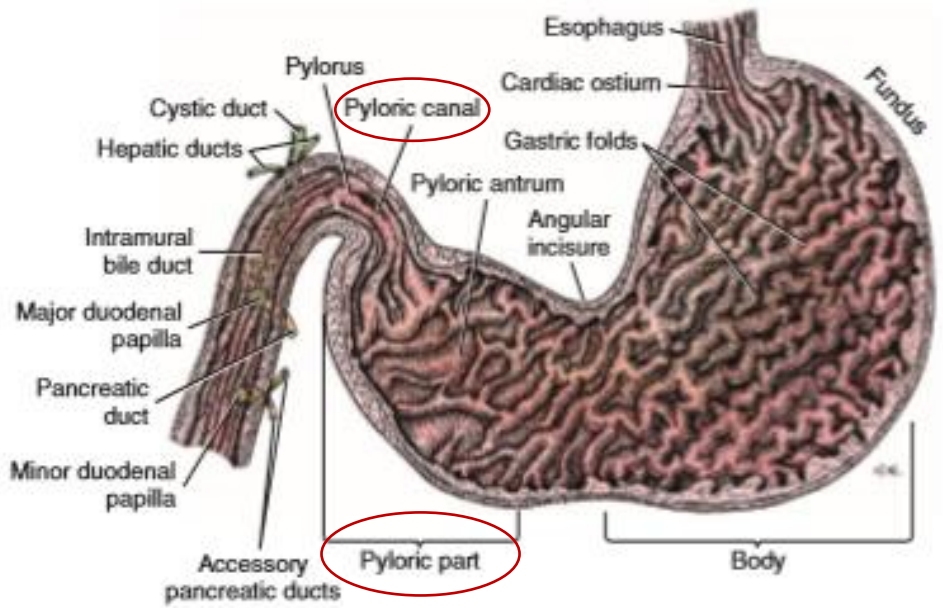
1. Cardiac opening
2. Fundus
3. Pyloric antrum
4. Pyloric canal
5. Gastric pit
6. Mucopolysaccharide-secreting cells
7. Lamina muscularis mucosae

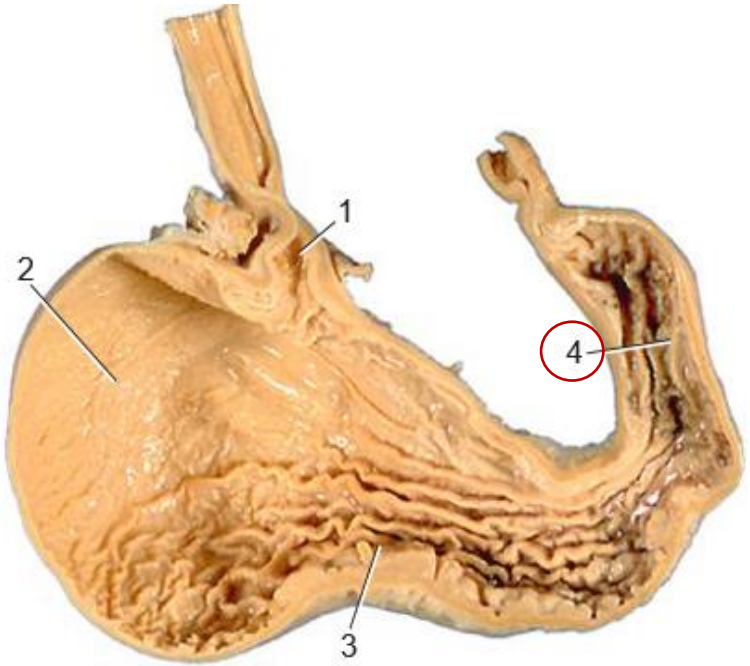
THE SIMPLE STOMACH

PARS PYLORICA:

b. CANALIS PYLORICUS (PYLORIC CANAL):

- **second, shortm narrow portion of pars pylorica**
- **in front of the pylorus**





1. Cardiac opening
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DOG

THE SIMPLE STOMACH

PARS PYLORICA:

c. PYLORUS:

- **distal constriction**
- **M. sphincter pylori**

d. OSTIUM PYLORICUM:

- opening between the pylorus and the duodenum

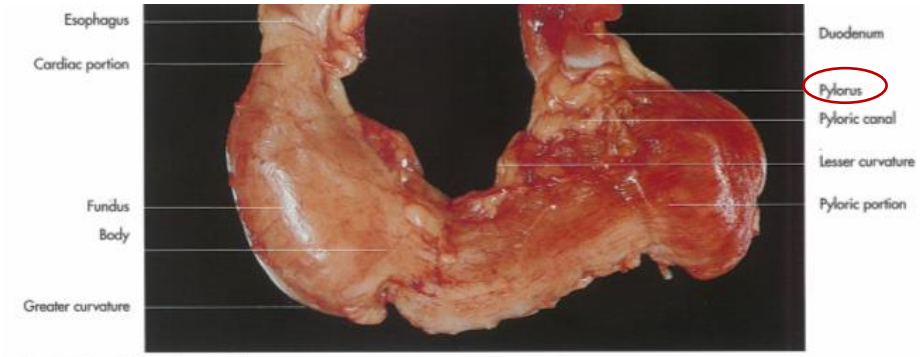
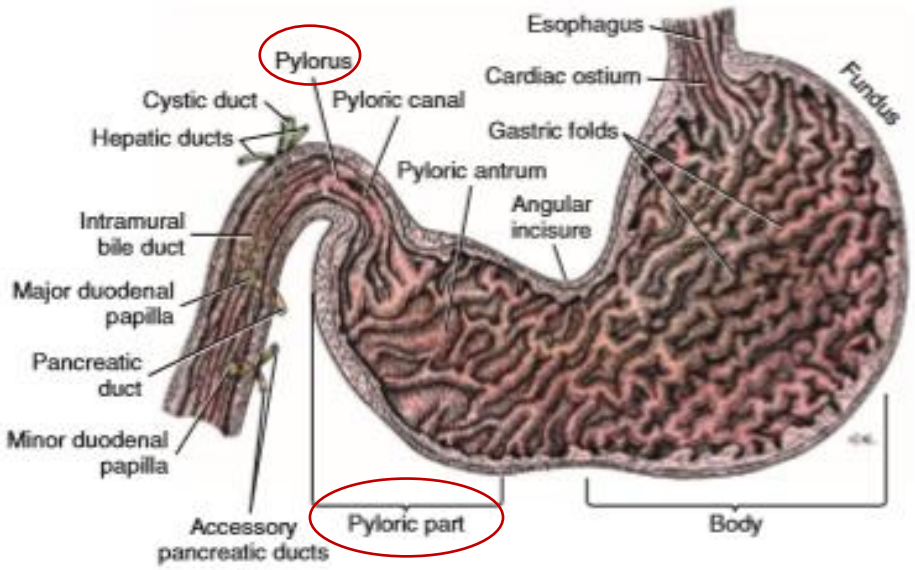
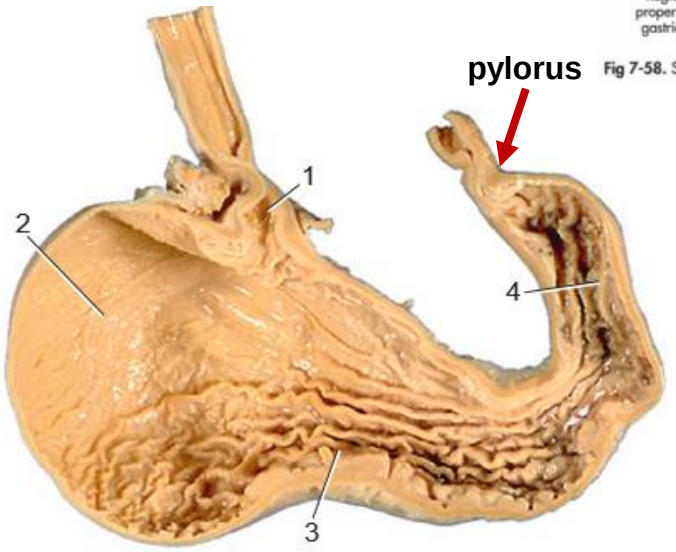


Fig 7-57. Stomach of a dog, caudal aspect.

Fig 7-58. Stomach of a dog, interior.





DOG

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THE SIMPLE STOMACH

PARS PYLORICA:

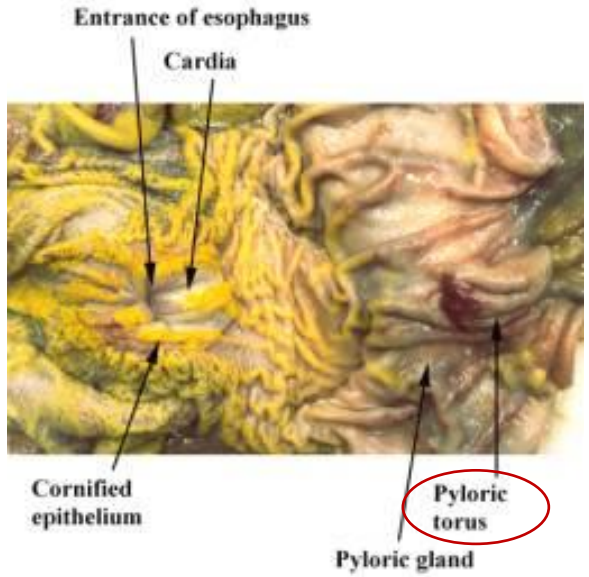
c. TORUS PYLORICUS:

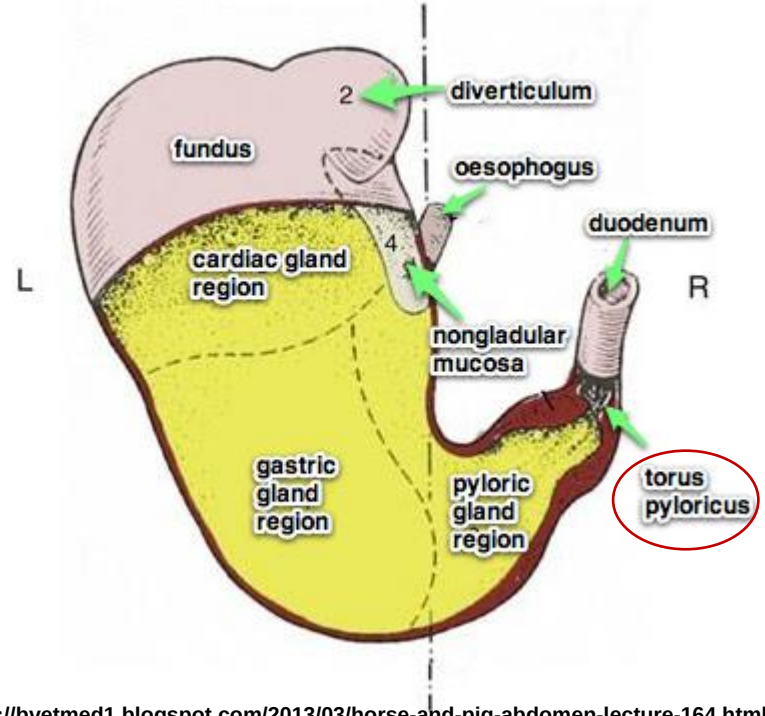
- protuberance in pylorus

formed by:

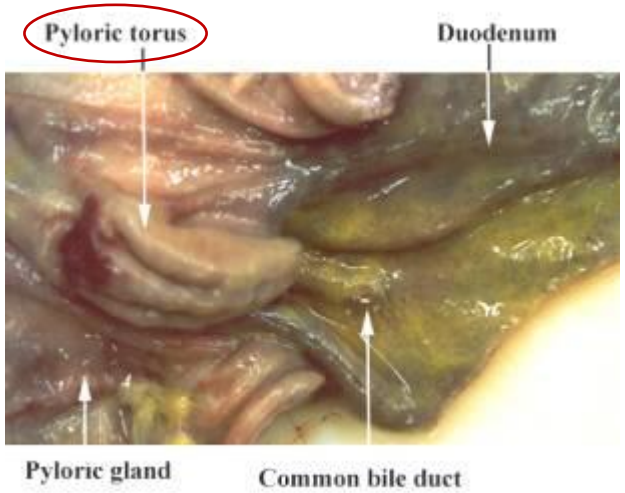
1. **the circular muscle at the end of the curvatura minor**
2. **fat**
3. **mucous membrane**

- in Su, Ru





http://bvetmed1.blogspot.com/2013/03/horse-and-pig-abdomen-lecture-164.html



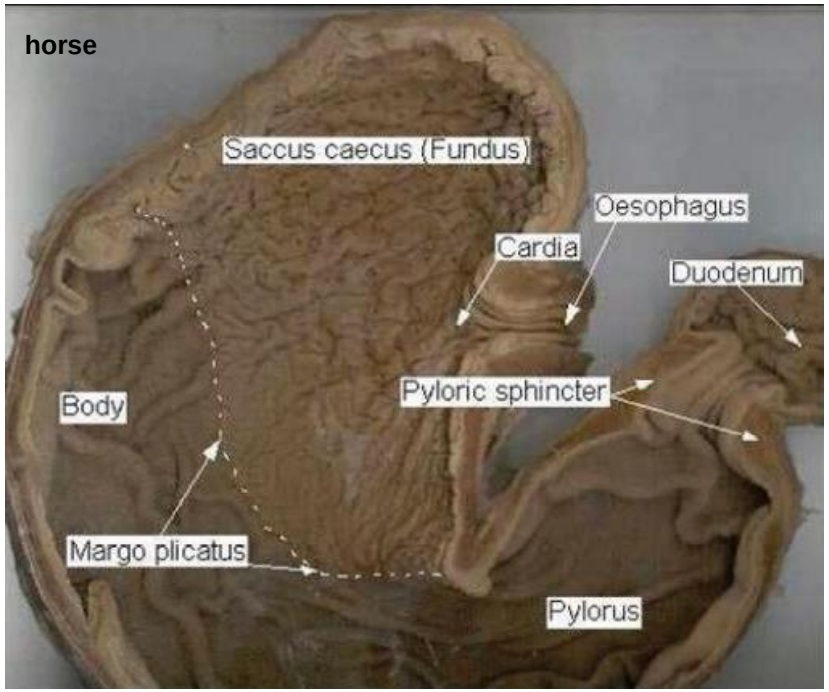
https://www.studyblue.com/notes/note/n/swine/deck/14598308

http://www.carrsconsulting.com/thepig/disorders/intestinal/anatomy/anatomyoftheintestinaltract.htm

THE SIMPLE STOMACH

MARGO PLICATUS:

- **in Eq**
- **junction between glandular and – non-glandular mucosa**



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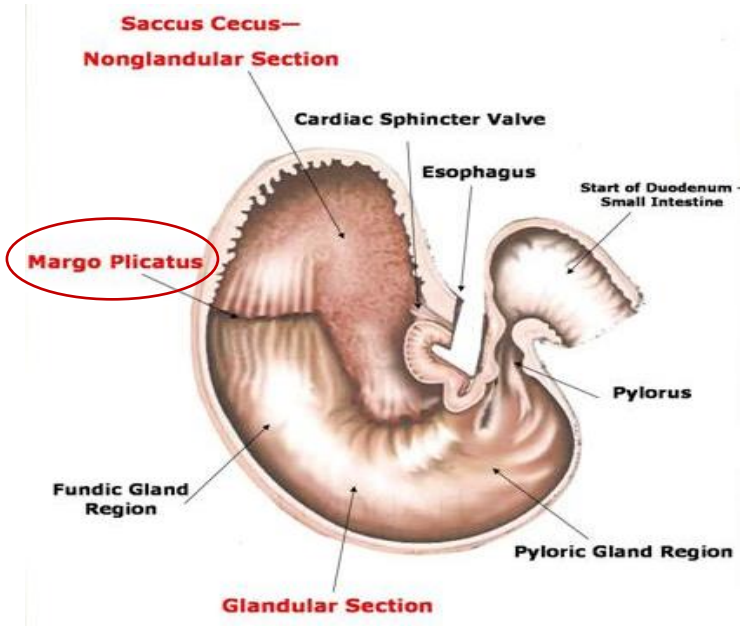
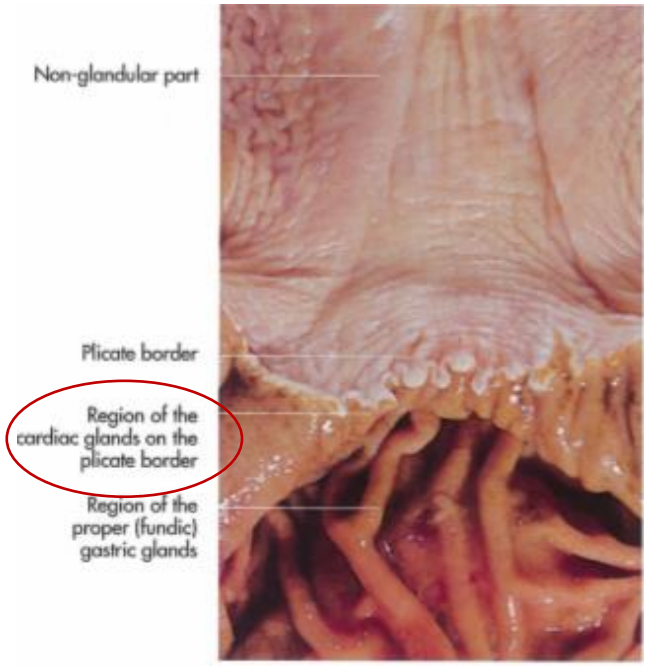
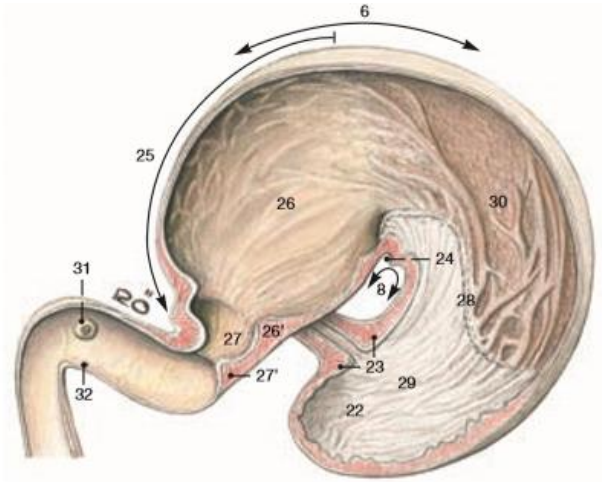


http://www.horsecoursesonline.com/college/nutrition/lesson_one_900.htm



ig 7-60. Stomach of a horse, cardiac region, interior.



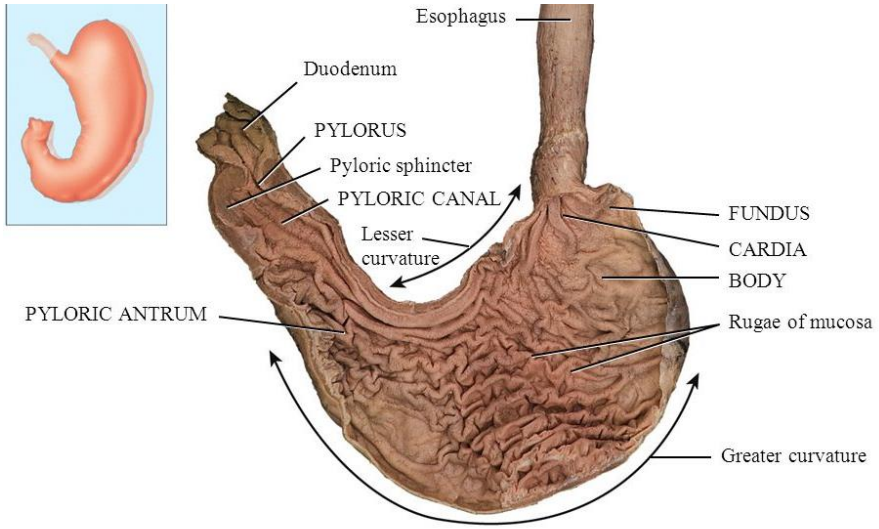
6 Greater curvature
8 Lesser curvature
22 Fundus, or blind sac
23 Cardiac sphincter at cardia
24 Angular notch
25 Pyloric part
26 Pyloric antrum
26'Sphincter of pyloric antrum
27 Pyloric canal
27'Pyloric sphincter at pylorus
28 Margo plicatus
29 Nonglandular part
30 Glandular part
31 Major duodenal papilla
32 Minor duodenal papilla

THE SIMPLE STOMACH

PLICAE GASTRICAE (GASTRIC FOLDS):

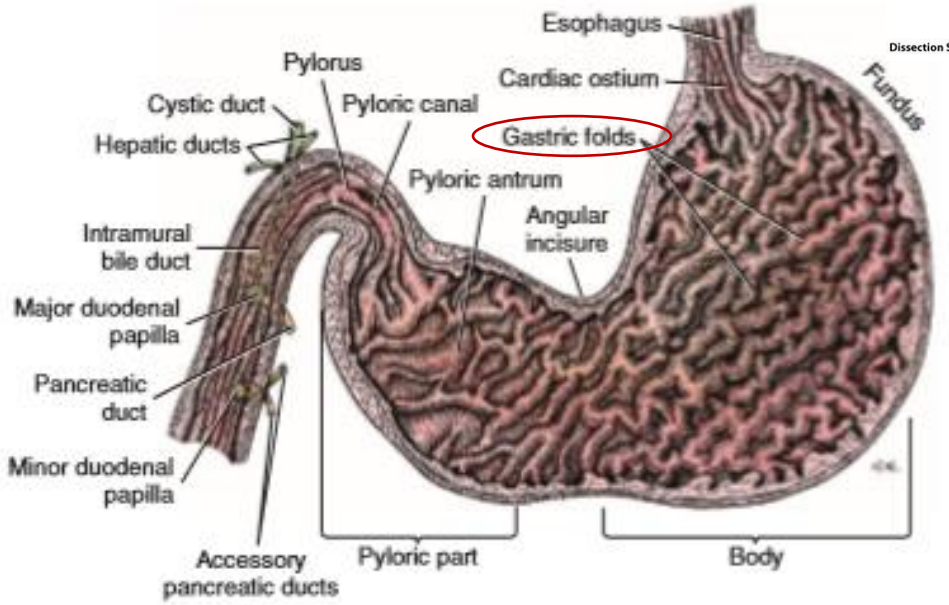
- **formed by the glandular mucosa (pars glandularis)**

FOVEOLA GASTRICAE (GASTRIC PITS)



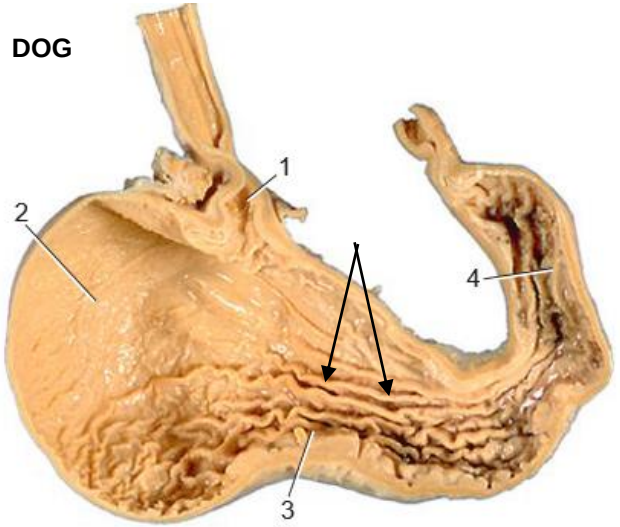
(b) Anterior view of internal anatomy

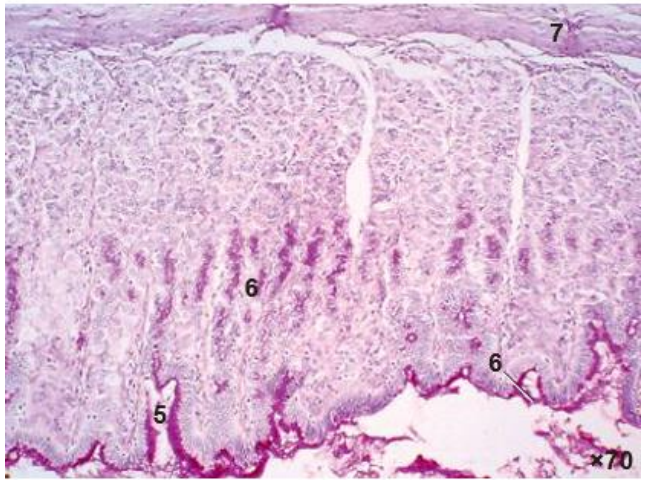
Dissection Shawn Miller, Photograph Mark Nielsen



https://biology.mwit.ac.th/Resource/AnatomyPDF/5_Lab_DigestiveSystem.pdf

DOG





1. Cardiac opening
2. Fundus
3. Pyloric antrum
4. Pyloric canal
5. Gastric pit
6. Mucopolysaccharide-secreting cells
7. Lamina muscularis mucosae

BLOOD SUPPLY OF THE SIMPLE STOMACH

I. A. coeliaca

1. A. gastrica sinistra

2. A. hepatica:

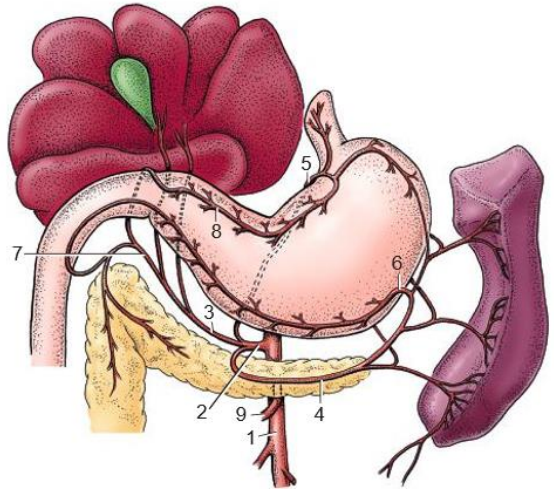
a. A. gastrica dextra

b. A. gastroepiploica dextra

c. Aa. gastricae breves

3. A lienalis:

a. A. gastroepiploica sinistra



1. Aorta
2. Celiac artery
3. Hepatic artery
4. Splenic artery
5. Left gastric artery
6. Left gastroepiploic artery
7. Gastroduodenal artery
8. Right gastric artery
9. Cranial mesenteric artery

Note: Ventral view.

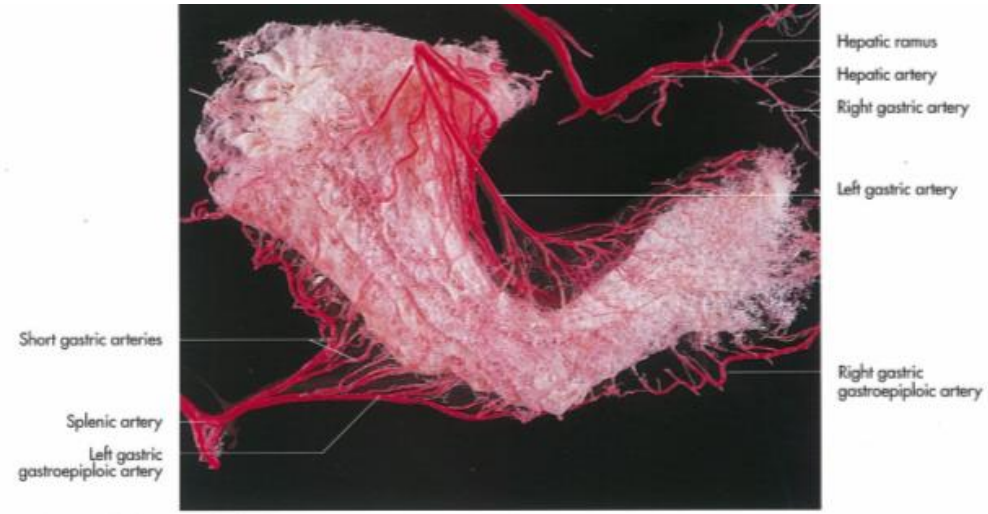
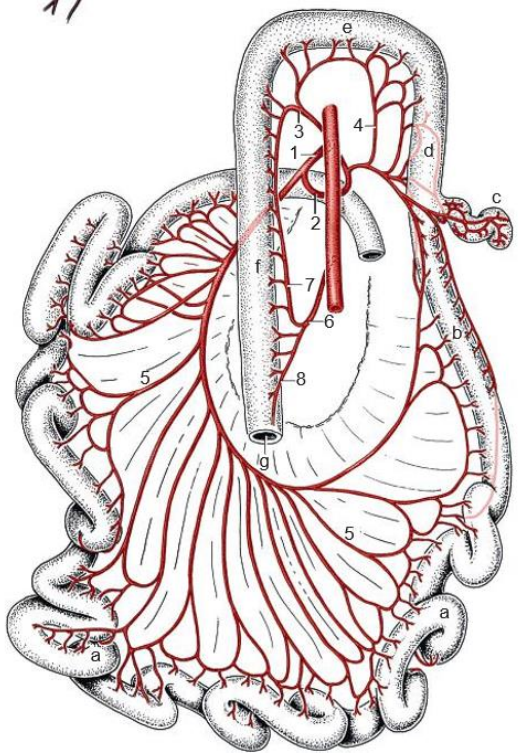
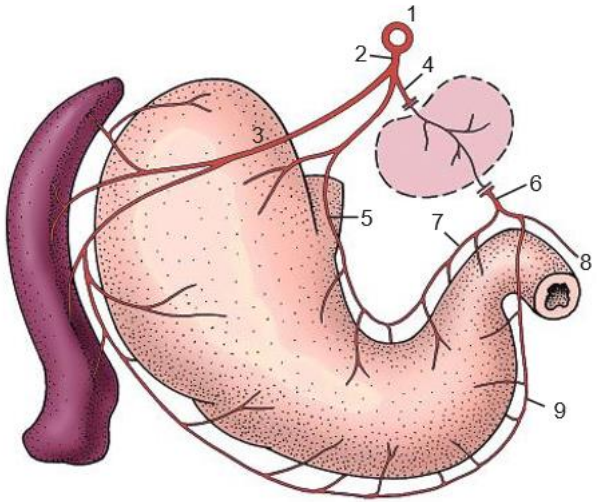


Fig 7-62. Arteries of the stomach of a dog, corrosion cast (König, 1992).



1. Cranial mesenteric artery
2. Common trunk
3. Middle colic artery
4. Right colic artery
5. Jejunal arteries
6. Caudal mesenteric artery
7. Left colic artery
8. Cranial rectal artery

Note: Distribution of the cranial and caudal mesenteric arteries to the intestines (dorsal view). *a,* Jejunum; *b,* ileum; *c,* cecum; *d,* ascending colon; *e,* transverse colon; *f,* descending colon; *g,* rectum.



1. Aorta
2. Celiac artery
3. Splenic artery
4. Hepatic artery
5. Left gastric artery
6. Gastroduodenal artery
7. Right gastric artery
8. Cranial pancreaticoduodenal artery
9. Right gastroepiploic artery

Note: Caudal view; schematic drawing.

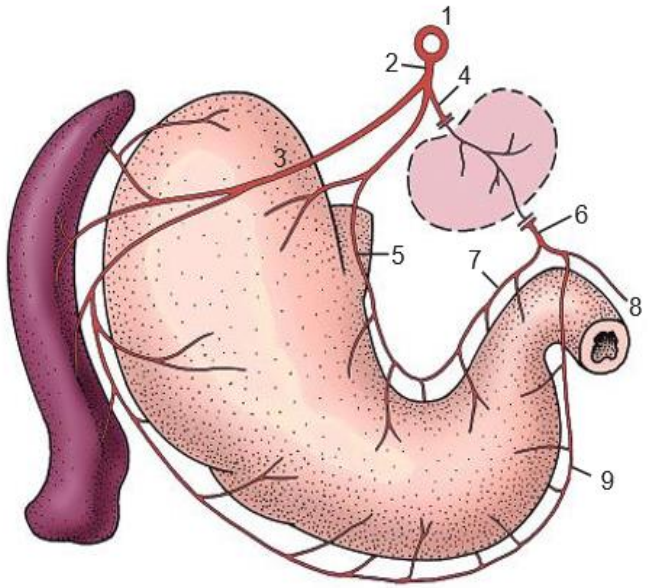
BLOOD SUPPLY OF THE SIMPLE STOMACH

1. A. gastrica sinistra:

anastomosis with the:

a. A. gastrica dextra

b. A. esophagea



1. Aorta
2. Celiac artery
3. Splenic artery
4. Hepatic artery
5. Left gastric artery
6. Gastroduodenal artery
7. Right gastric artery
8. Cranial pancreaticoduodenal artery
9. Right gastroepiploic artery

Note: Caudal view; schematic drawing.

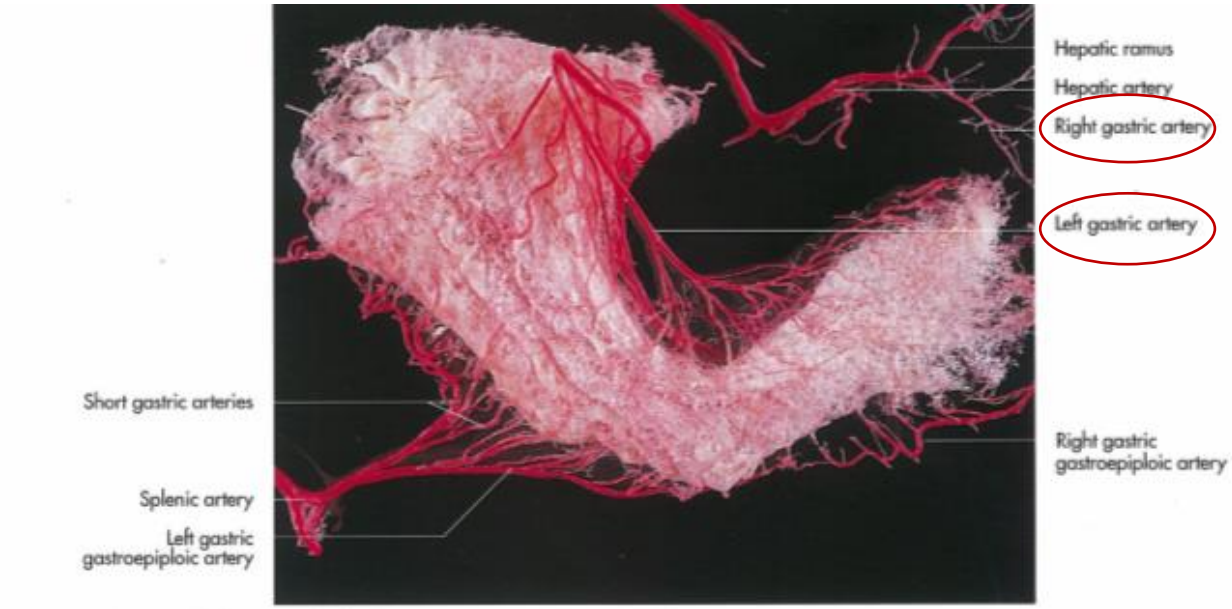
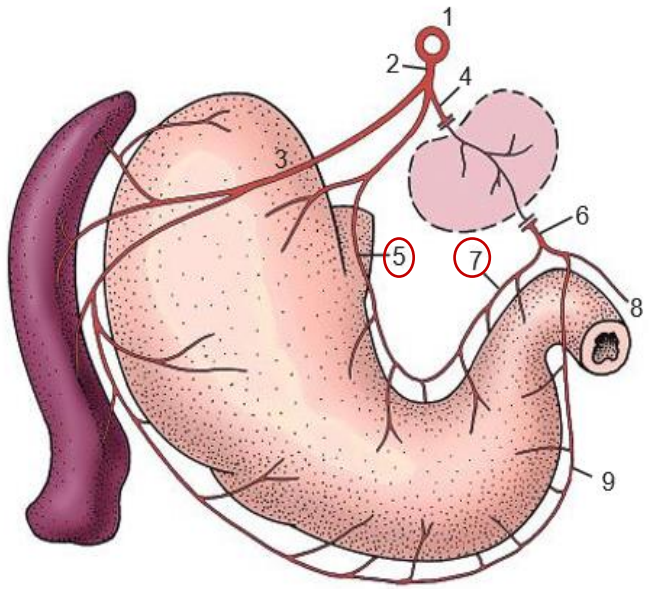


Fig 7-62. Arteries of the stomach of a dog, corrosion cast (König, 1992).

BLOOD SUPPLY OF THE SIMPLE STOMACH

1. A. gastrica sinistra and dextra:

- **run along the curvatora minor**
- **anastomose with each other - form a perigastric arterial ring**



1. Aorta
2. Celiac artery
3. Splenic artery
4. Hepatic artery
5. Left gastric artery
6. Gastroduodenal artery
7. Right gastric artery
8. Cranial pancreaticoduodenal artery
9. Right gastroepiploic artery

Note: Caudal view; schematic drawing.

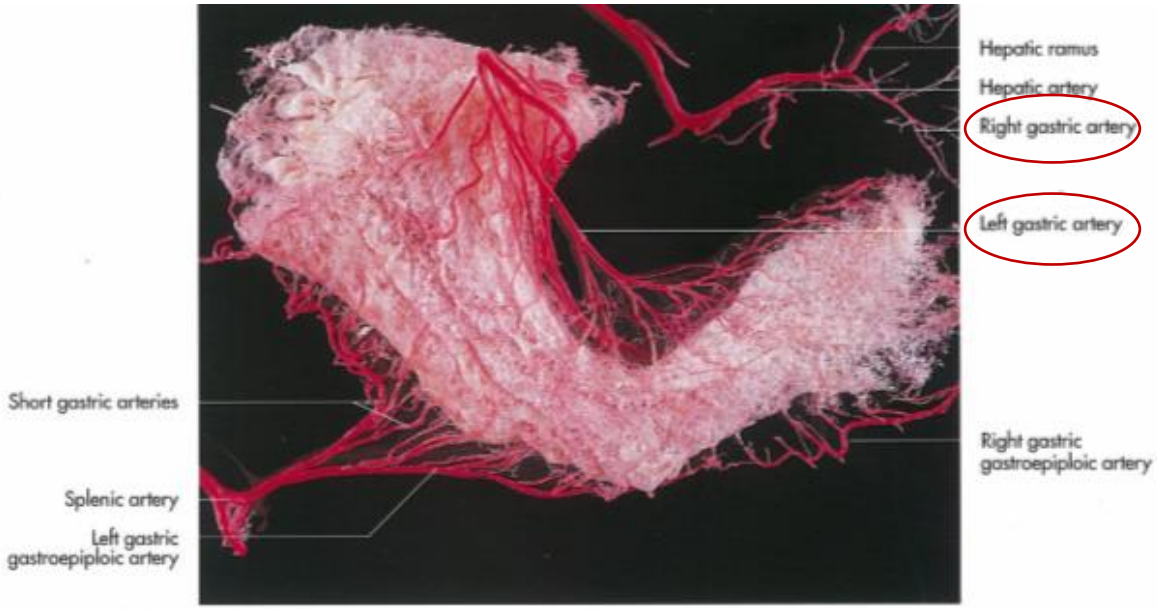


Fig 7-62. Arteries of the stomach of a dog, corrosion cast (König, 1992).

BLOOD SUPPLY OF THE SIMPLE STOMACH

A. gastroepiploica dextra and sinistra

- **run along the curvatora major**
- **anastomose with each other - perigastric arterial ring**

a. rr. gastrici

a. rr. epiploici – for omentum majus

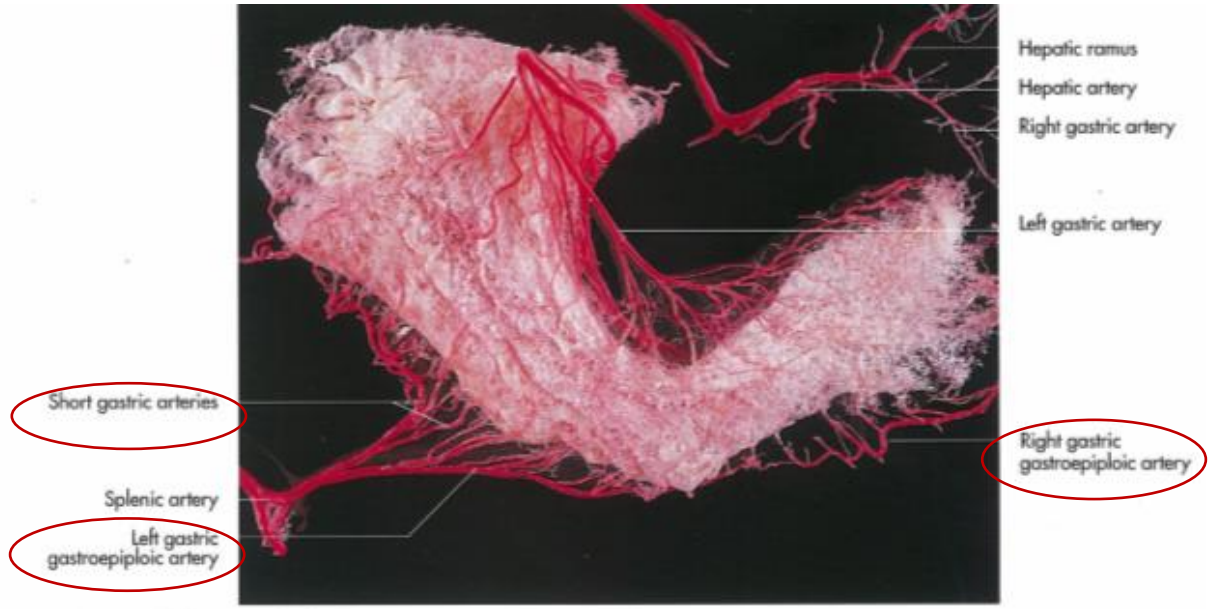
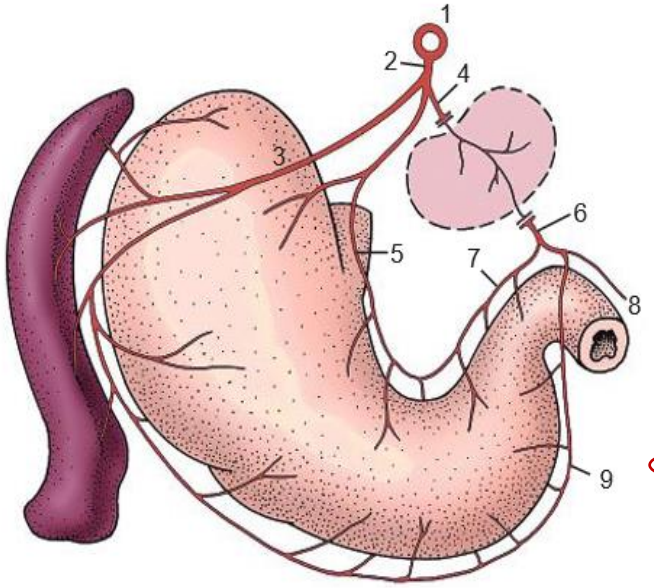
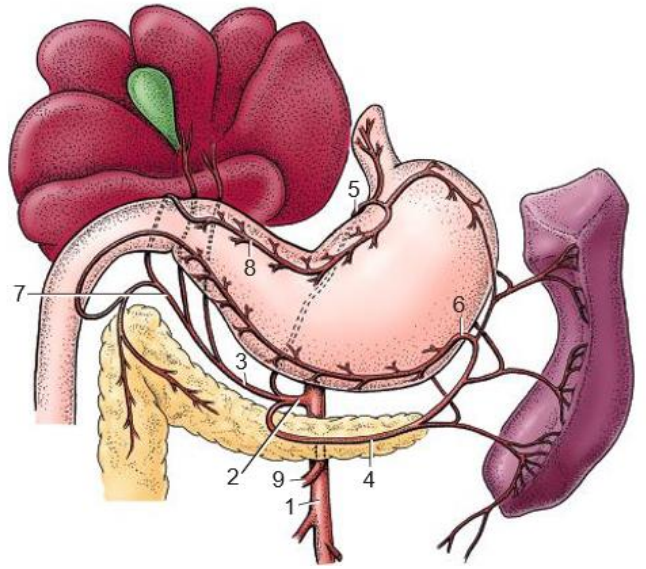


Fig 7-62. Arteries of the stomach of a dog, corrosion cast (König, 1992).



1. Aorta
2. Celiac artery
3. Splenic artery
4. Hepatic artery
5. Left gastric artery
6. Gastroduodenal artery
7. Right gastric artery
8. Cranial pancreaticoduodenal artery
9. Right gastroepiploic artery

Note: Caudal view; schematic drawing.



1. Aorta
2. Celiac artery
3. Hepatic artery
4. Splenic artery
5. Left gastric artery
6. Left gastroepiploic artery
7. Gastroduodenal artery
8. Right gastric artery
9. Cranial mesenteric artery

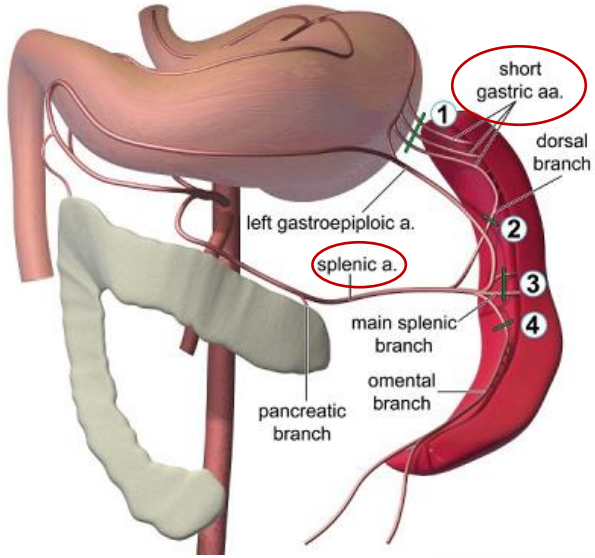
Note: Ventral view.

BLOOD SUPPLY OF THE SIMPLE STOMACH

Aa. gastricae breves:

- branches of splenic aretry

- supply the fundus



https://www.wsava.org/News-Press/News/Total-Splenectomy-%E2%80%93-when-and-how

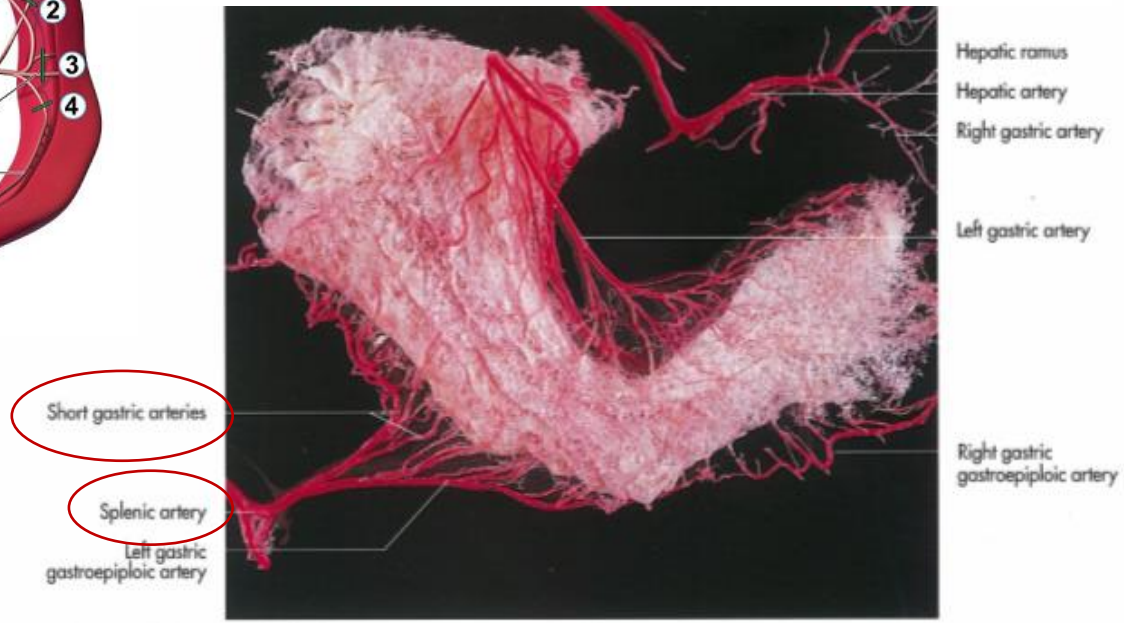


Fig 7-62. Arteries of the stomach of a dog, corrosion cast (Kōnig, 1992).

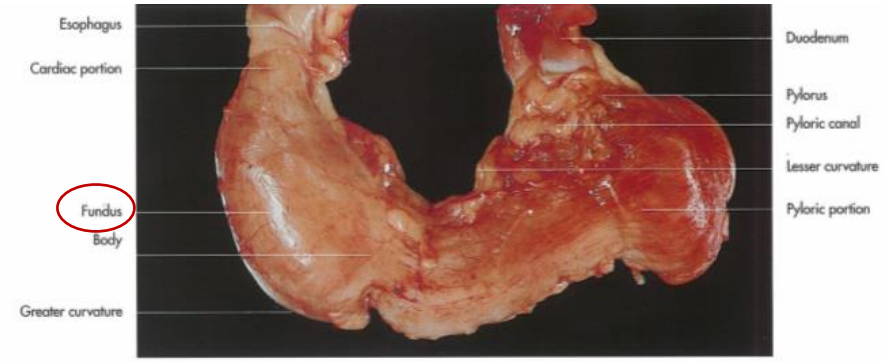


Fig 7-57. Stomach of a dog, caudal aspect.

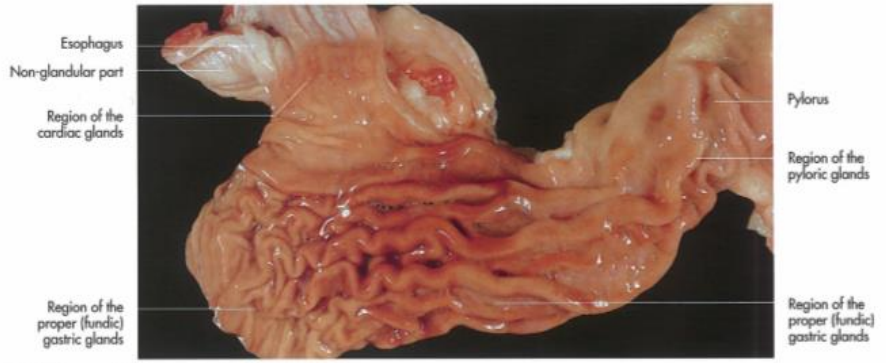


Fig 7-58. Stomach of a dog, interior.

BLOOD SUPPLY OF THE SIMPLE STOMACH

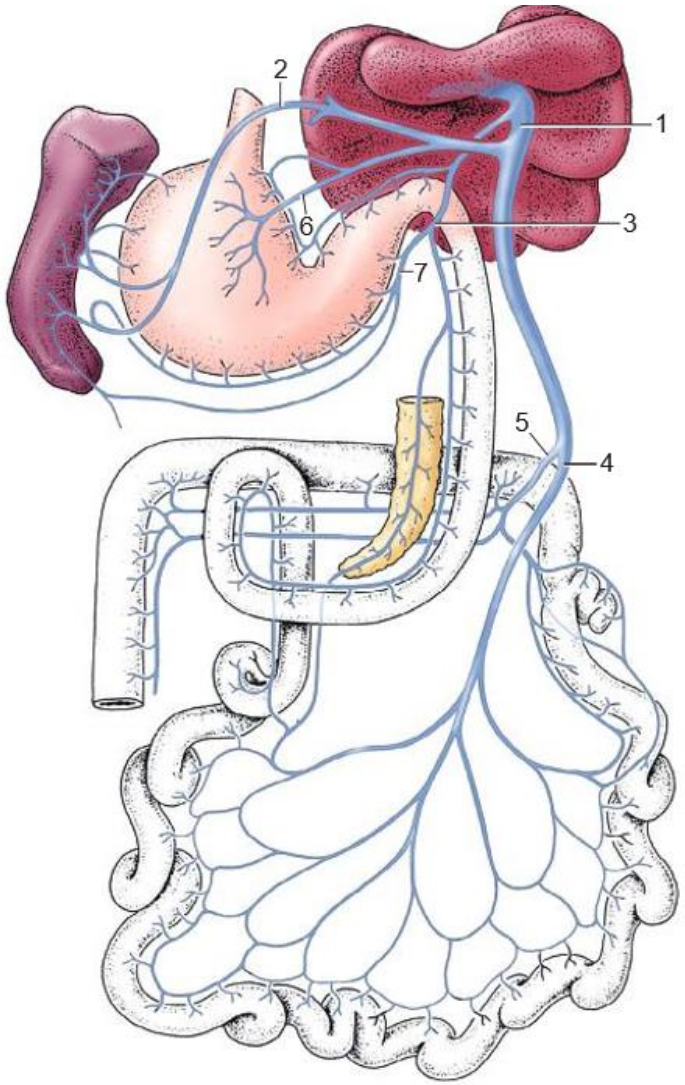
VEINS:

- join the vena portae to enter the liver

anastomoses between:

a. v. esophagea

b. v. gastrica sinistra



1. Portal vein
2. Splenic vein
3. Gastroduodenal vein
4. Cranial mesenteric vein
5. Caudal mesenteric vein
6. Left gastric vein
7. Right gastroepiploic vein

Note: Semischematic dorsal view.

COMPLEX STOMACH

- stomach of the ruminants

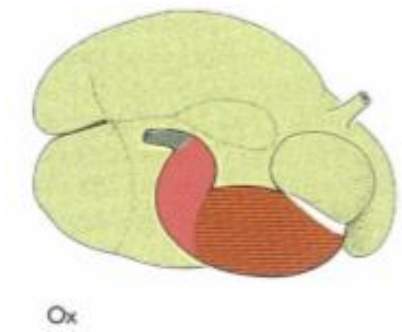
composed of:

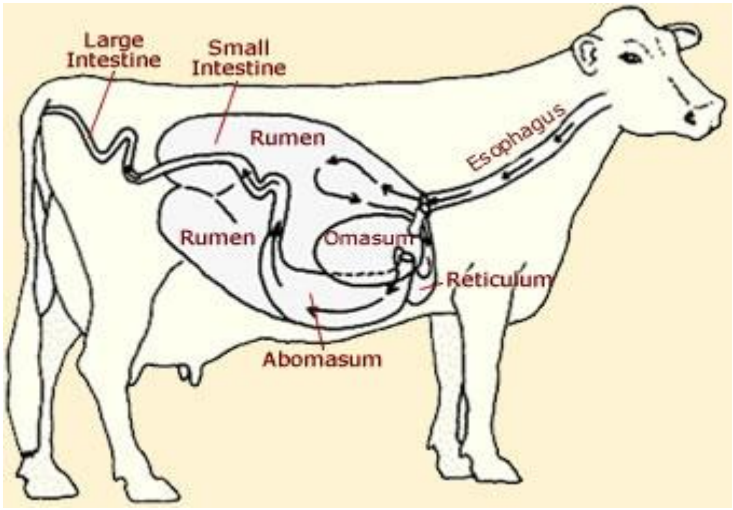
I. PROVENTRICULUS (FORESTOMACH)

- **reffered to non - glandular stomach**
- **responsible for the enzymatic distruction of cellulose**

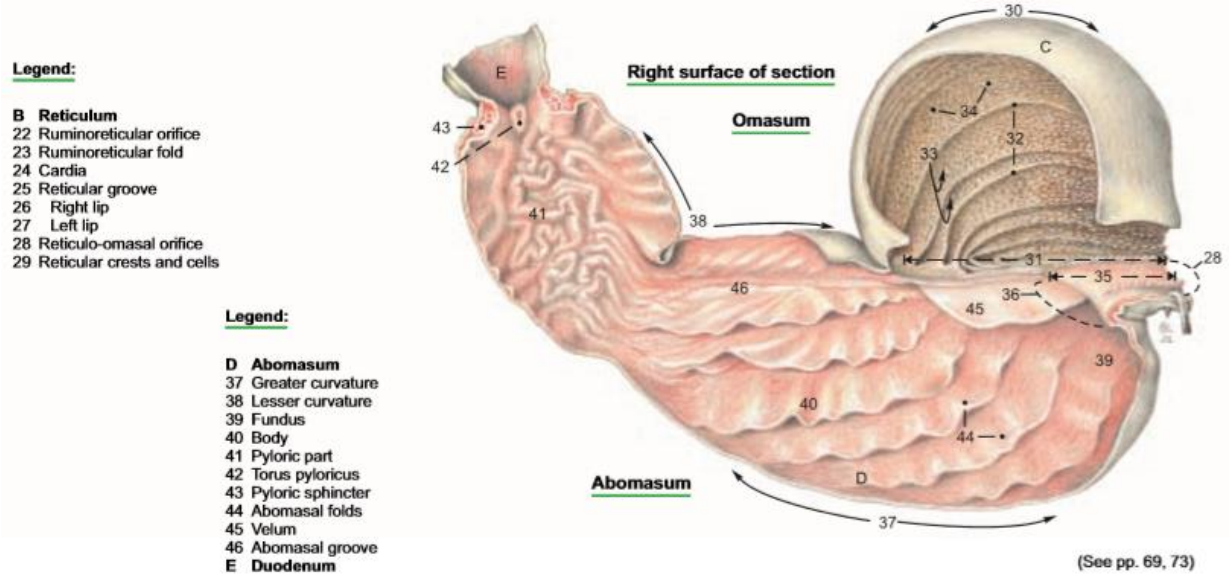
II. ABOMASUM

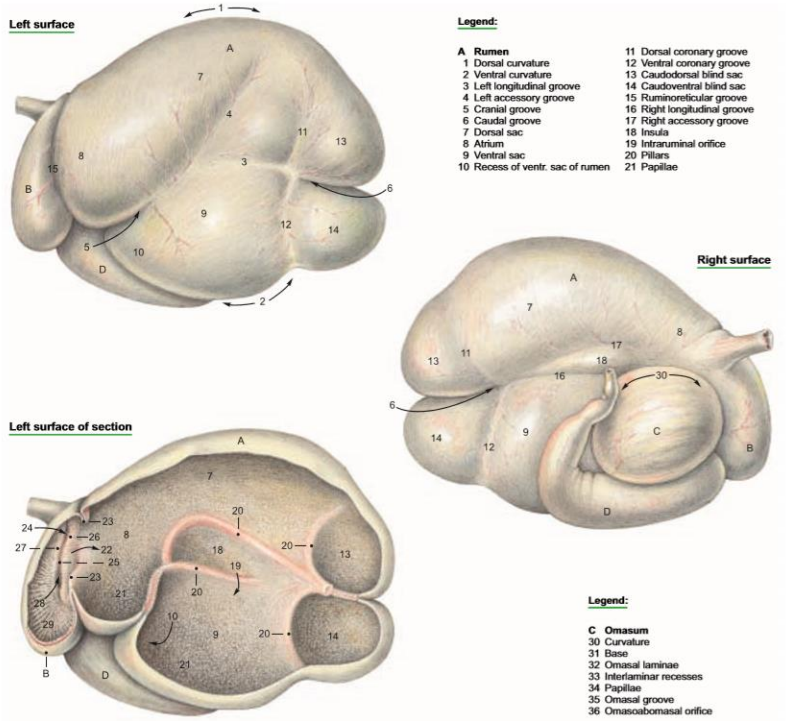
- reffered to glandular and simple stomach



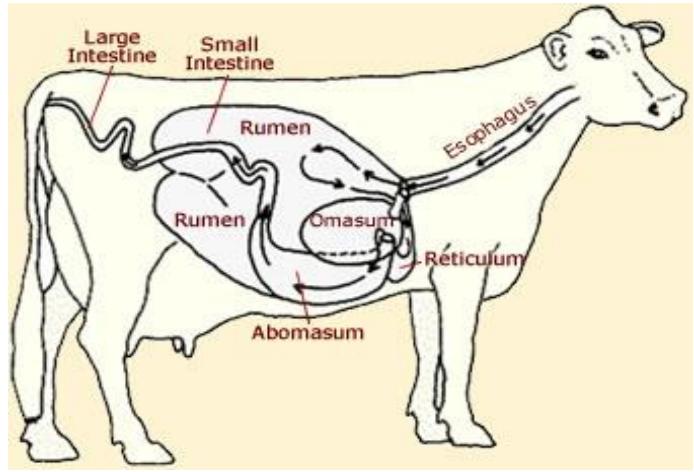


http://www.cattle-empire.net/blog/115/what-cud-and-why-do-cattle-chew-it





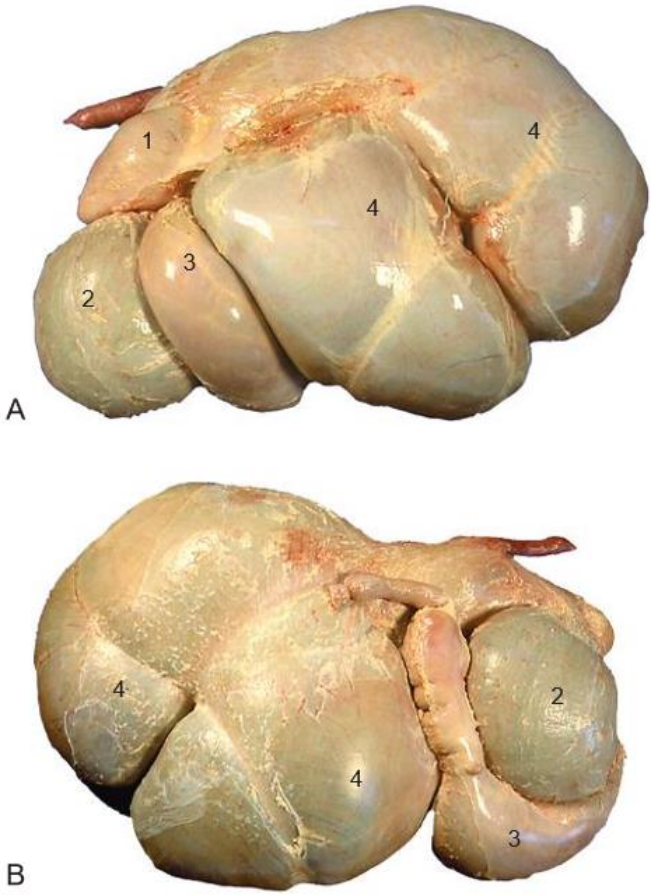
COMPLEX STOMACH



http://www.cattle-empire.net/blog/115/what-cud-and-why-do-cattle-chew-it

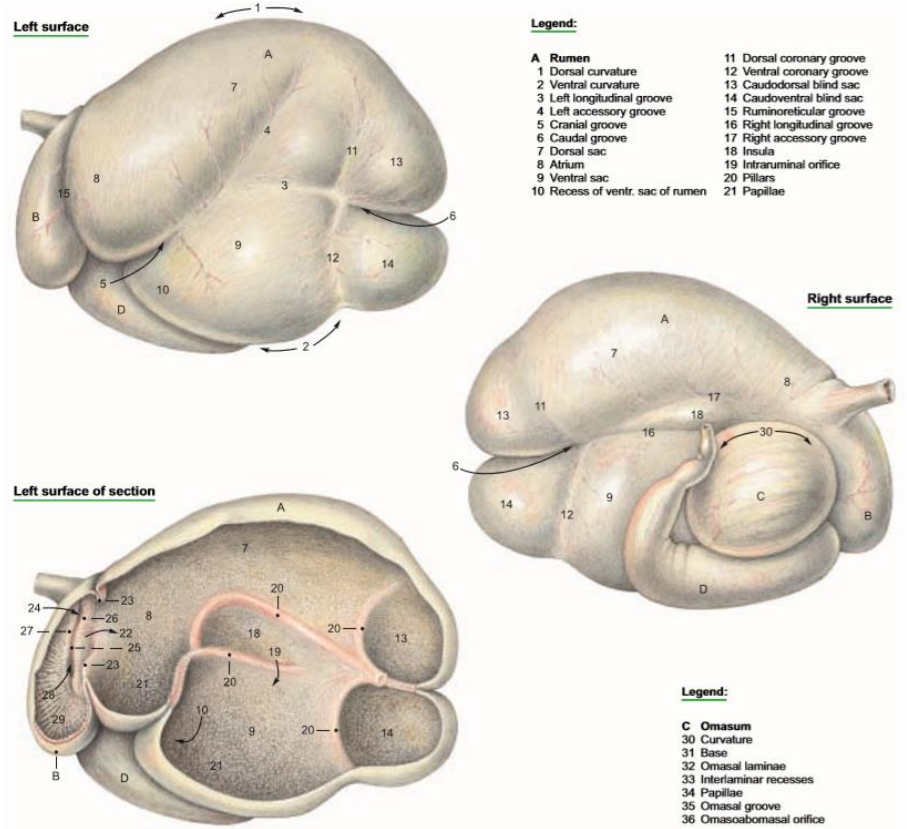
I. PROVENTRICULUS composed of:

1. **RUMEN**
2. **RETICULUM**
3. **OMASUM**



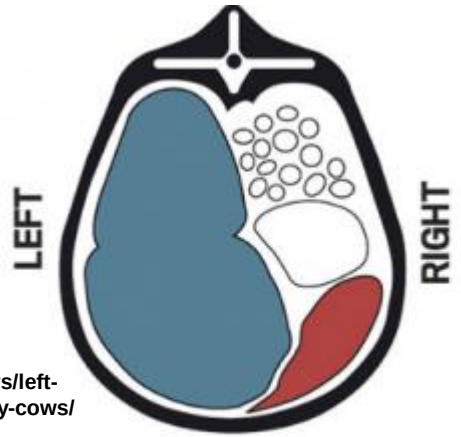
1. Reticulum
2. Omasum
3. Abomasum
4. Rumen

Note: A, Left side. **B,** Right side.



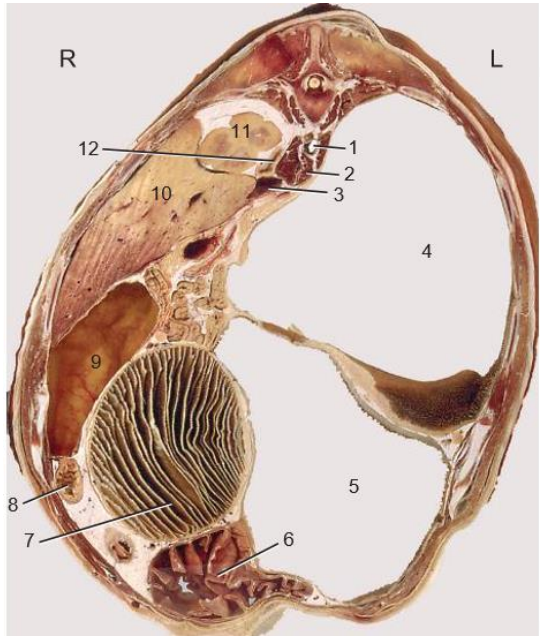
POSITION OF THE COMPLEX STOMACH

1. **Rumen – lies on the left**
2. **Reticulum - lies cranially**
3. **Omasum - lies on the right**
4. **Abomasum - lies ventrally**



https://www.northvets.co.nz/news/left-displaced-abomasum-lda-in-dairy-cows/

Normal position of abomasum (red) and rumen (blue)

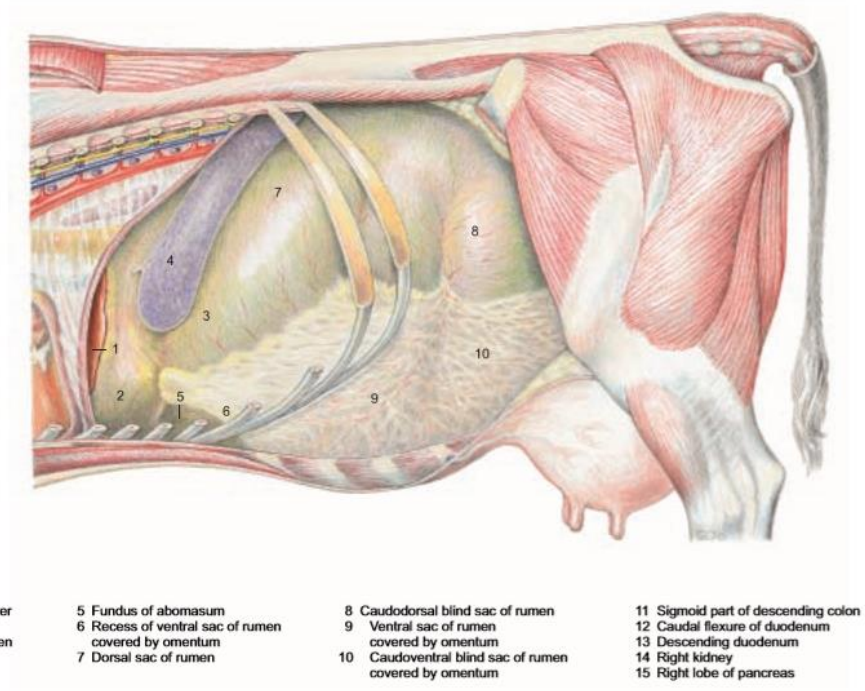


1. Aorta
2. Right crus of the diaphragm
3. Caudal vena cava
4. Doral sac of the rumen
5. Ventral sac of the rumen
6. Abomasum
7. Omasum
8. Duodenum
9. Gallbladder
10. Liver
11. Cranial pole of the right kidney
12. Right adrenal gland

Note: Transverse section, cranial view.

- its proximal portion below the rumen, reticulum, omasum

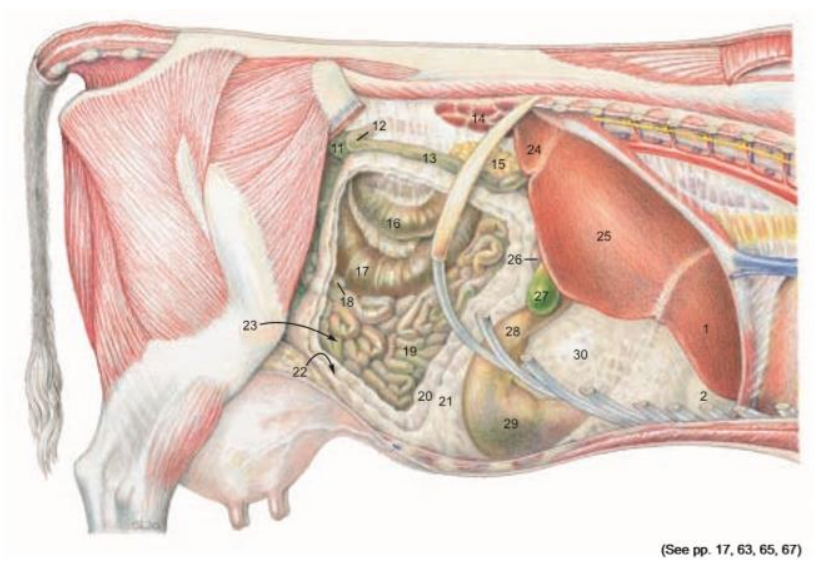
(Left side)



Legend:

1 Left lobe of liver
2 Reticulum
3 Atrium of rumen
4 Spleen
5 Fundus of abomasum
6 Recess of ventral sac of rumen covered by omentum
7 Dorsal sac of rumen
8 Caudodorsal blind sac of rumen
9 Ventral sac of rumen covered by omentum
10 Caudoventral blind sac of rumen covered by omentum
11 Sigmoid part of descending colon
12 Caudal flexure of duodenum
13 Descending duodenum
14 Right kidney
15 Right lobe of pancreas

(Right side)



(See pp. 17, 63, 65, 67)

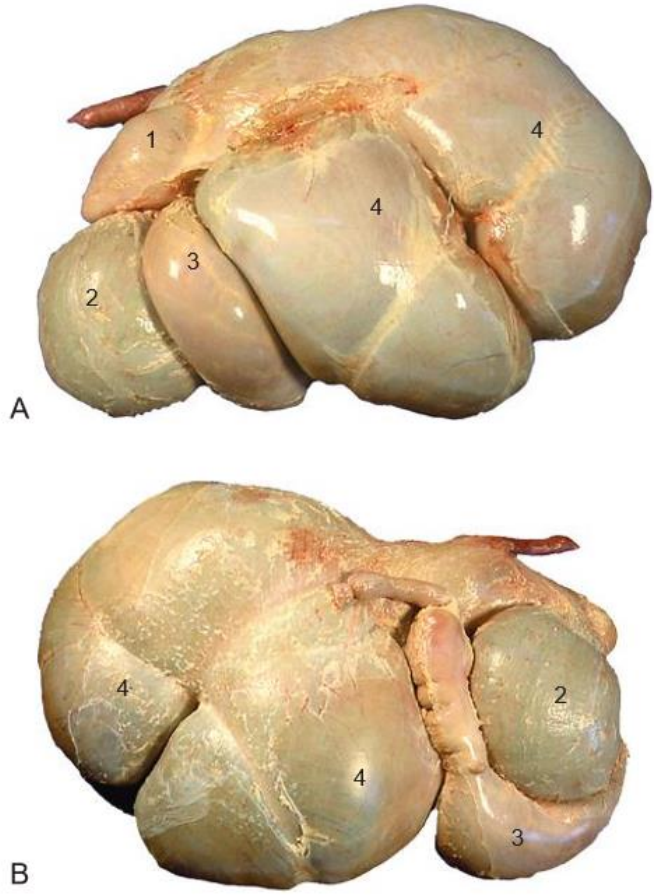
Legend:

16 Prox. loop of ascending colon
17 Cecum
18 Ileum
19 Jejunum
Greater omentum:
20 Deep wall
21 Supf. wall
22 Caudal recess
23 Supraomental recess
24 Caudate process of liver
25 Right lobe of liver
26 Cranial part of duodenum
27 Gall bladder
28 Pyloric part of abomasum
29 Body of abomasum
30 Omasum covered by lesser omentum

THE COMPLEX STOMACH

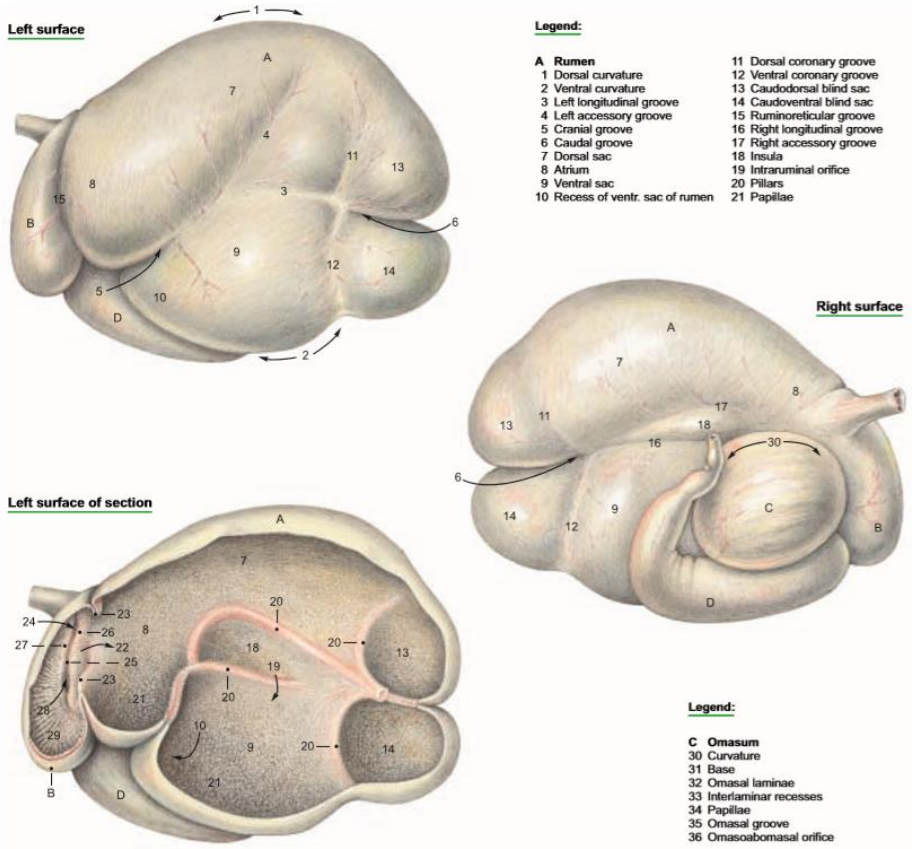
RUMEN:

- **large compartment**
- **compressed laterally**
- **occupies the major portion of the abdominal cavity**
- **extends from the diaphragm to the pelvic inlet**
- **fills the left half of the abdominal cavity**



1. Reticulum
2. Omasum
3. Abomasum
4. Rumen

Note: **A,** Left side. **B,** Right side.



THE COMPLEX STOMACH

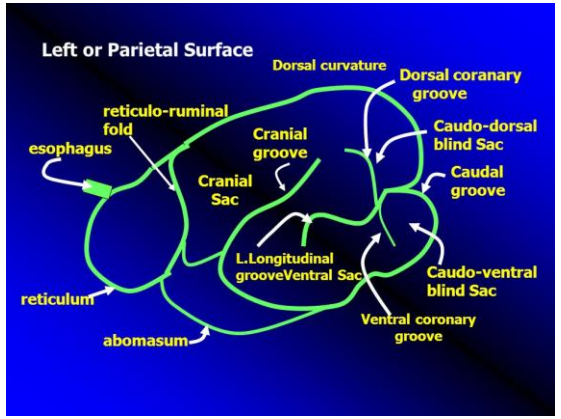
RUMEN:

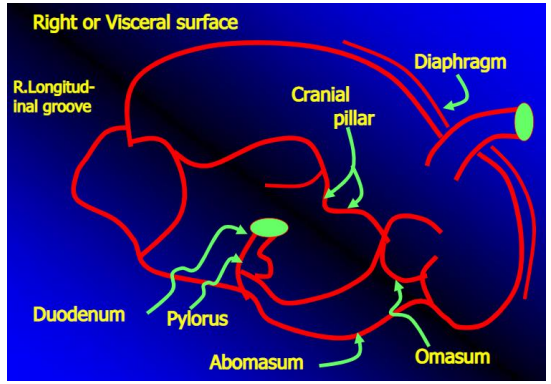
FACIES PARIETALIS (LEFT):

- **surface faces the abdominal wall to the left and ventrally**

FACIES VISCERALIS (RIGHT):

- surface faces the intestine, to the right





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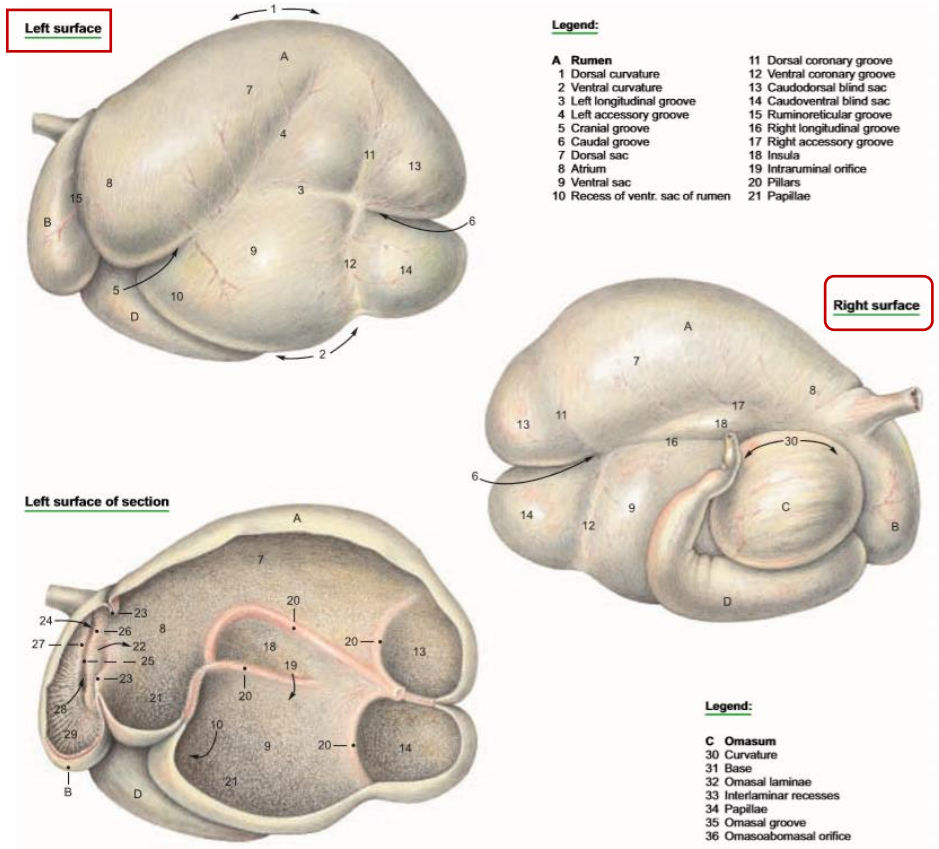
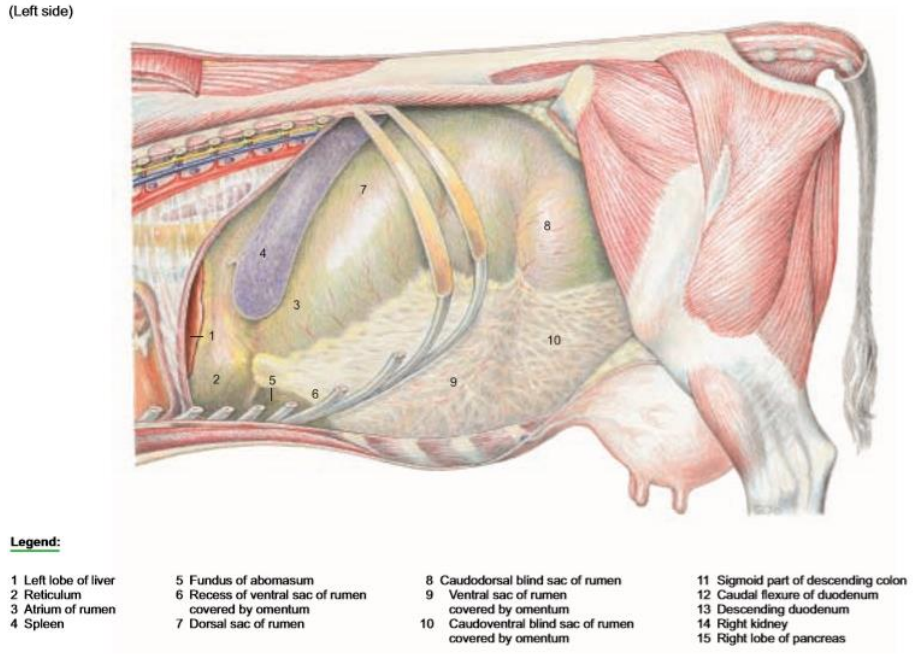
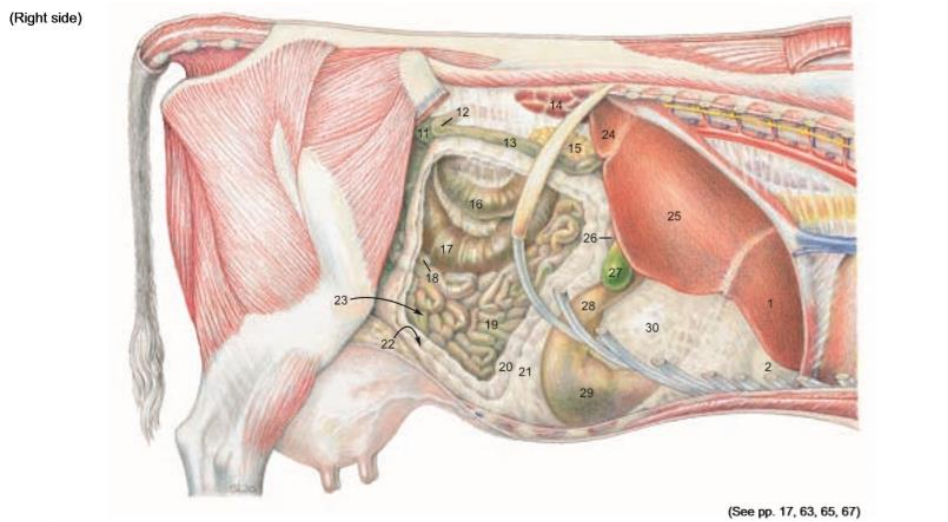






THE COMPLEX STOMACH

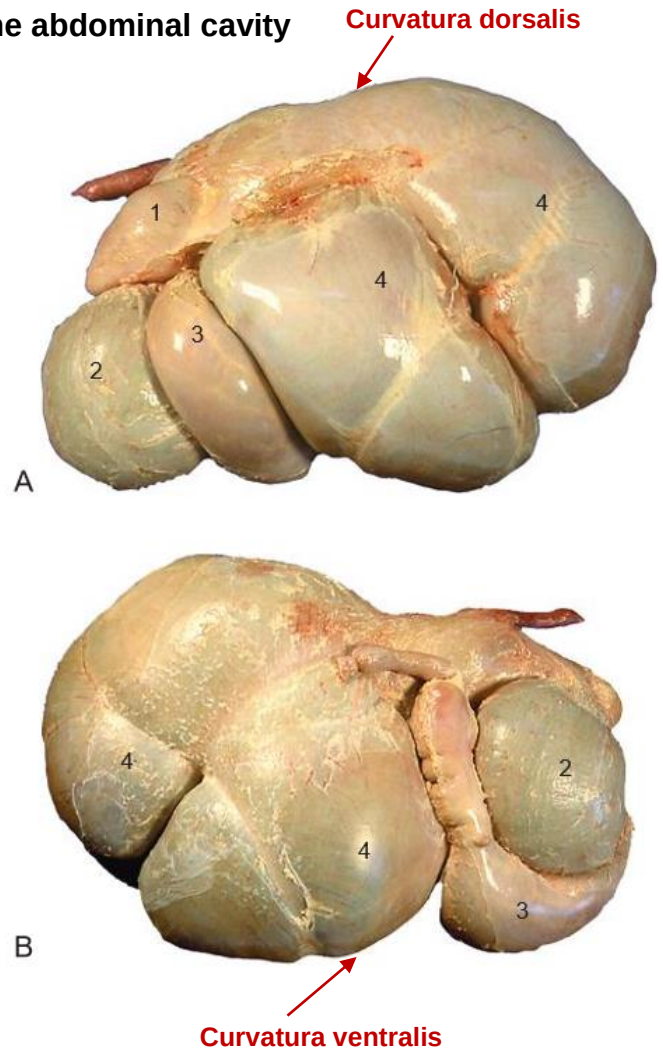
RUMEN:

CURVATURA DORSALIS:

- **lies against the diaphragm, and the roof of the abdominal cavity**

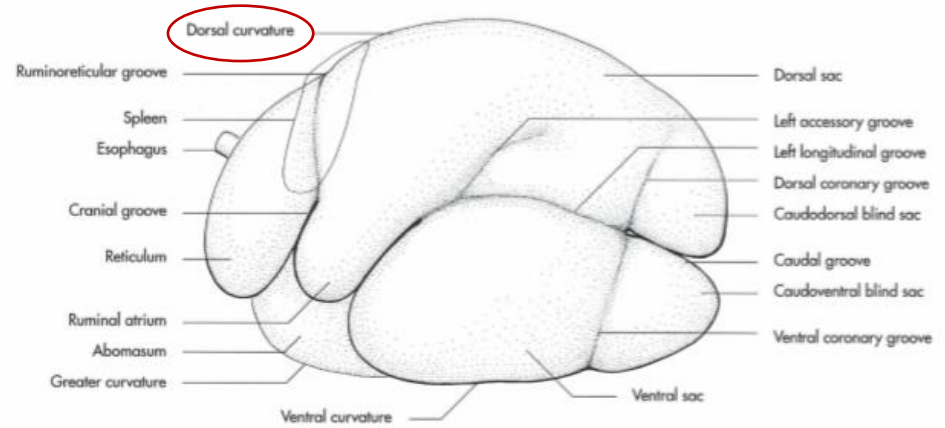
CURVATORA VENTRALIS:

- follows the contour the abdominal floor

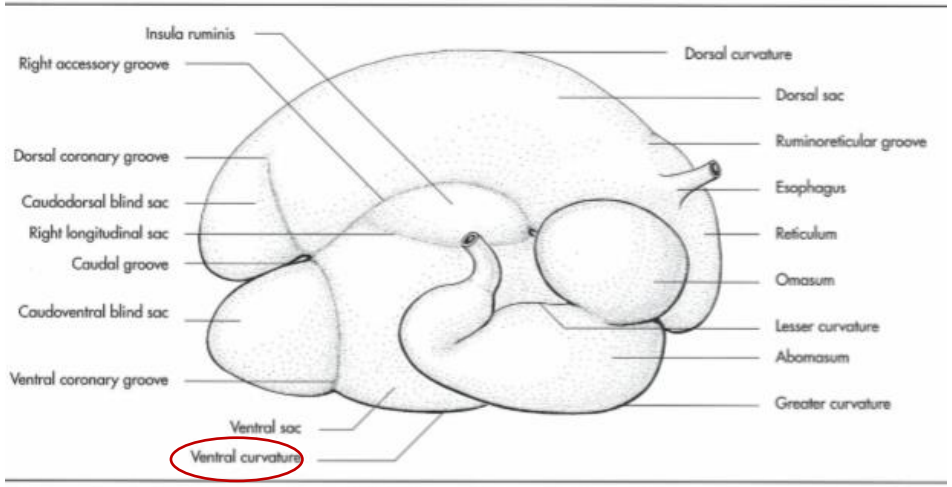


1. Reticulum
2. Omasum
3. Abomasum
4. Rumen

Note: A, Left side. **B,** Right side.

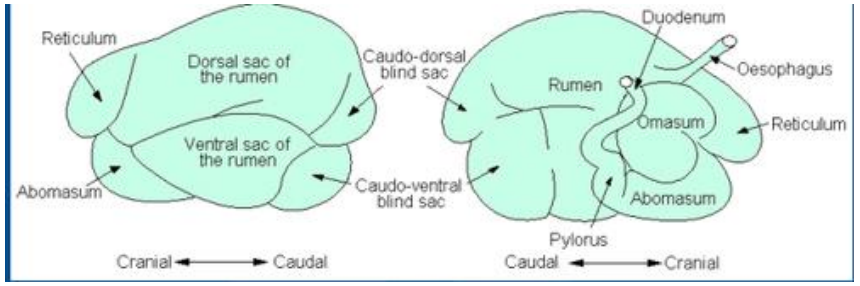


65. Compartments of the stomach of the ox, left lateral aspect, schematic (Schaller, 1992).



66. Compartments of the stomach of the ox, right lateral aspect, schematic (Schaller, 1992).

THE COMPLEX STOMACH



https://quizlet.com/51528157/the-ruminant-abdomen-flash-cards/

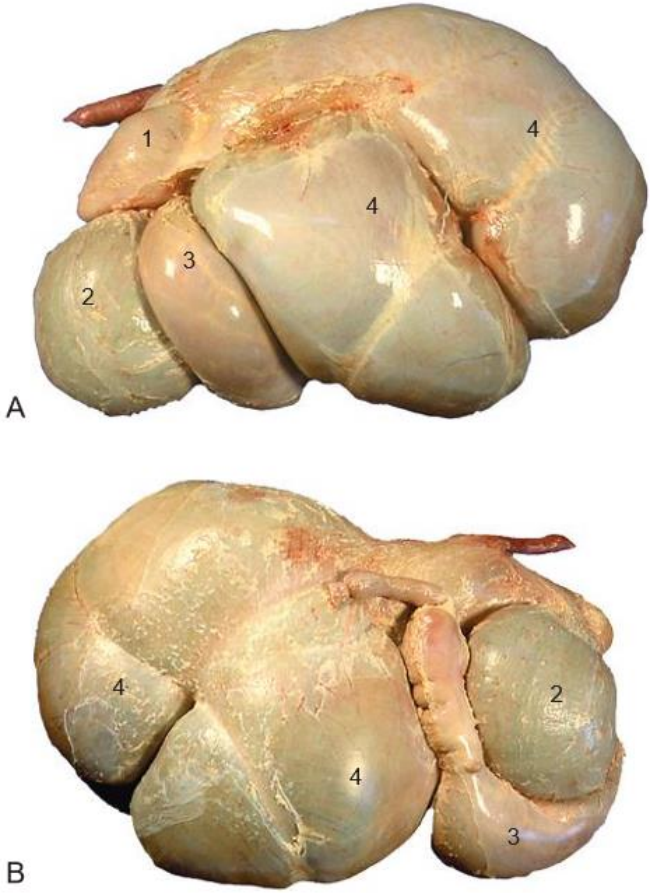
RUMEN:

EXTREMITAS CRANIALIS:

- **adjacent to the reticulum**

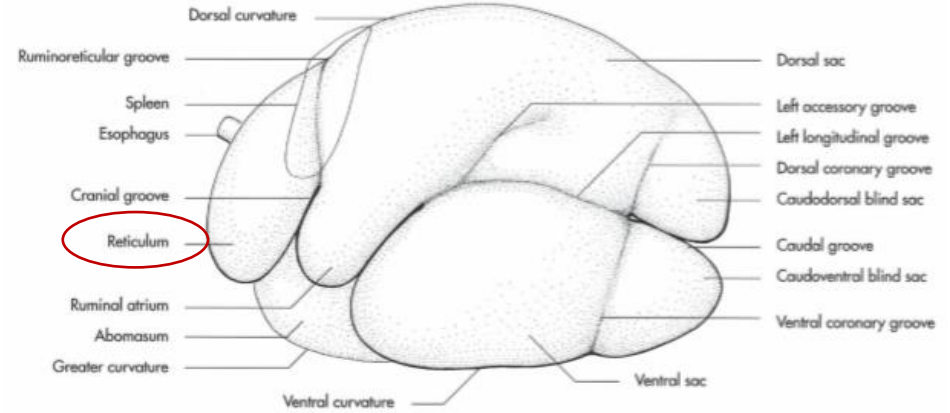
EXTREMITAS CAUDALIS:

- blind sacs

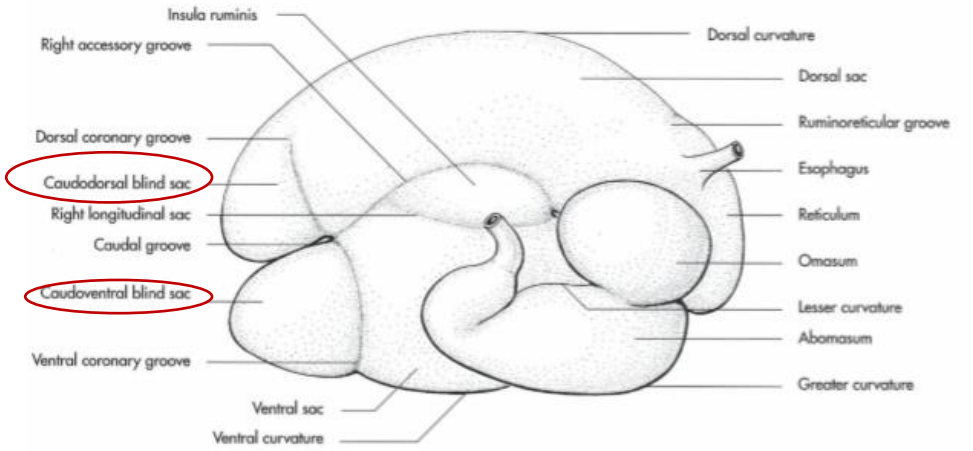


1. Reticulum
2. Omasum
3. Abomasum
4. Rumen

Note: A, Left side. **B,** Right side.



-65. Compartments of the stomach of the ox, left lateral aspect, schematic (Schaller, 1992).



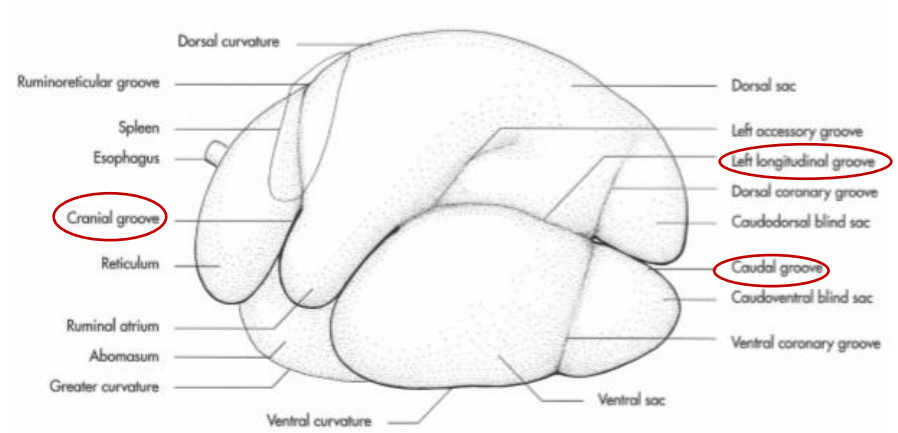
-66. Compartments of the stomach of the ox, right lateral aspect, schematic (Schaller, 1992).

THE COMPLEX STOMACH

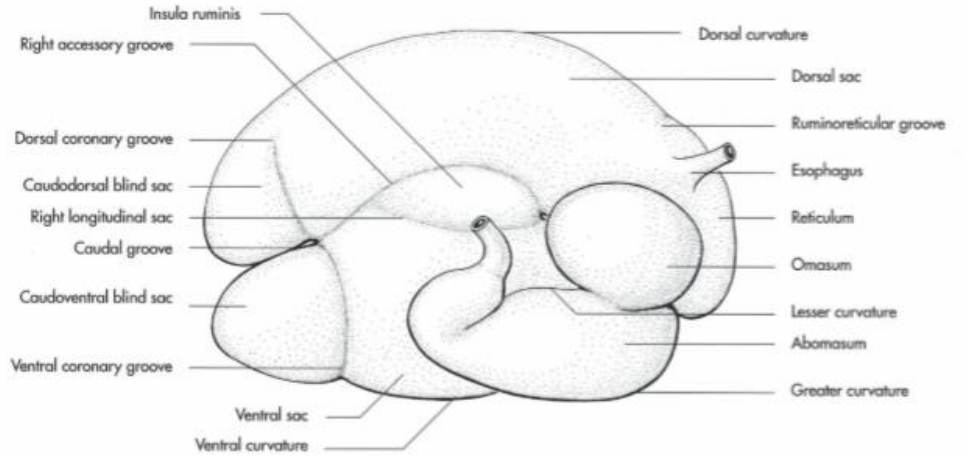
RUMEN:

SULCUS LONGITUDINALIS DEXTER ET SINISTER:

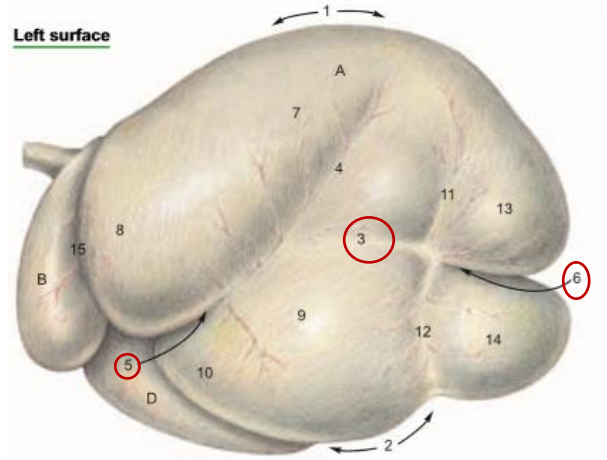
- **left and right longitudinal grooves**
- **on the parietal and visceral surface**
- **connected cranially and caudally by two transverse grooves (SULCUS CRANIALIS et CAUDALIS)**

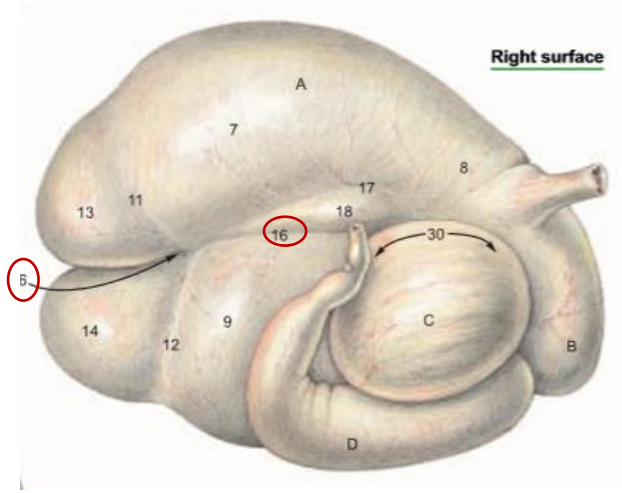


65. Compartments of the stomach of the ox, left lateral aspect, schematic (Schaller, 1992).



66. Compartments of the stomach of the ox, right lateral aspect, schematic (Schaller, 1992).





Legend:

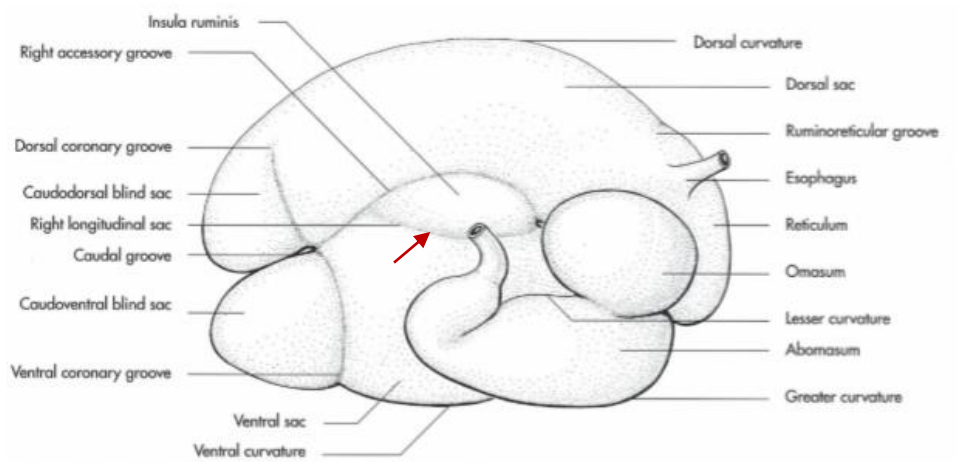
A	**Rumen**	11	Dorsal coronary groove
1	Dorsal curvature	12	Ventral coronary groove
2	Ventral curvature	13	Caudodorsal blind sac
3	Left longitudinal groove	14	Caudoventral blind sac
4	Left accessory groove	15	Ruminoreticular groove
5	Cranial groove	16	Right longitudinal groove
6	Caudal groove	17	Right accessory groove
7	Dorsal sac	18	Insula
8	Atrium	19	Intraruminal orifice
9	Ventral sac	20	Pillars
10	Recess of ventr. sac of rumen	21	Papillae

THE COMPLEX STOMACH

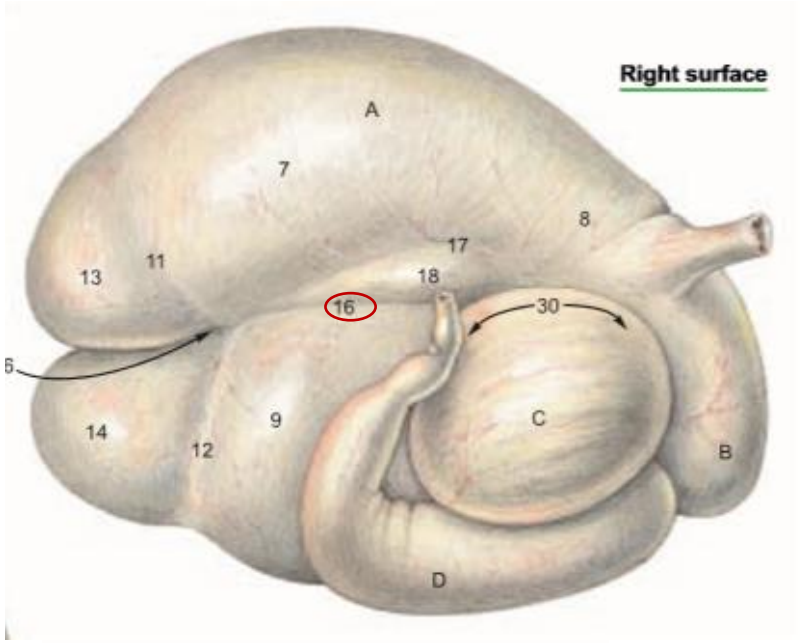
RUMEN:

SULCUS LONGITUDINALIS DEXTER:

- splits into two limbs – enclose the INSULA RUMINIS



66. Compartments of the stomach of the ox, right lateral aspect, schematic (Schaller, 1992).



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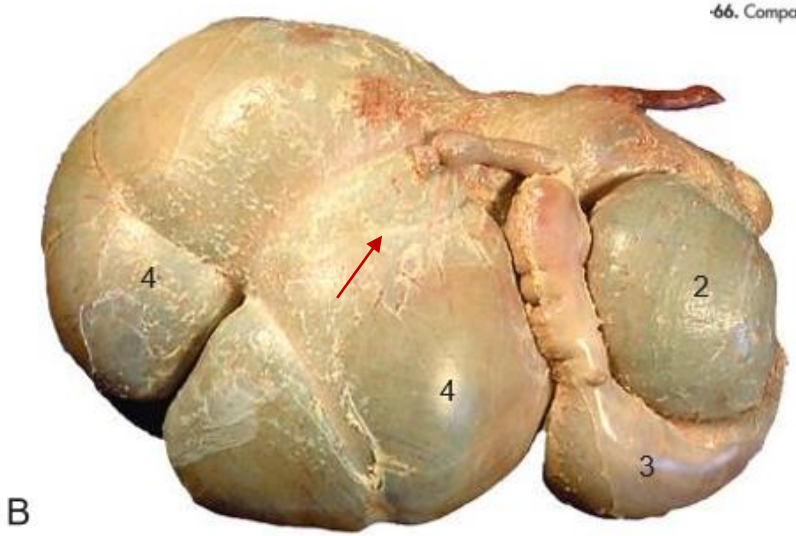
8	Atrium	19	Intraruminal orifice
9	Ventral sac	20	Pillars
10	Recess of ventr. sac of rumen	21	Papillae



1. Reticulum
2. Omasum
3. Abomasum
4. Rumen

Note: A, Left side. **B,** Right side.

THE COMPLEX STOMACH

RUMEN:

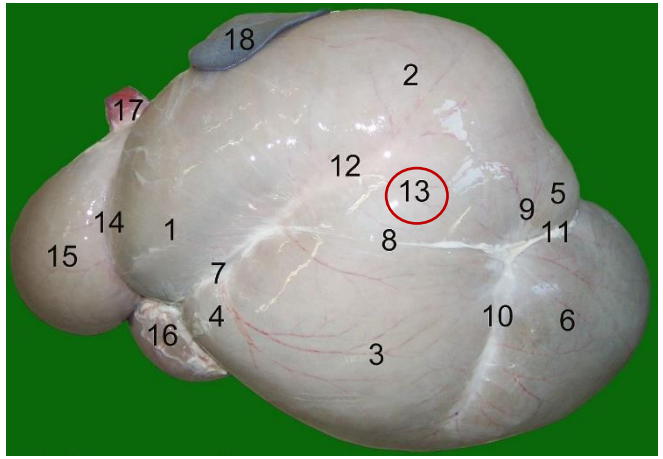
INSULA RUMINIS:

- **island of the rumen**
- **elliptical area**

enclosed by:

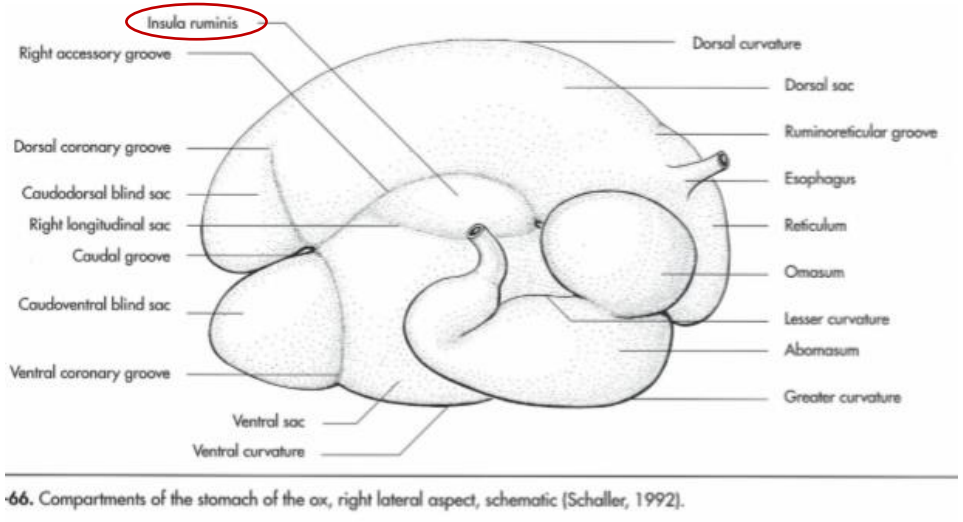
a. right longitudinal groove

b. right accessory grove

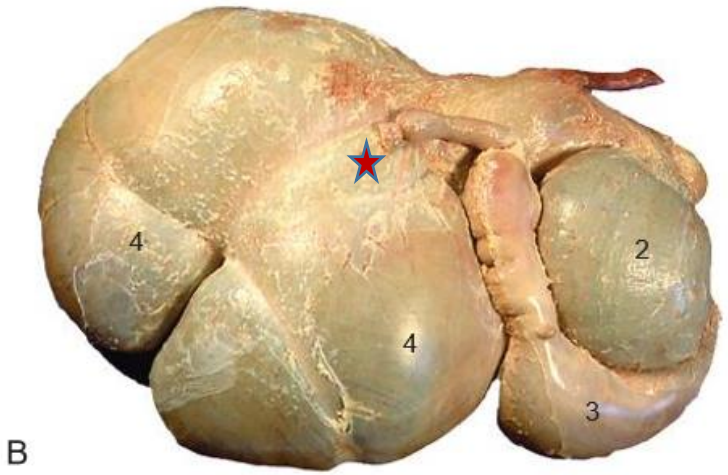


Rumen of a sheep from left. 1 Atrium ruminis, 2 Saccus dorsalis, 3 Saccus ventralis, 4 Recessus ruminis, 5 Saccus cecus caudodorsalis, 6 Saccus cecus caudoventralis, 7 Sulcus cranialis, 8 Sulcus longitudinalis dexter, 9 Sulcus coronarius dorsalis, 10 Sulcus coronarius ventralis, 11 Sulcus caudalis, 12 Sulcus accessorius sinister, 13 Insula ruminis, 14 Sulcus ruminoreticularis, 15 Reticulum, 16 Abomasum, 17 Oesophagus, 18 Spleen.

https://en.wikipedia.org/wiki/Rumen



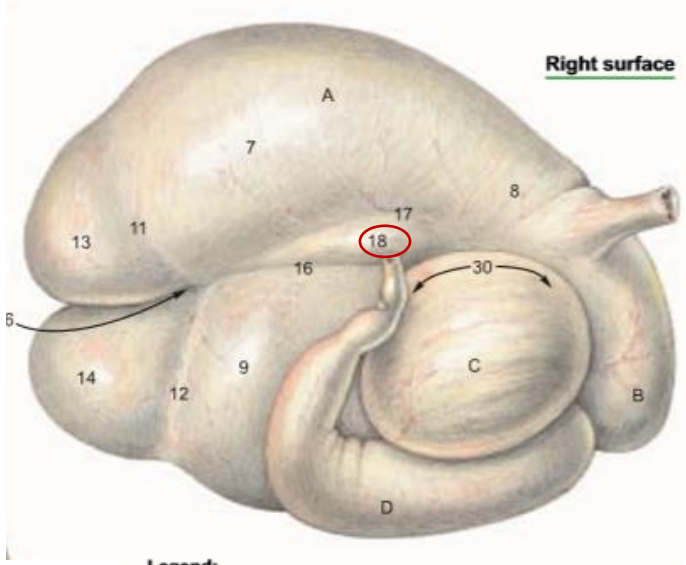
66. Compartments of the stomach of the ox, right lateral aspect, schematic (Schaller, 1992).



B

1. Reticulum
2. Omasum
3. Abomasum
4. Rumen

Note: A, Left side. **B,** Right side.



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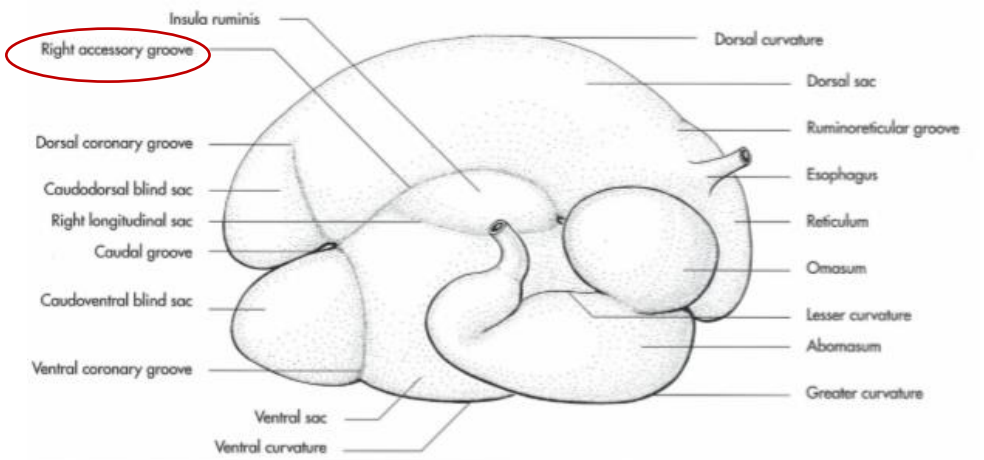
8	Atrium	19	Intraruminal orifice
9	Ventral sac	20	Pillars
10	Recess of ventr. sac of rumen	21	Papillae

THE COMPLEX STOMACH

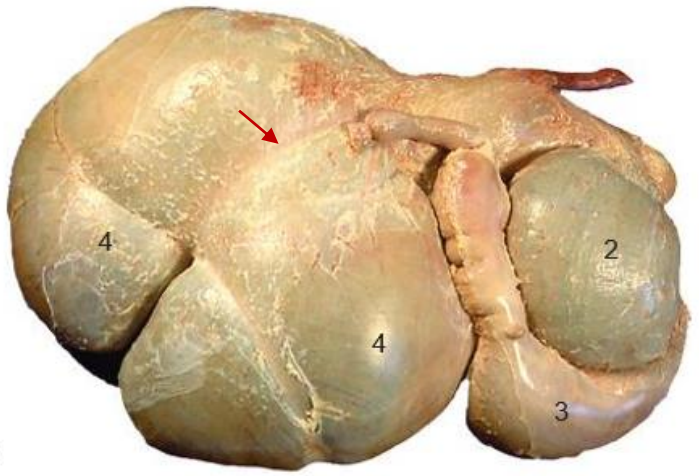
RUMEN:

SULCUS ACCESSORIUS DEXTER:

- **right accessory groove**
- **dorsal to the right longitudinal groove**



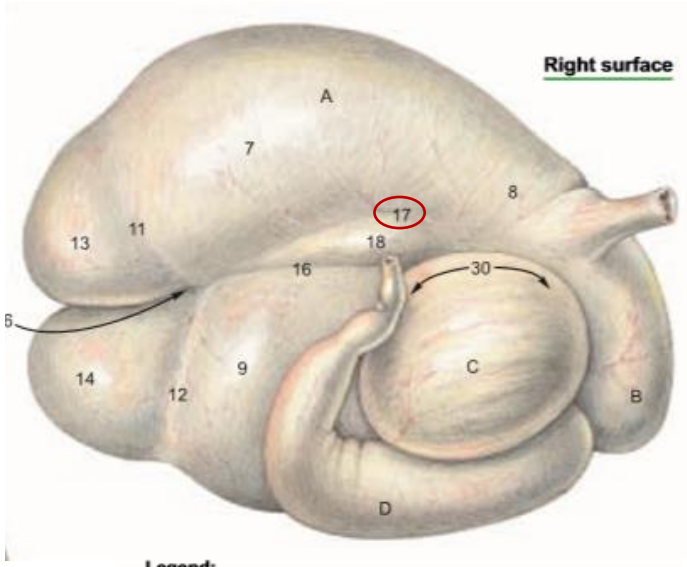
66. Compartments of the stomach of the ox, right lateral aspect, schematic (Schaller, 1992).



B

1. Reticulum
2. Omasum
3. Abomasum
4. Rumen

Note: A, Left side. **B,** Right side.



Legend:

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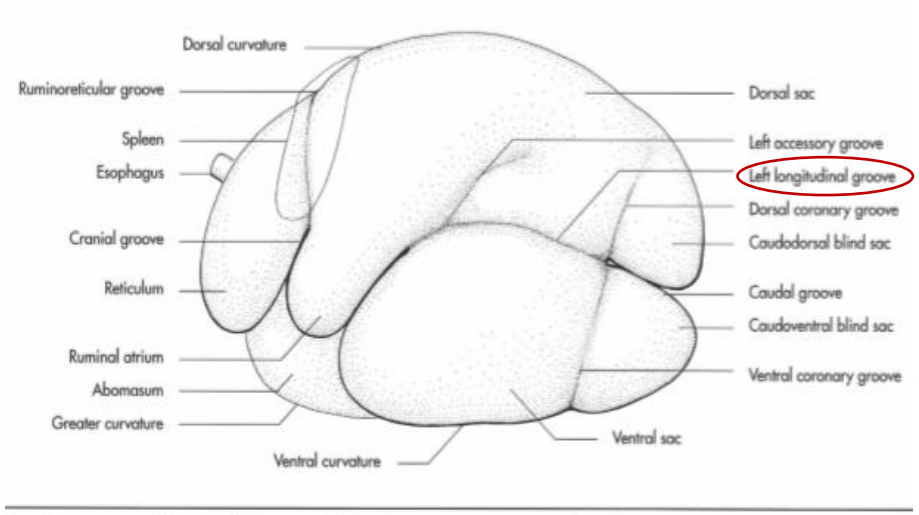
5 Cranial groove	16 Right longitudinal groove
6 Caudal groove	17 Right accessory groove
7 Dorsal sac	18 Insula
8 Atrium	19 Intraruminal orifice
9 Ventral sac	20 Pillars
10 Recess of ventr. sac of rumen	21 Papillae

THE COMPLEX STOMACH

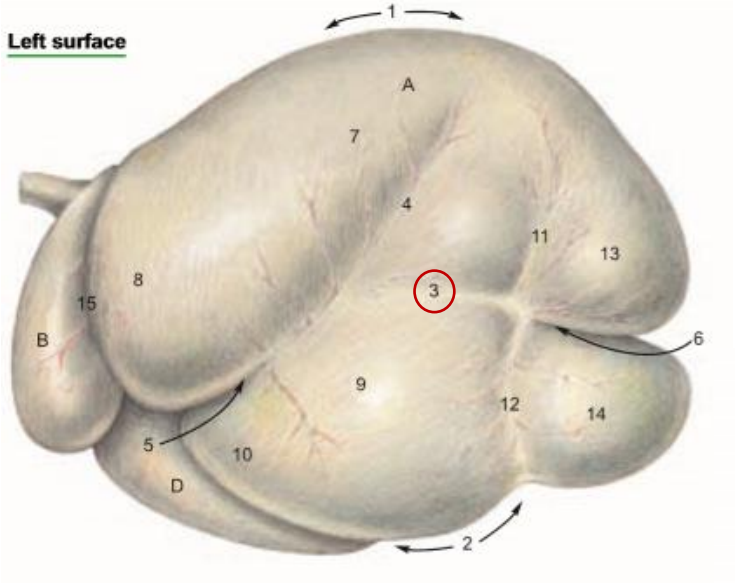
RUMEN:

SULCUS LONGITUDINALIS SINISTER:

- **begins at the cranial groove**
- **passing at first dorsocaudally**
- **extends along the left side of the rumen to the cudal groove**



-65. Compartments of the stomach of the ox, left lateral aspect, schematic (Schaller, 1992).



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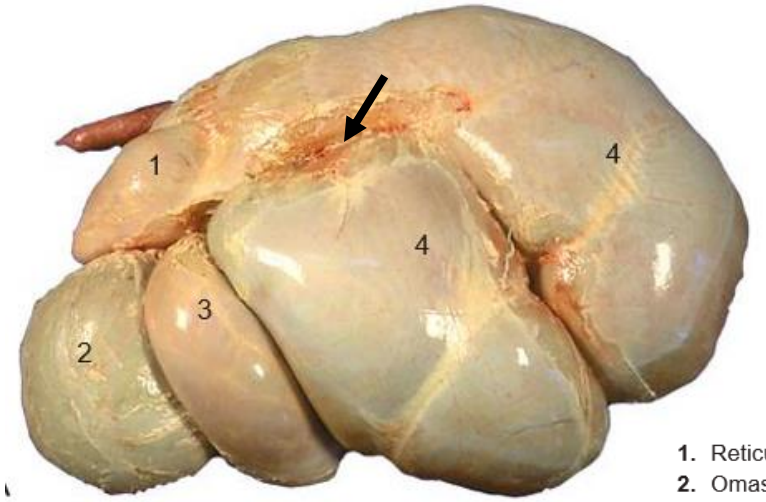


1. Reticulum
2. Omasum
3. Abomasum
4. Rumen

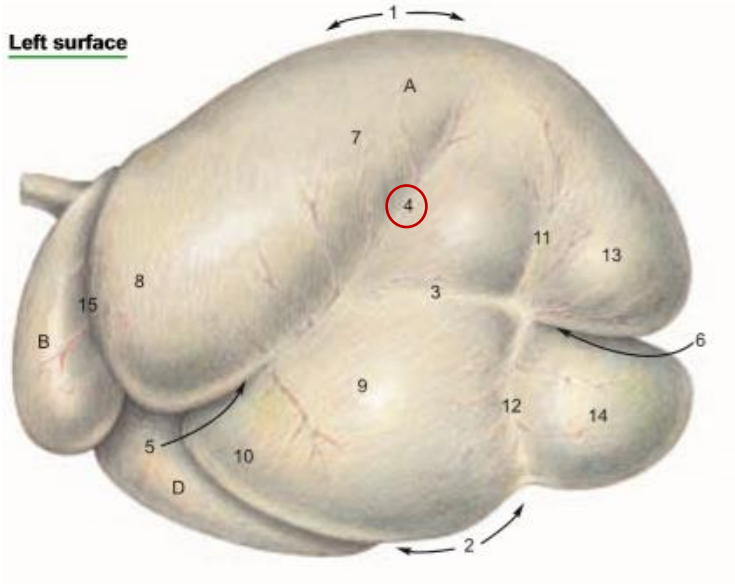
Note: A, Left side. **B,** Right side.

THE COMPLEX STOMACH

RUMEN:

SULCUS ACCESSORIUS SINISTER:

- **left accessory groove**
- **dorsal branch of the left longitudinal groove**



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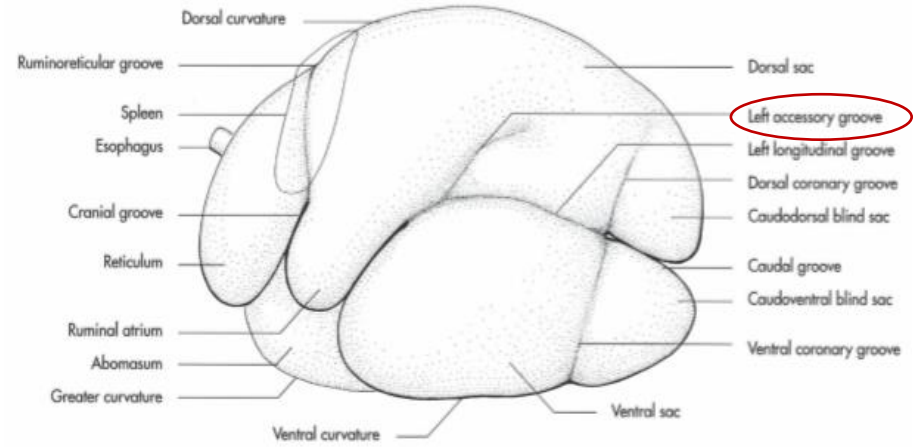

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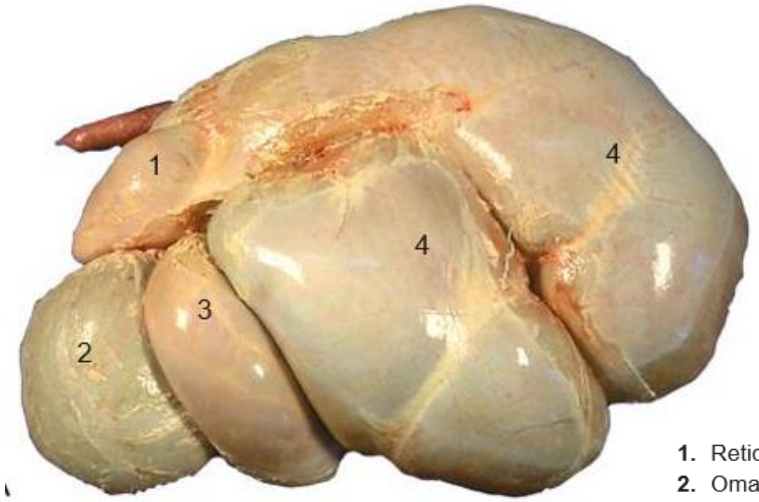


1. Reticulum
2. Omasum
3. Abomasum
4. Rumen

Note: A, Left side. **B,** Right side.

THE COMPLEX STOMACH

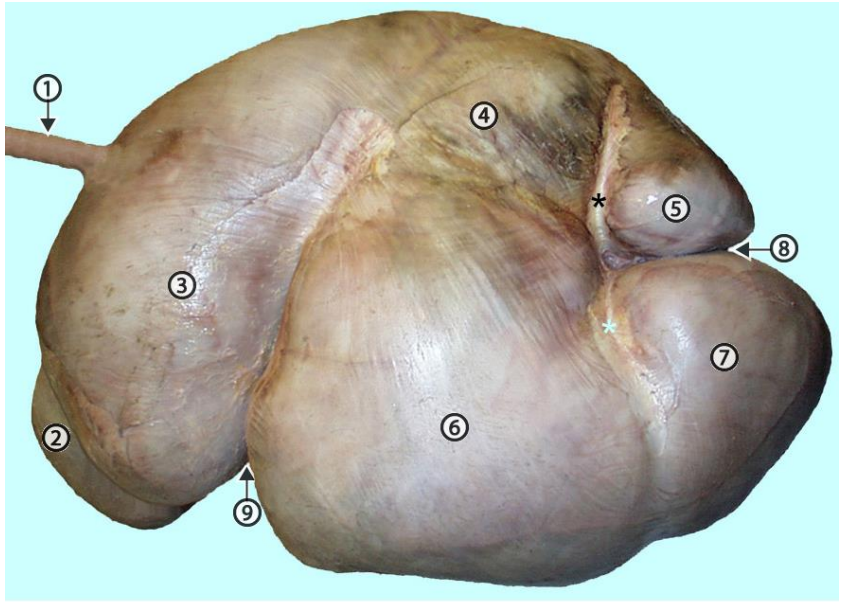
RUMEN:

SULCUS CRANIALIS:

- **cranial groove between atrium and recessus ruminis**

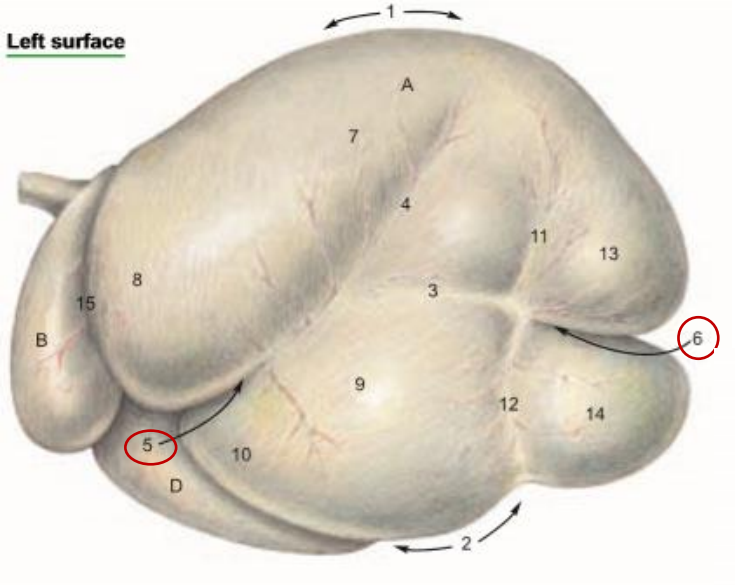
SULCUS CAUDALIS:

- separates the saccus caecus caudodorsalis et caudoventralis



Left/caudal view of inflated bovine reticulorumen (inflation may distort the relative proportions of an organ). 1, esophagus; 2, reticulum; 3, cranial sac, a.k.a., atrium ruminis; 4, dorsal sac; 5, caudodorsal blind sac; 6, ventral sac; 7, caudoventral blind sac; 8, caudal groove; 9, cranial groove; black asterisk, left dorsal coronary groove; blue asterisk, left ventral coronary groove.

http://vanat.cvm.umn.edu/ungDissect/Lab14/Img14-1.html



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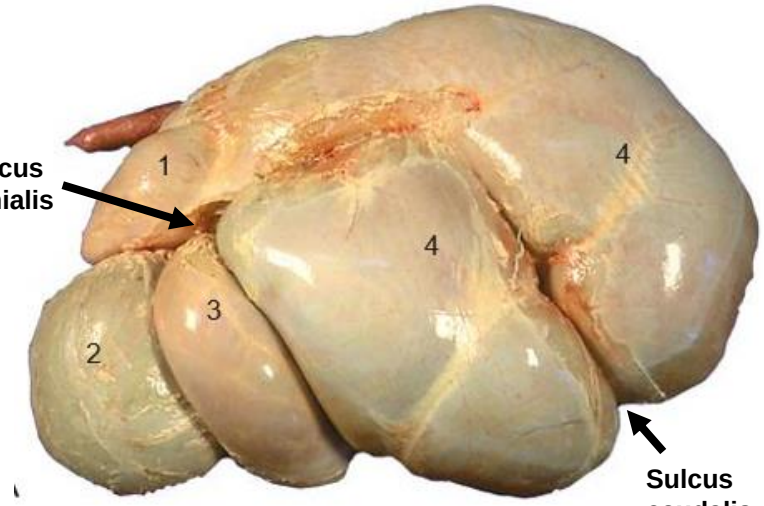
10	Recess of ventr. sac of rumen	21	Papillae



1. Reticulum
2. Omasum
3. Abomasum
4. Rumen

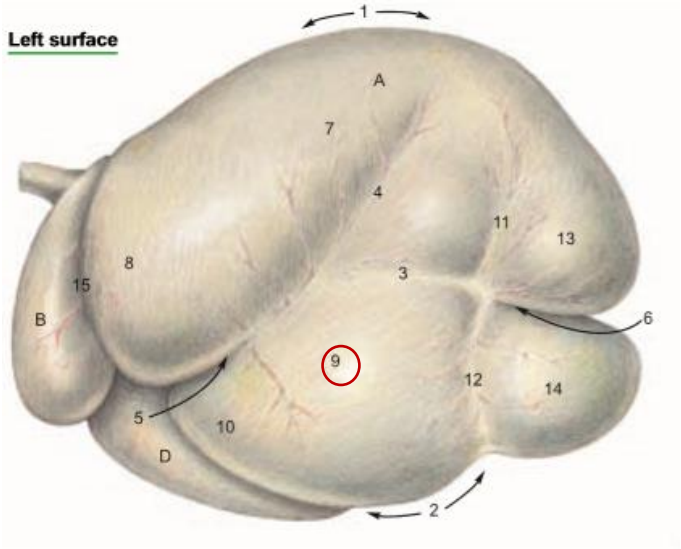
Note: A, Left side. **B,** Right side.

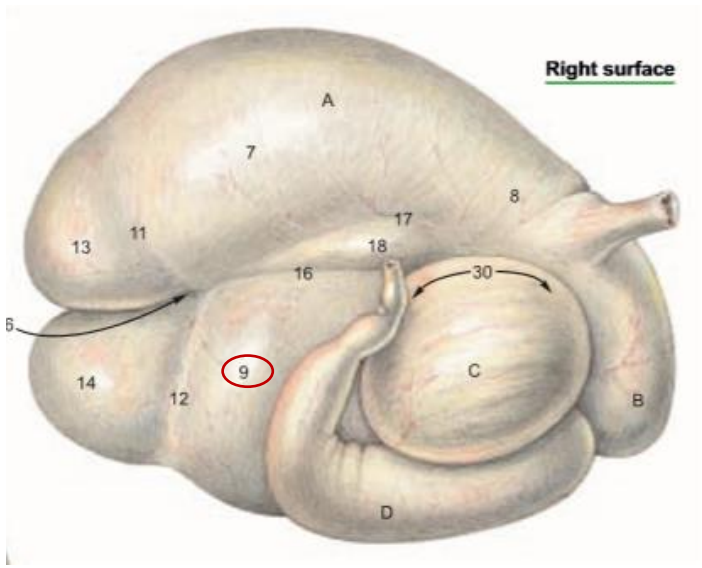
THE COMPLEX STOMACH

RUMEN:

SACCUS VENTRALIS:

- **extends offen into the right half of the abdominal cavity**
- **ventral to the longitudinal grooves**
- **papilla ruminis are large**





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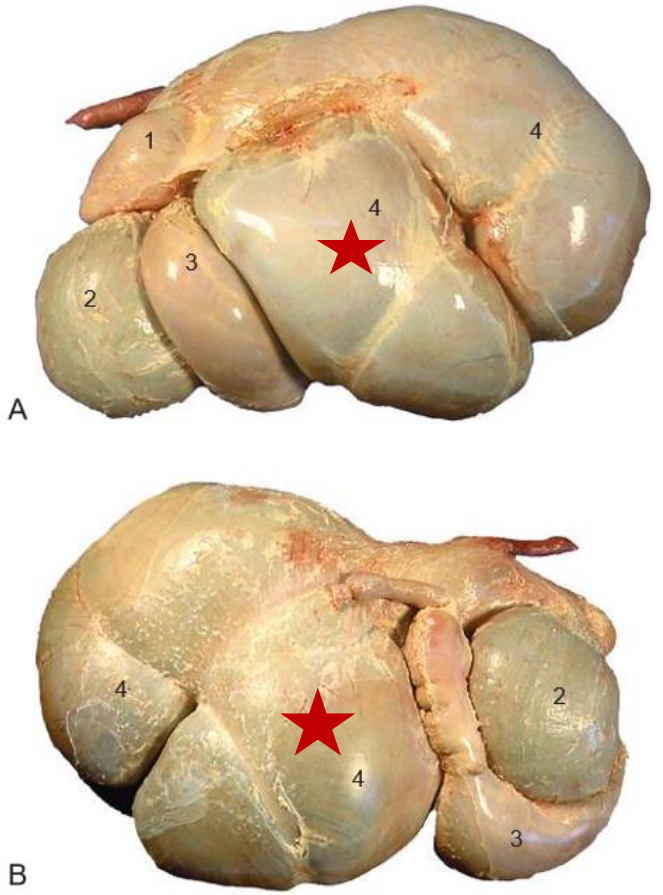


1. Reticulum
2. Omasum
3. Abomasum
4. Rumen

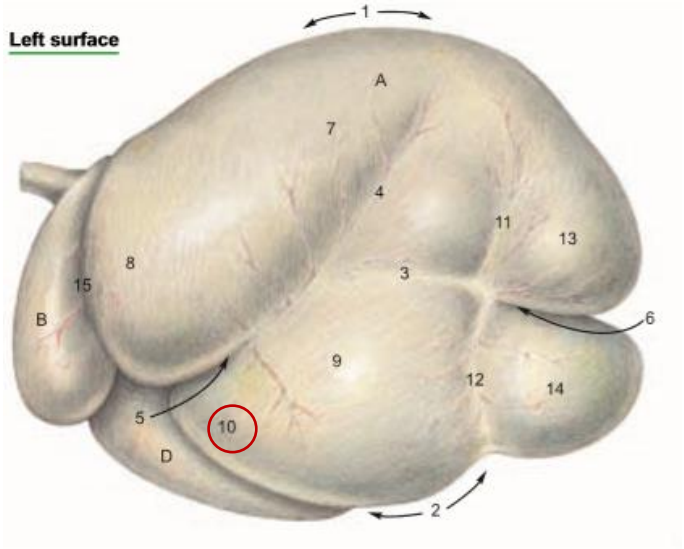
Note: A, Left side. **B,** Right side.

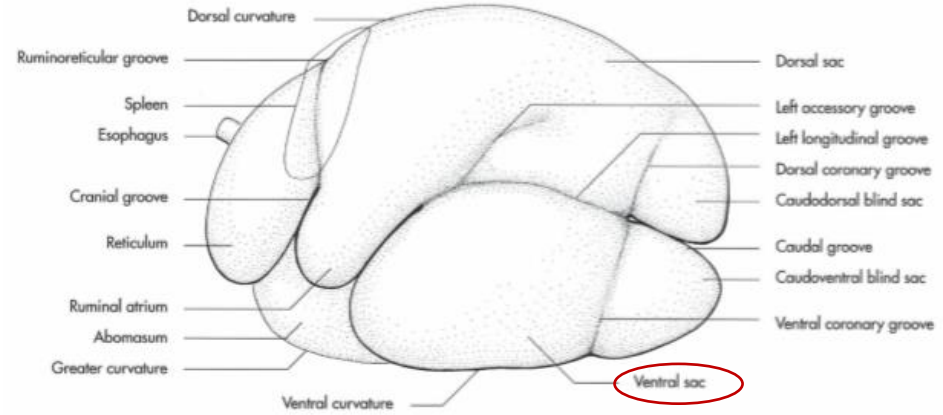
THE COMPLEX STOMACH

RUMEN:

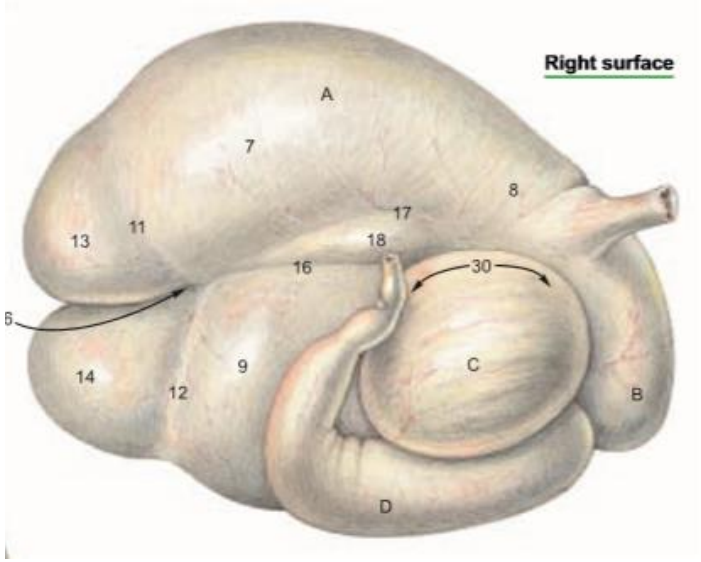
RECESSUS RUMINIS:

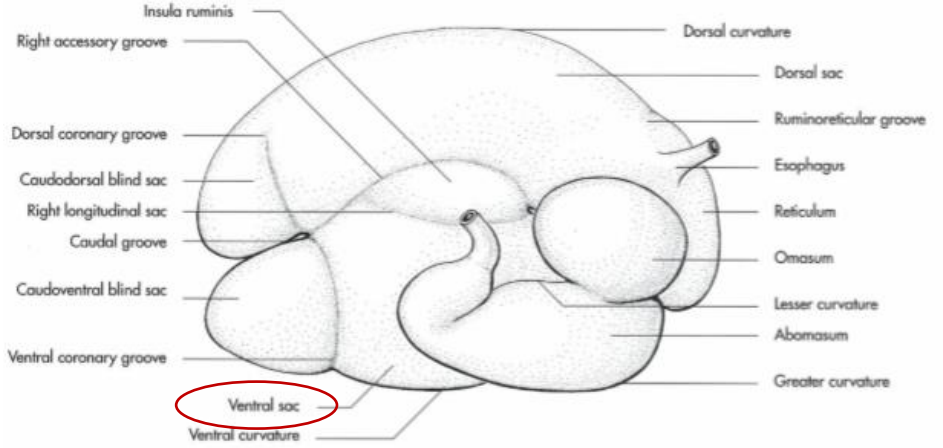
- cranial end of the ventral sac





65. Compartments of the stomach of the ox, left lateral aspect, schematic (Schaller, 1992).





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Legend:

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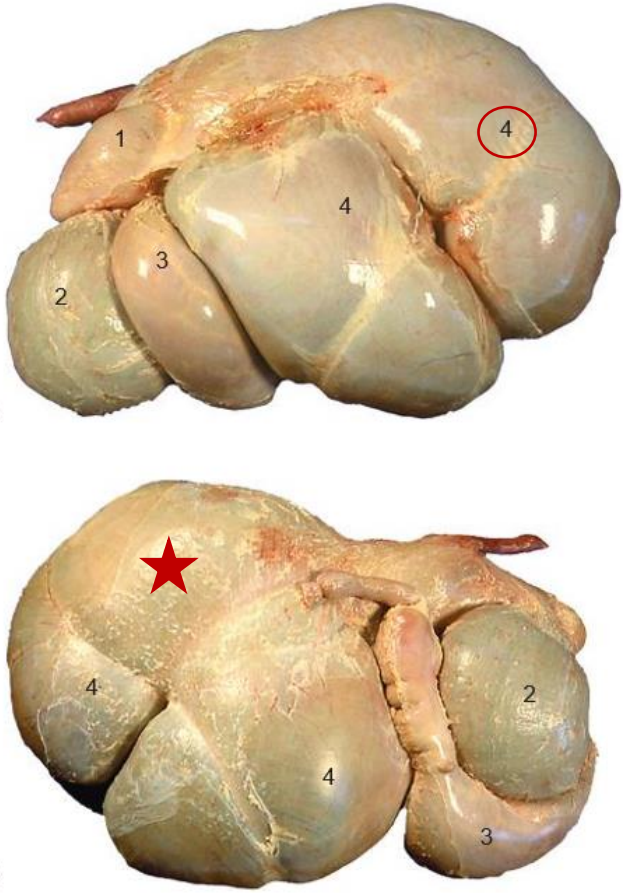
7 Dorsal sac	18 Insula
8 Atrium	19 Intraruminal orifice
9 Ventral sac	20 Pillars
10 Recess of ventr. sac of rumen	21 Papillae

THE COMPLEX STOMACH

RUMEN:

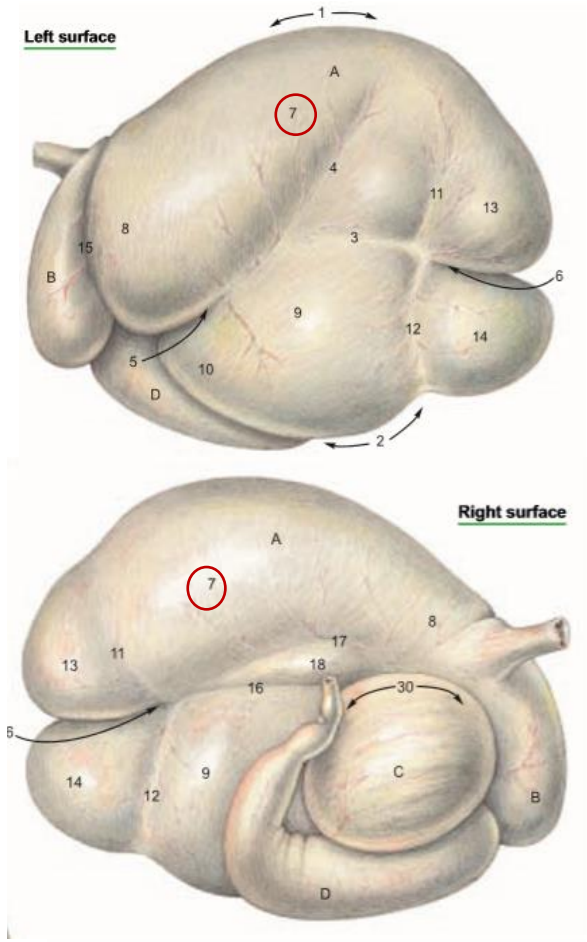
SACCUS DORSALIS:

- **lies to the left of the median plane**
- **dorsal to the longitudinal grooves**

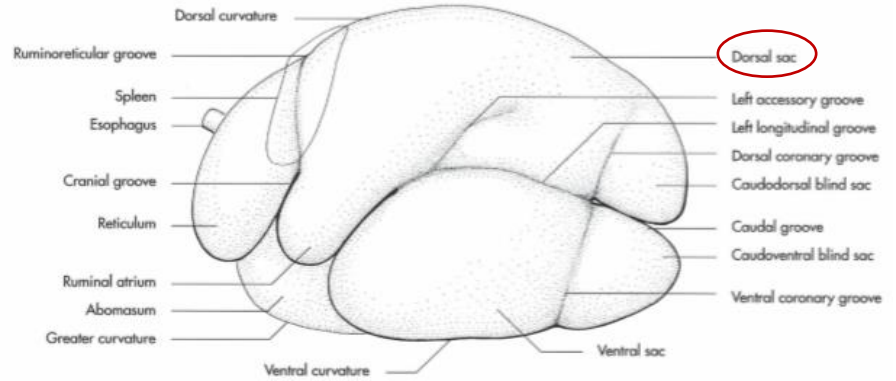


1. Reticulum
2. Omasum
3. Abomasum
4. Rumen

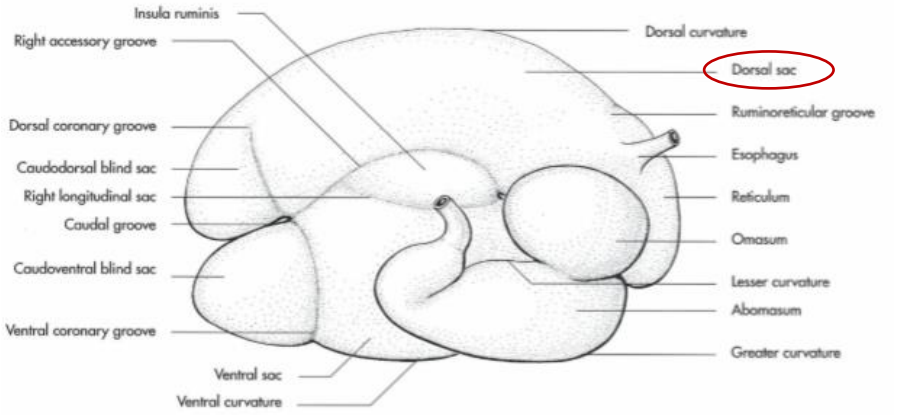
Note: **A,** Left side. **B,** Right side.



A	**Rumen**	11	Dorsal coronary groove
1	Dorsal curvature	12	Ventral coronary groove
2	Ventral curvature	13	Caudodorsal blind sac
3	Left longitudinal groove	14	Caudoventral blind sac
4	Left accessory groove	15	Ruminoreticular groove
5	Cranial groove	16	Right longitudinal groove
6	Caudal groove	17	Right accessory groove
7	Dorsal sac	18	Insula
8	Atrium	19	Intraruminal orifice
9	Ventral sac	20	Pillars
10	Recess of ventr. sac of rumen	21	Papillae



65. Compartments of the stomach of the ox, left lateral aspect, schematic (Schaller, 1992).



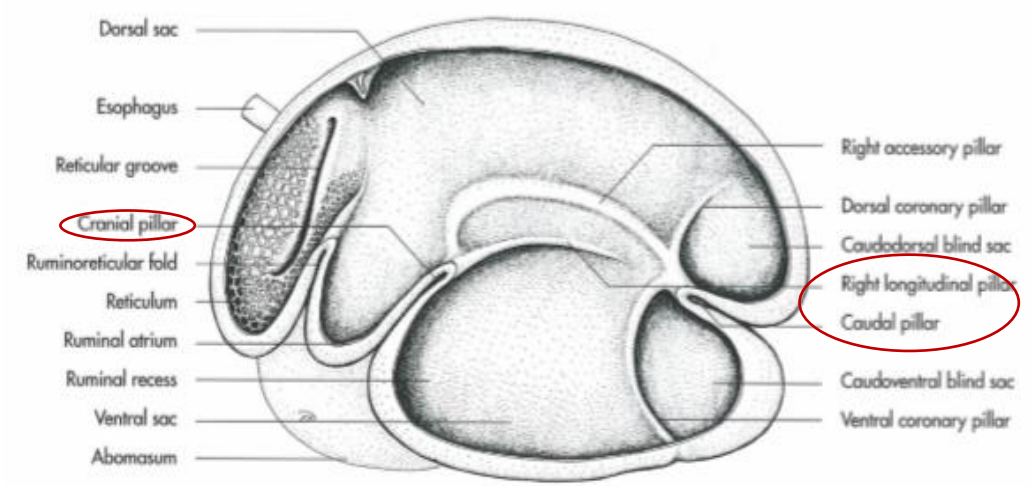
66. Compartments of the stomach of the ox, right lateral aspect, schematic (Schaller, 1992).

THE COMPLEX STOMACH

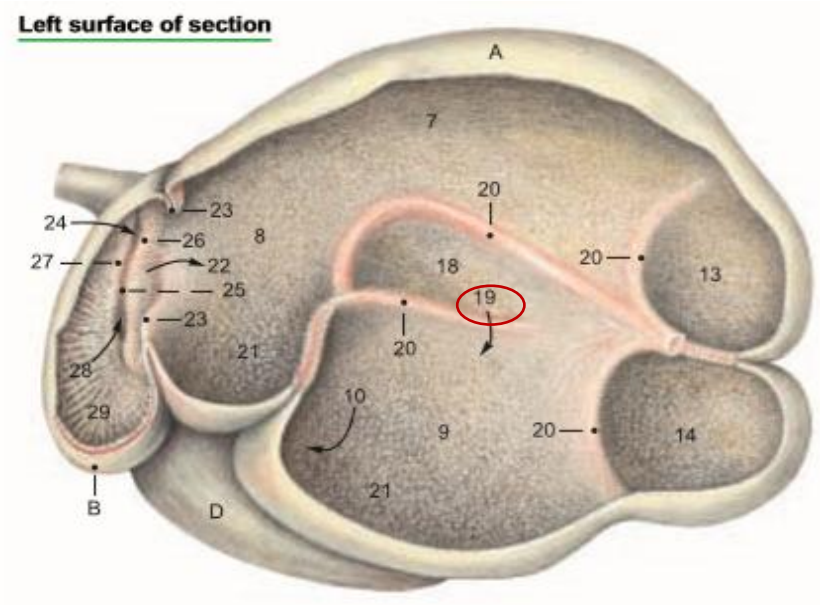
RUMEN:

OSTIUM INTRARUMINALE:

- **opening between saccus dorsalis et ventralis**
- **bounded by the cranial, caudal and longitudinal pillars**



Interior of the rumen of the ox, left aspect, schematic (Schaller, 1992).



Legend:

A Rumen
1 Dorsal curvature
2 Ventral curvature
3 Left longitudinal groove
4 Left accessory groove
5 Cranial groove
6 Caudal groove
7 Dorsal sac
8 Atrium
9 Ventral sac
10 Recess of ventr. sac of rumen
11 Dorsal coronary groove
12 Ventral coronary groove
13 Caudodorsal blind sac
14 Caudoventral blind sac
15 Ruminoreticular groove
16 Right longitudinal groove
17 Right accessory groove
18 Insula
19 Intraruminal orifice
20 Pillars
21 Papillae

Legend:

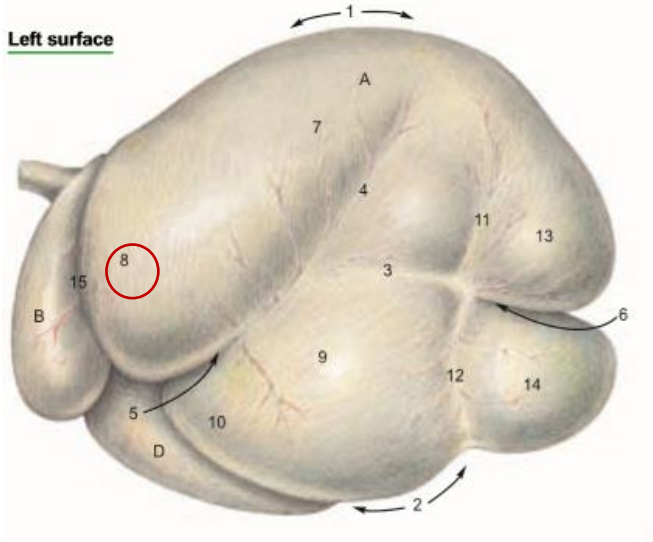
B Reticulum
22 Ruminoreticular orifice
23 Ruminoreticular fold
24 Cardia
25 Reticular groove
26 Right lip
27 Left lip
28 Reticulo-omasal orifice
29 Reticular crests and cells

THE COMPLEX STOMACH

RUMEN:

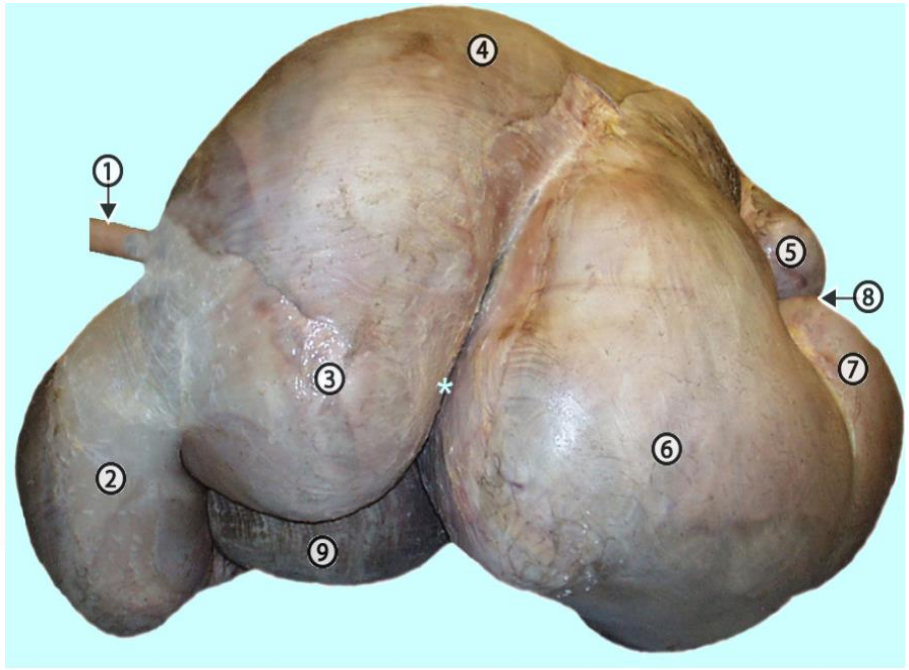
SACCUS CRANIALIS (ATRIUM RUMINIS):

- **lies between reticulum and saccus ventralis**
- **morphologicaly and functionally distinct from the dorsal sac**



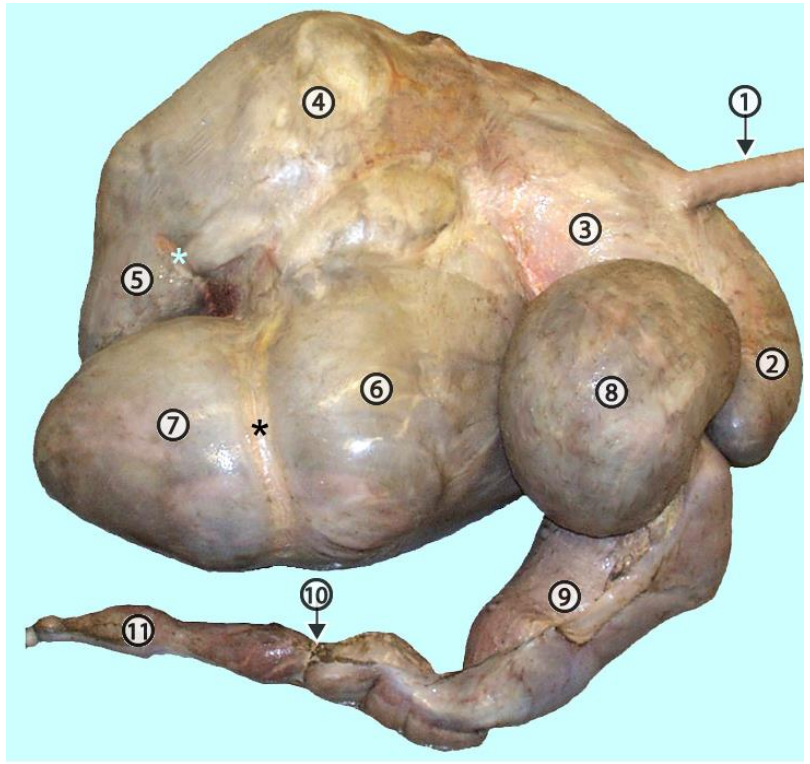
Legend:

A Rumen	11 Dorsal coronary groove
1 Dorsal curvature	12 Ventral coronary groove
2 Ventral curvature	13 Caudodorsal blind sac
3 Left longitudinal groove	14 Caudoventral blind sac
4 Left accessory groove	15 Ruminoreticular groove
5 Cranial groove	16 Right longitudinal groove
6 Caudal groove	17 Right accessory groove
7 Dorsal sac	18 Insula
8 Atrium	19 Intraruminal orifice
9 Ventral sac	20 Pillars
10 Recess of ventr. sac of rumen	21 Papillae



Left/cranial view of inflated bovine reticulorumen (inflation may distort the relative proportions of an organ). 1, esophagus; 2, reticulum; 3, cranial sac, a.k.a., atrium ruminis; 4, dorsal sac; 5, caudodorsal blind sac; 6, ventral sac; 7, caudoventral blind sac; 8, caudal groove; 9, abomasum; blue asterisk, cranial groove.

http://vanat.cvm.umn.edu/ungDissect/Lab14/Img14-2.html



Right side of inflated bovine stomach. 1, esophagus; 2, reticulum; 3, cranial sac, a.k.a., atrium ruminis; 4, dorsal sac; 5, caudodorsal blind sac; blue asterisk, right dorsal coronary groove; 6, ventral sac; 7, caudoventral blind sac; black asterisk, right ventral coronary groove; 8, omasum; 9, abomasum; 10, pyloris; 11, descending duodenum.

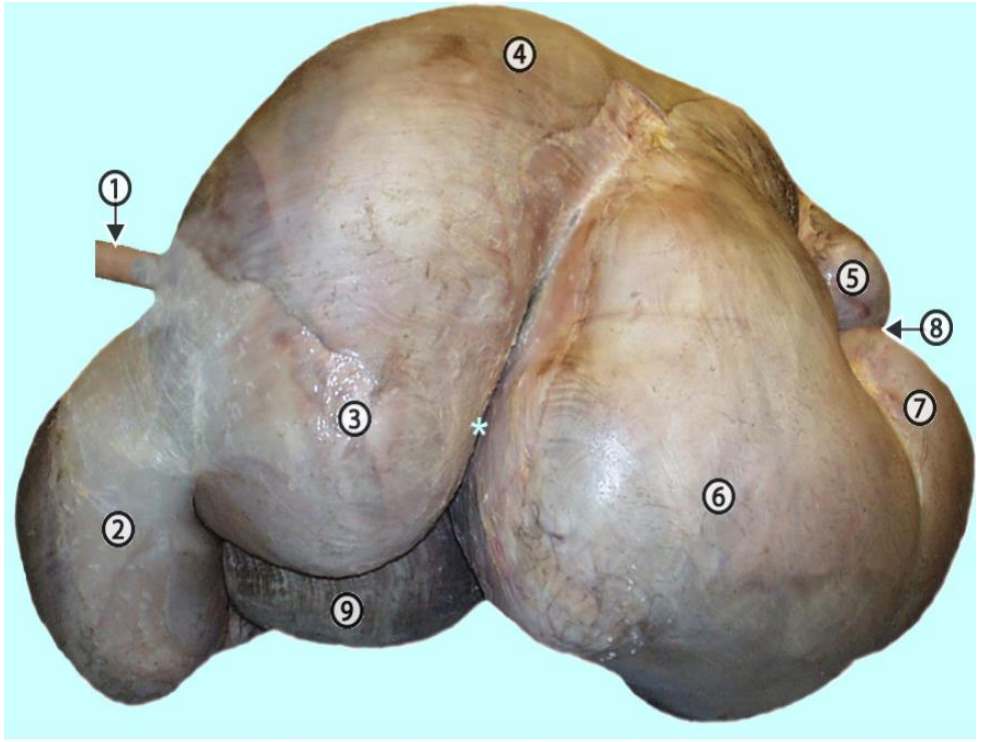
http://vanat.cvm.umn.edu/ungDissect/Lab14/Img14-3.html

THE COMPLEX STOMACH

RUMEN:

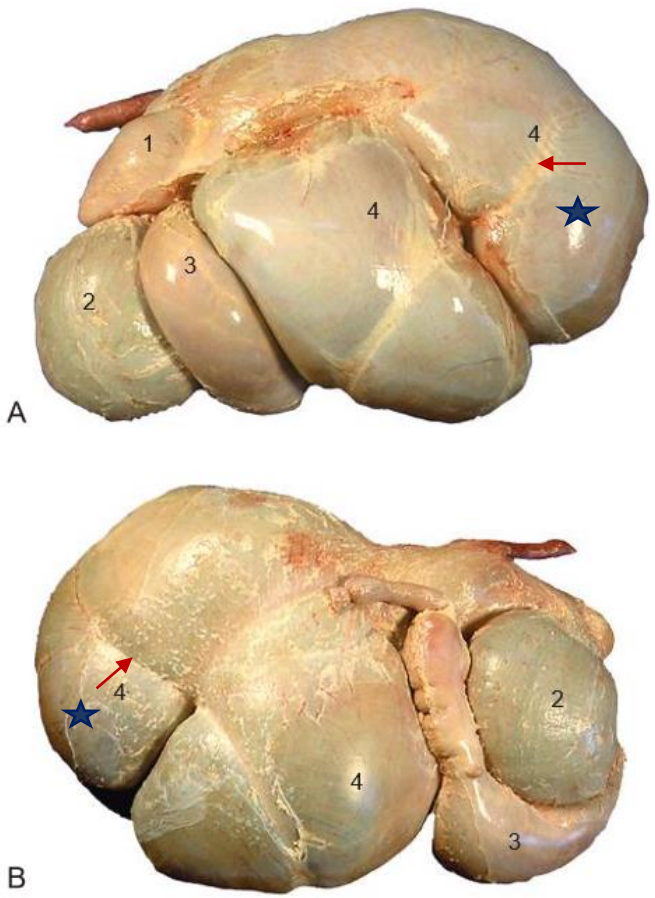
SULCUS CORONARIUS DORSALIS:

- **dorsal coronary groove**
- **limits the caudodorsal blind sac (saccus caecus caudodorsalis)**



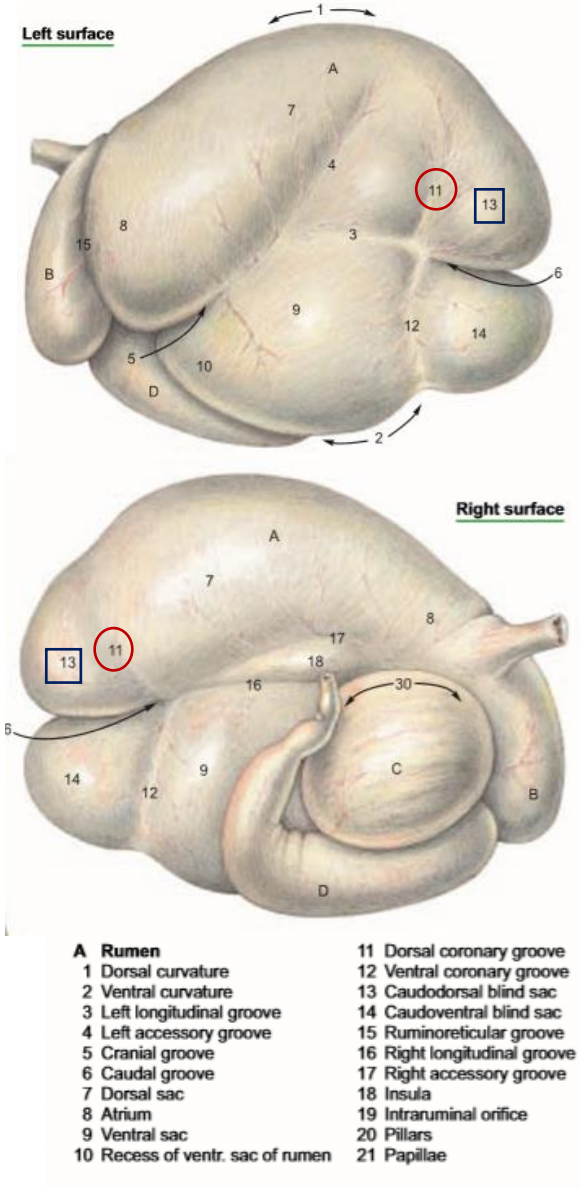
Left/cranial view of inflated bovine reticulorumen (inflation may distort the relative proportions of an organ). 1, esophagus; 2, reticulum; 3, cranial sac, a.k.a., atrium ruminis; 4, dorsal sac; 5, caudodorsal blind sac; 6, ventral sac; 7, caudoventral blind sac; 8, caudal groove; 9, abomasum; blue asterisk, cranial groove.

http://vanat.cvm.umn.edu/ungDissect/Lab14/Img14-2.html



1. Reticulum
2. Omasum
3. Abomasum
4. Rumen

Note: A, Left side. **B,** Right side.



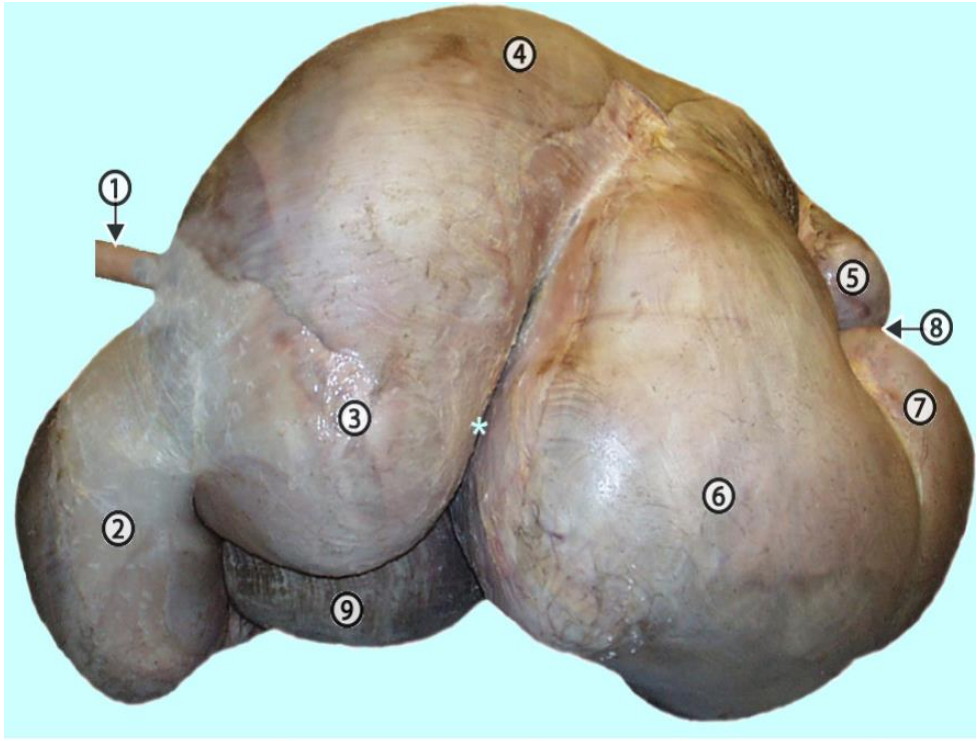
A Rumen
1 Dorsal curvature
2 Ventral curvature
3 Left longitudinal groove
4 Left accessory groove
5 Cranial groove
6 Caudal groove
7 Dorsal sac
8 Atrium
9 Ventral sac
10 Recess of ventr. sac of rumen
11 Dorsal coronary groove
12 Ventral coronary groove
13 Caudodorsal blind sac
14 Caudoventral blind sac
15 Ruminoreticular groove
16 Right longitudinal groove
17 Right accessory groove
18 Insula
19 Intraruminal orifice
20 Pillars
21 Papillae

THE COMPLEX STOMACH

RUMEN:

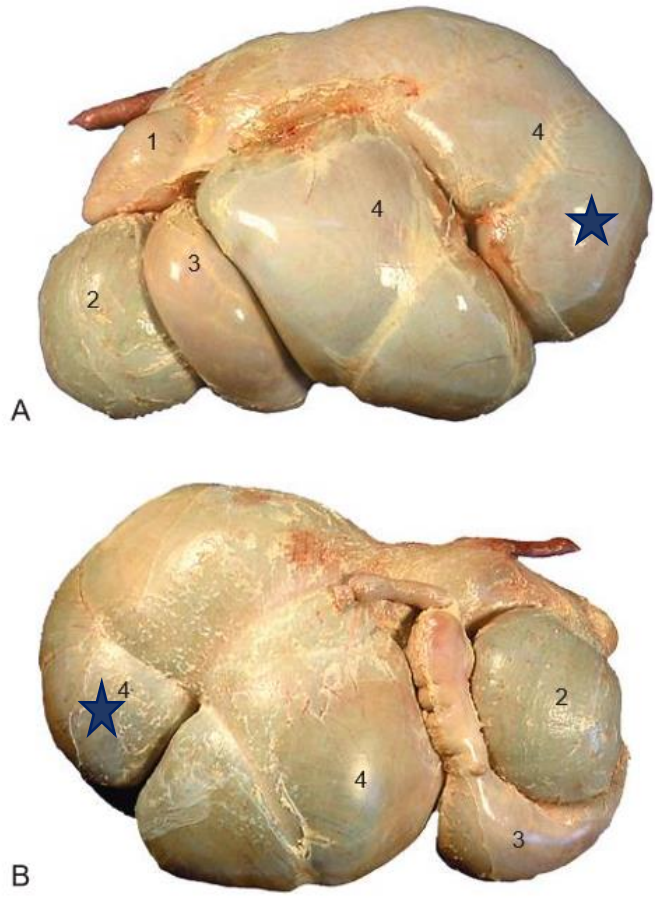
SACCUS CAECUS CAUDODORSALIS:

- **caudodorsal blind sac**



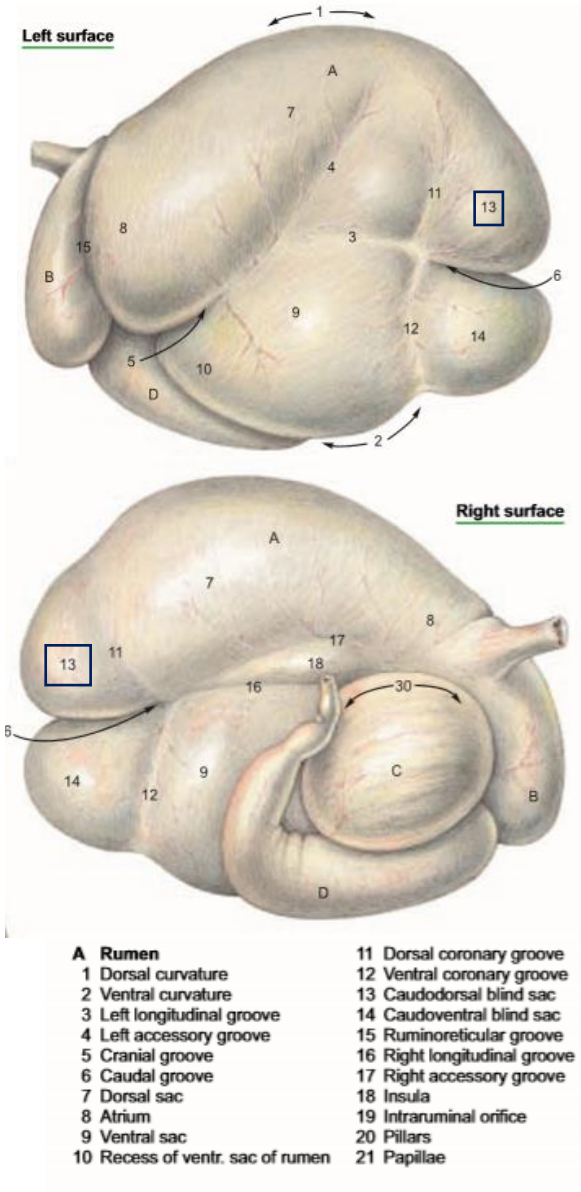
Left/cranial view of inflated bovine reticulorumen (inflation may distort the relative proportions of an organ). 1, esophagus; 2, reticulum; 3, cranial sac, a.k.a., atrium ruminis; 4, dorsal sac; 5, caudodorsal blind sac; 6, ventral sac; 7, caudoventral blind sac; 8, caudal groove; 9, abomasum; blue asterisk, cranial groove.

http://vanat.cvm.umn.edu/ungDissect/Lab14/Img14-2.html



1. Reticulum
2. Omasum
3. Abomasum
4. Rumen

Note: A, Left side. **B,** Right side.



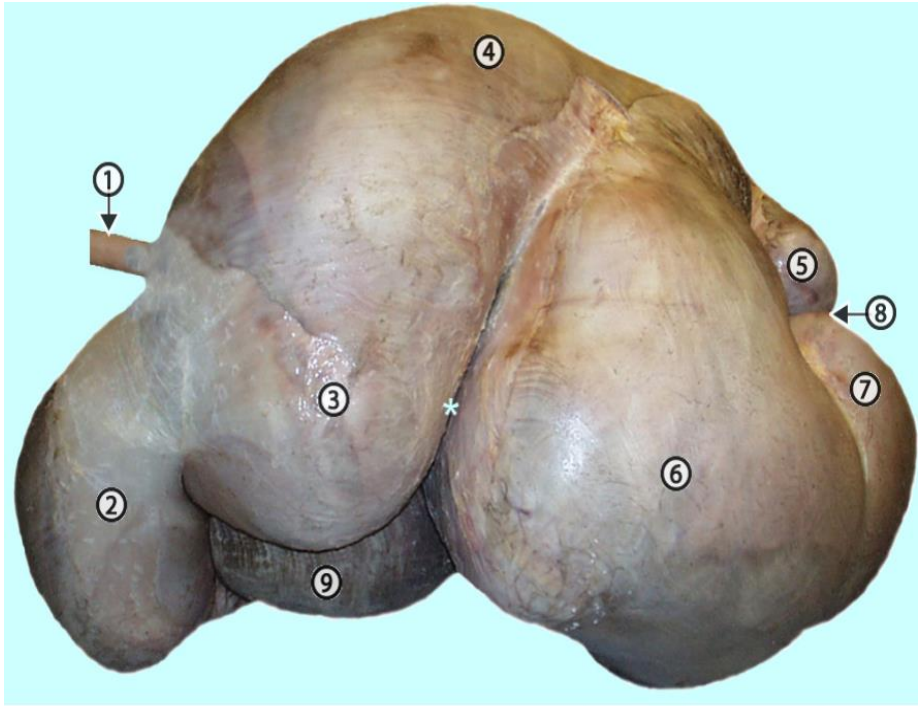
A Rumen
1 Dorsal curvature
2 Ventral curvature
3 Left longitudinal groove
4 Left accessory groove
5 Cranial groove
6 Caudal groove
7 Dorsal sac
8 Atrium
9 Ventral sac
10 Recess of ventr. sac of rumen
11 Dorsal coronary groove
12 Ventral coronary groove
13 Caudodorsal blind sac
14 Caudoventral blind sac
15 Ruminoreticular groove
16 Right longitudinal groove
17 Right accessory groove
18 Insula
19 Intraruminal orifice
20 Pillars
21 Papillae

THE COMPLEX STOMACH

RUMEN:

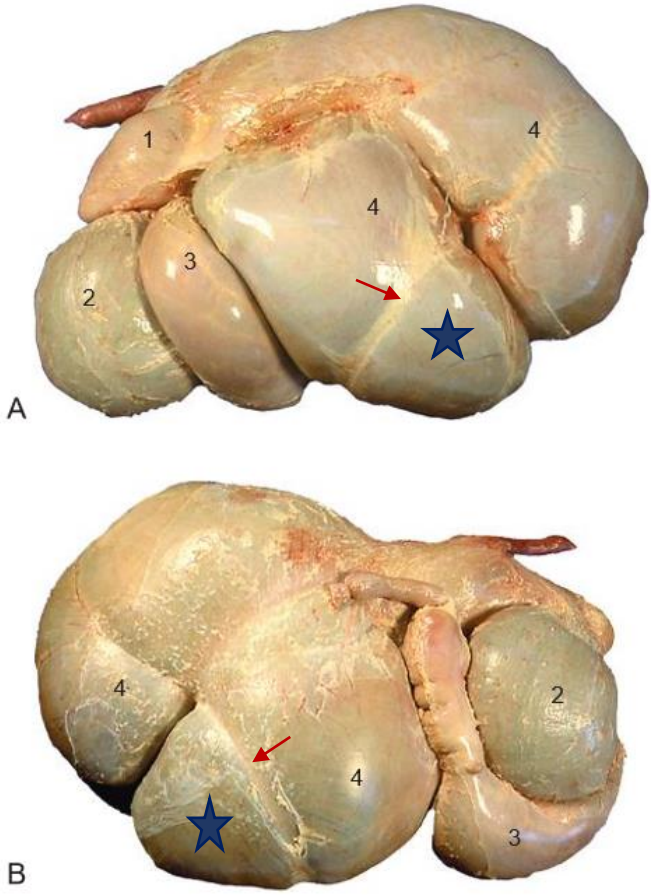
SULCUS CORONARIUS VENTRALIS:

- **ventral coronary groove**
- **limits the caudoventral blind sac (saccus caecus caudoventralis)**



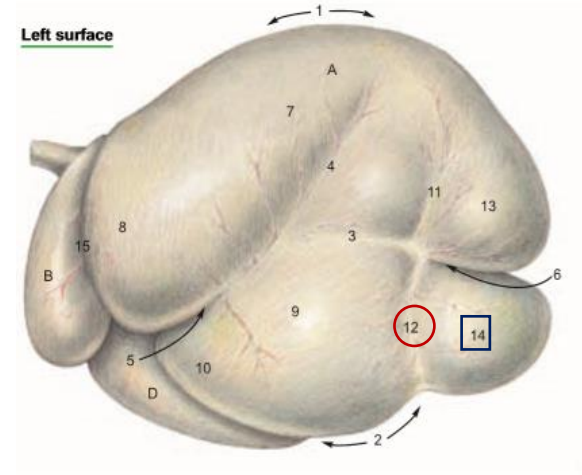
Left/cranial view of inflated bovine reticulorumen (inflation may distort the relative proportions of an organ). 1, esophagus; 2, reticulum; 3, cranial sac, a.k.a., atrium ruminis; 4, dorsal sac; 5, caudodorsal blind sac; 6, ventral sac; 7, caudoventral blind sac; 8, caudal groove; 9, abomasum; blue asterisk, cranial groove.

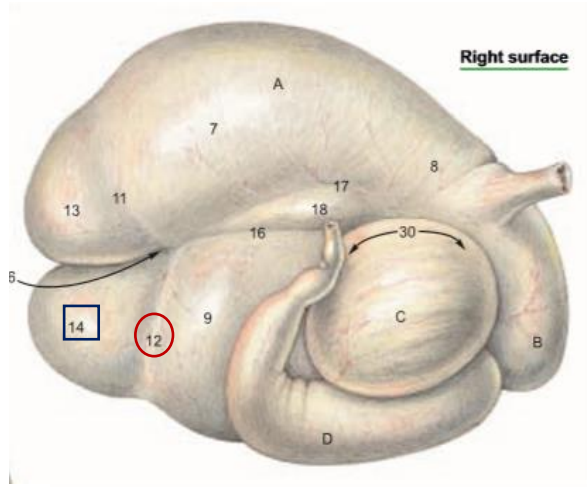
http://vanat.cvm.umn.edu/ungDissect/Lab14/Img14-2.html



1. Reticulum
2. Omasum
3. Abomasum
4. Rumen

Note: A, Left side. **B,** Right side.





A Rumen

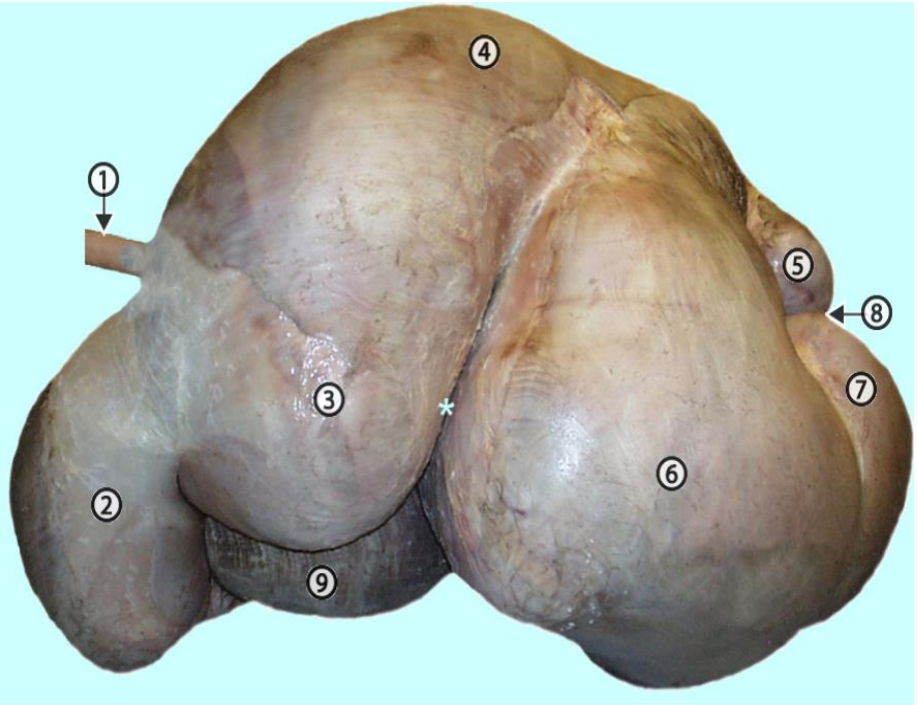
1 Dorsal curvature
2 Ventral curvature
3 Left longitudinal groove
4 Left accessory groove
5 Cranial groove
6 Caudal groove
7 Dorsal sac
8 Atrium
9 Ventral sac
10 Recess of ventr. sac of rumen
11 Dorsal coronary groove
12 Ventral coronary groove
13 Caudodorsal blind sac
14 Caudoventral blind sac
15 Ruminoreticular groove
16 Right longitudinal groove
17 Right accessory groove
18 Insula
19 Intraruminal orifice
20 Pillars
21 Papillae

THE COMPLEX STOMACH

RUMEN:

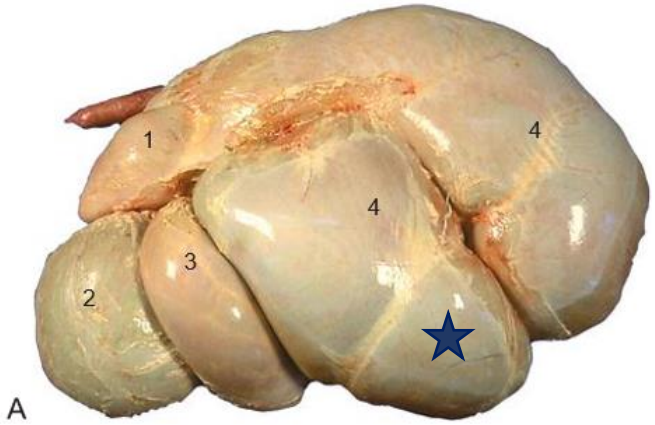
SACCUS CAECUS CAUDOVENTRALIS:

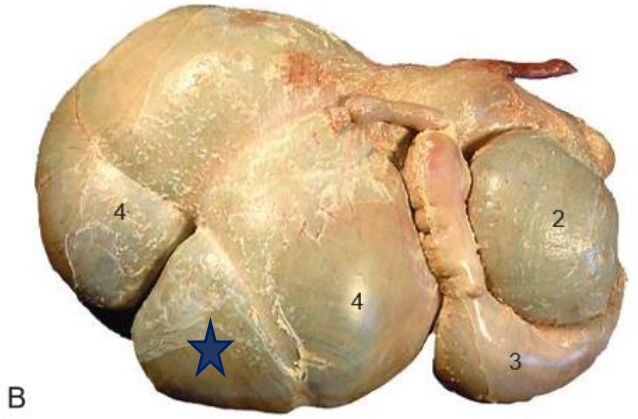
- **caudoventral blind sac**



Left/cranial view of inflated bovine reticulorumen (inflation may distort the relative proportions of an organ). 1, esophagus; 2, reticulum; 3, cranial sac, a.k.a., atrium ruminis; 4, dorsal sac; 5, caudodorsal blind sac; 6, ventral sac; 7, caudoventral blind sac; 8, caudal groove; 9, abomasum; blue asterisk, cranial groove.

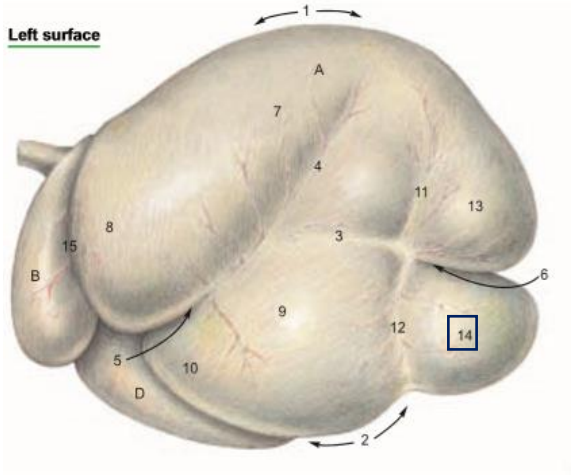
http://vanat.cvm.umn.edu/ungDissect/Lab14/Img14-2.html

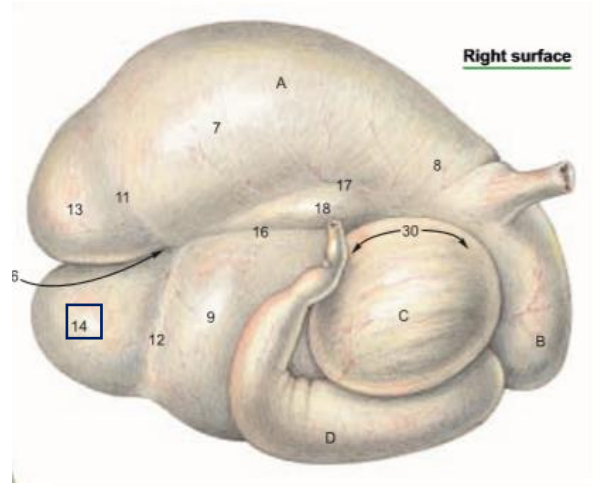




1. Reticulum
2. Omasum
3. Abomasum
4. Rumen

Note: A, Left side. **B,** Right side.





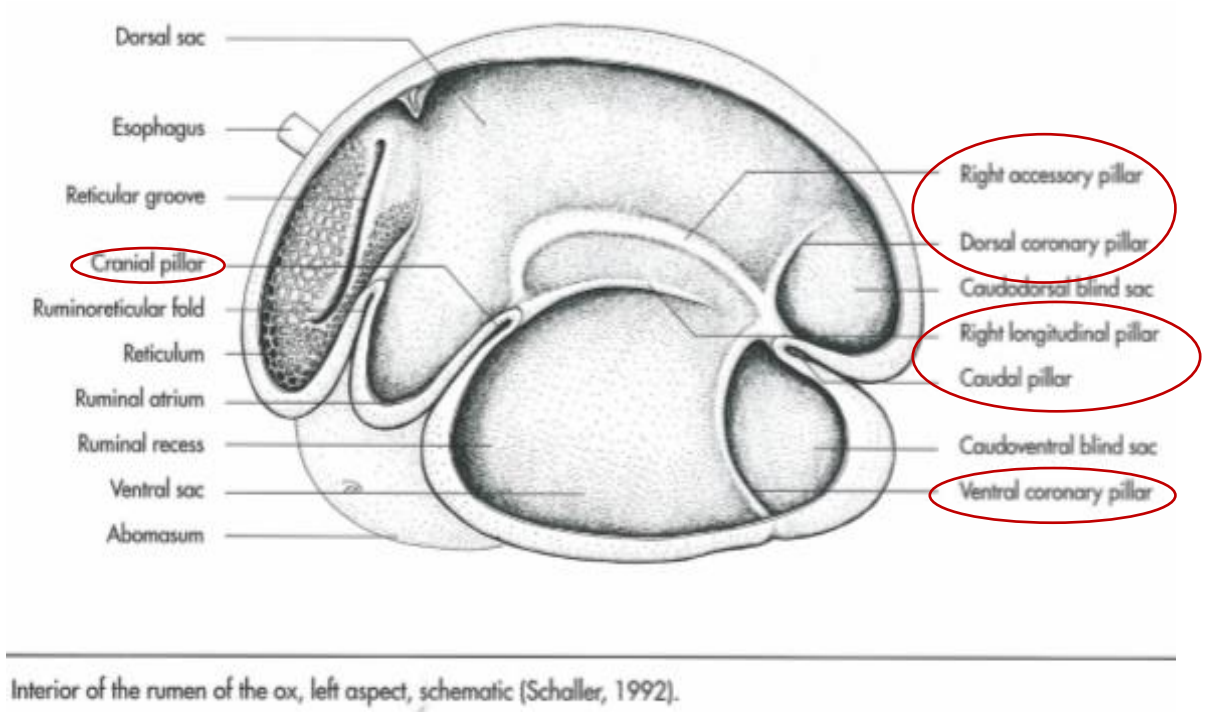
A	**Rumen**	11	Dorsal coronary groove
1	Dorsal curvature	12	Ventral coronary groove
2	Ventral curvature	13	Caudodorsal blind sac
3	Left longitudinal groove	14	Caudoventral blind sac
4	Left accessory groove	15	Ruminoreticular groove
5	Cranial groove	16	Right longitudinal groove
6	Caudal groove	17	Right accessory groove
7	Dorsal sac	18	Insula
8	Atrium	19	Intraruminal orifice
9	Ventral sac	20	Pillars
10	Recess of ventr. sac of rumen	21	Papillae

THE COMPLEX STOMACH

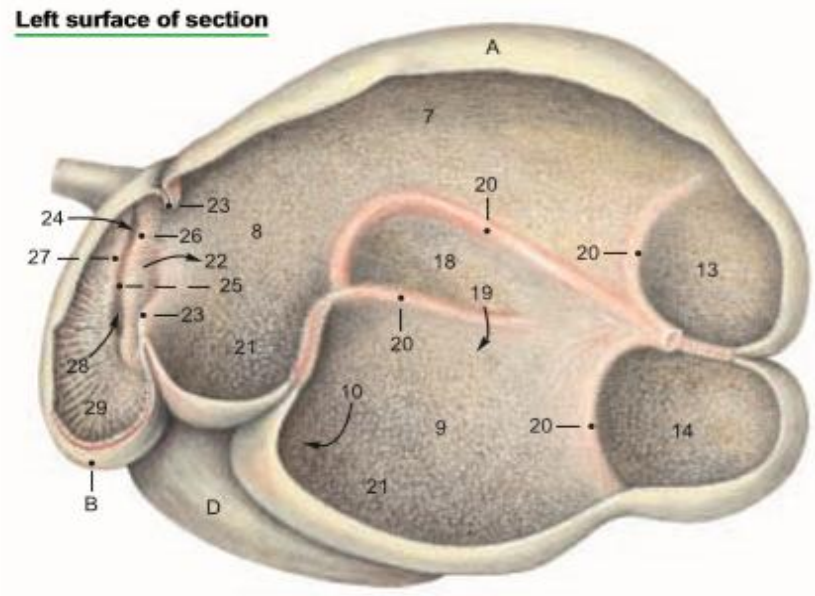
RUMEN:

RUMINAL PILLARS (PILAE RUMINIS):

- **inflections of the wall**
- **the grooves, visible on the external surface, correspond to the position of the ruminal pillars**



Interior of the rumen of the ox, left aspect, schematic (Schaller, 1992).



Legend:

A Rumen
1 Dorsal curvature
2 Ventral curvature
3 Left longitudinal groove
4 Left accessory groove
5 Cranial groove
6 Caudal groove
7 Dorsal sac
8 Atrium
9 Ventral sac
10 Recess of ventr. sac of rumen
11 Dorsal coronary groove
12 Ventral coronary groove
13 Caudodorsal blind sac
14 Caudoventral blind sac
15 Ruminoreticular groove
16 Right longitudinal groove
17 Right accessory groove
18 Insula
19 Intraruminal orifice
20 Pillars
21 Papillae

Legend:

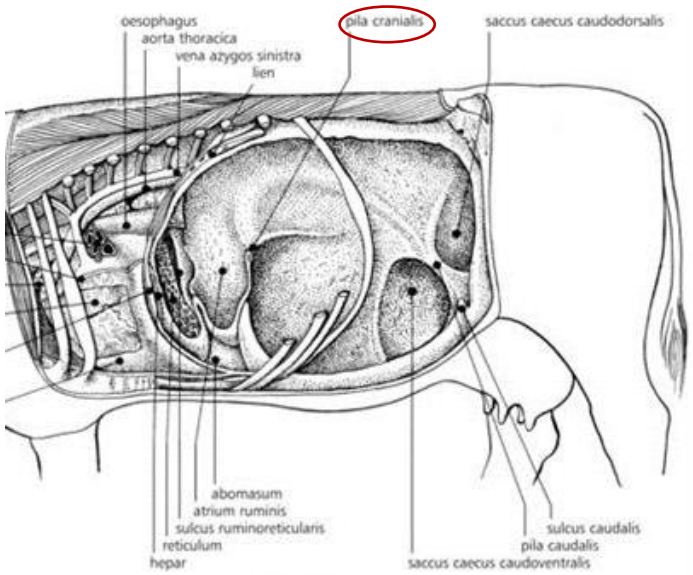
B Reticulum
22 Ruminoreticular orifice
23 Ruminoreticular fold
24 Cardia
25 Reticular groove
26 Right lip
27 Left lip
28 Reticulo-omasal orifice
29 Reticular crests and cells

THE COMPLEX STOMACH

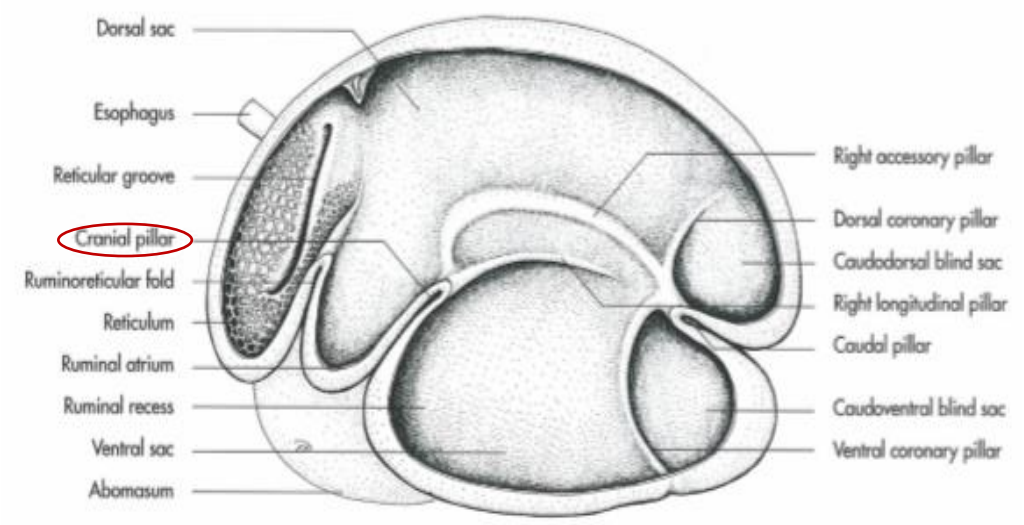
RUMEN:

PILA CRANIALIS:

- **muscular pillar**
- **projects into the cavity of rumen**
- **between atrium and recessus ruminis**
- **marked externally by the sulcus cranialis**



bal oldalról



Interior of the rumen of the ox, left aspect, schematic (Schaller, 1992).

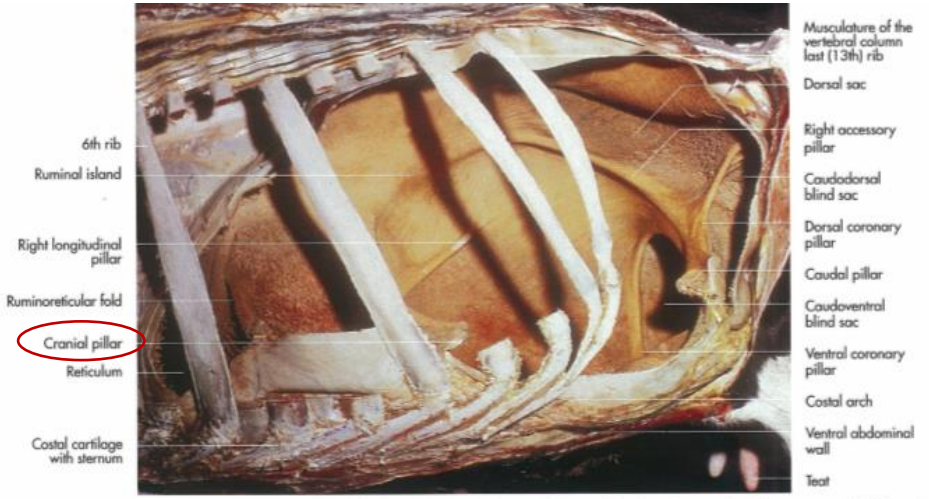
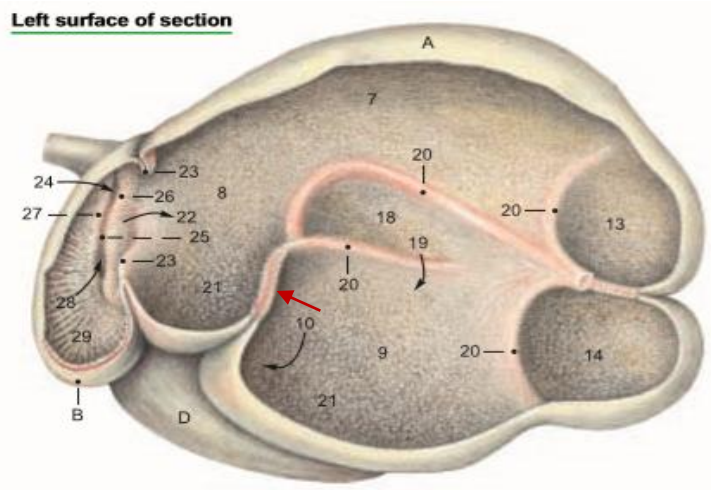


Fig 7-67. Topography of the rumen in an ox. Parts of the lateral body wall, several ribs and the lateral ruminal wall are removed, left lateral aspect (Pavaux, 1983).



Legend:

A Rumen
1 Dorsal curvature
2 Ventral curvature
3 Left longitudinal groove
4 Left accessory groove
5 Cranial groove
6 Caudal groove
7 Dorsal sac
8 Atrium
9 Ventral sac
10 Recess of ventr. sac of rumen
11 Dorsal coronary groove
12 Ventral coronary groove
13 Caudodorsal blind sac
14 Caudoventral blind sac
15 Ruminoreticular groove
16 Right longitudinal groove
17 Right accessory groove
18 Insula
19 Intraruminal orifice
20 Pillars
21 Papillae

Legend:

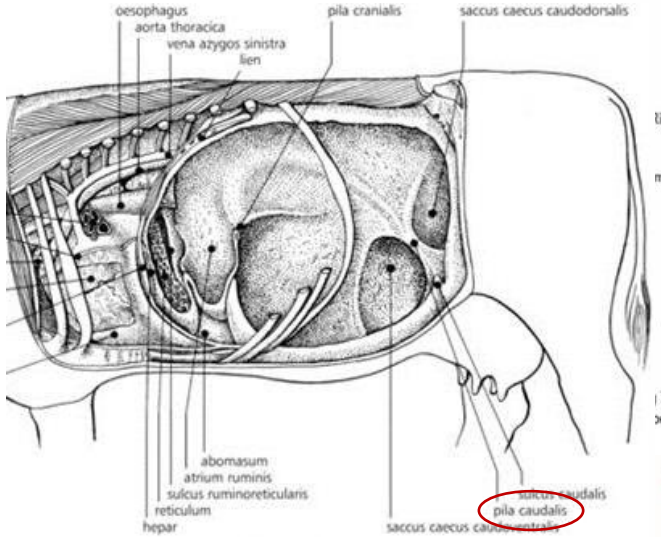
B Reticulum
22 Ruminoreticular orifice
23 Ruminoreticular fold
24 Cardia
25 Reticular groove
26 Right lip
27 Left lip
28 Reticulo-omasal orifice
29 Reticular crests and cells

THE COMPLEX STOMACH

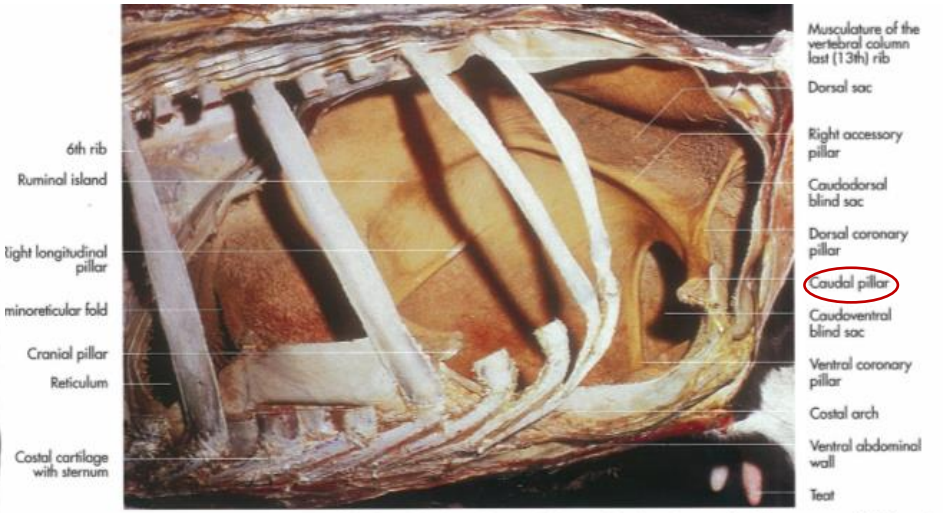
RUMEN:

PILA CAUDALIS:

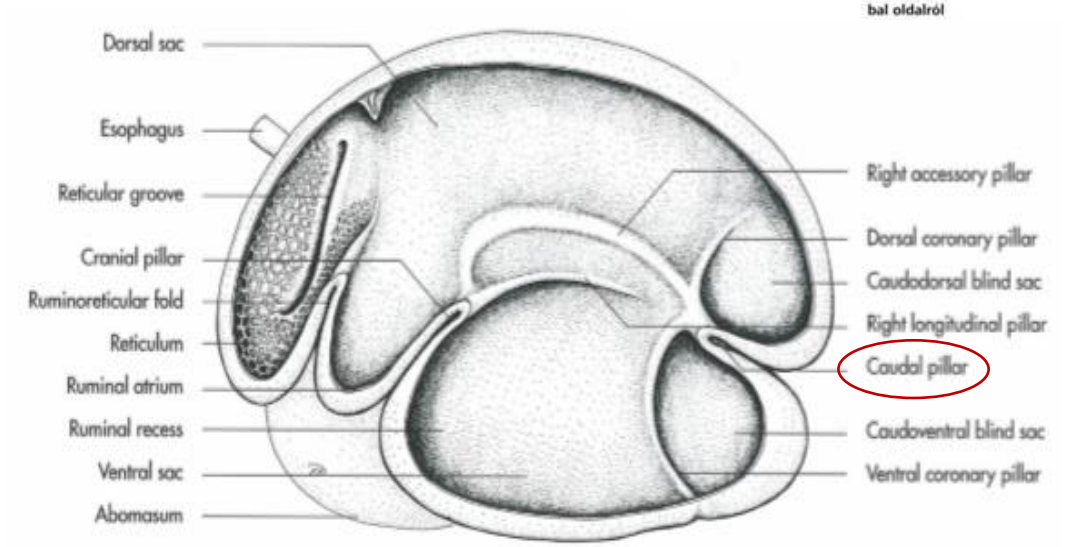
- **muscular pillar**
- **projects into the cavity of rumen**
- **between the caudodorsal and caudoventral blind sacs**
- **marked externally by the sulcus caudalis**



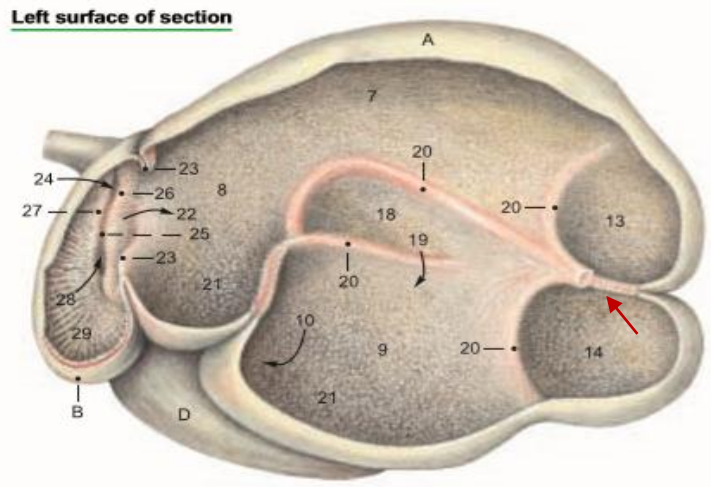
bal oldalról



7-67. Topography of the rumen in an ox. Parts of the lateral body wall, several ribs and the lateral ruminal wall are removed, left lateral aspect (Pavaux, 1983).



Interior of the rumen of the ox, left aspect, schematic (Schaller, 1992).



Legend:

A Rumen
1 Dorsal curvature
2 Ventral curvature
3 Left longitudinal groove
4 Left accessory groove
5 Cranial groove
6 Caudal groove
7 Dorsal sac
8 Atrium
9 Ventral sac
10 Recess of ventr. sac of rumen
11 Dorsal coronary groove
12 Ventral coronary groove
13 Caudodorsal blind sac
14 Caudoventral blind sac
15 Ruminoreticular groove
16 Right longitudinal groove
17 Right accessory groove
18 Insula
19 Intraruminal orifice
20 Pillars
21 Papillae

Legend:

B Reticulum
22 Ruminoreticular orifice
23 Ruminoreticular fold
24 Cardia
25 Reticular groove
26 Right lip
27 Left lip
28 Reticulo-omasal orifice
29 Reticular crests and cells

THE COMPLEX STOMACH

RUMEN:

PILA LONGITUDINALIS DEXTRA:

- **muscular pillar**
- **projects into the cavity of rumen**
- **marked externally by the sulcus longitudinalis dexter**

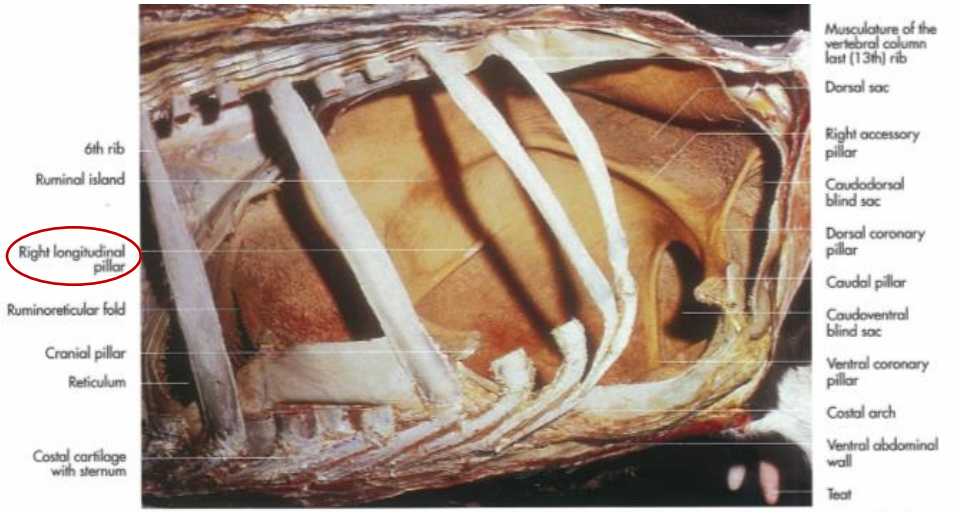
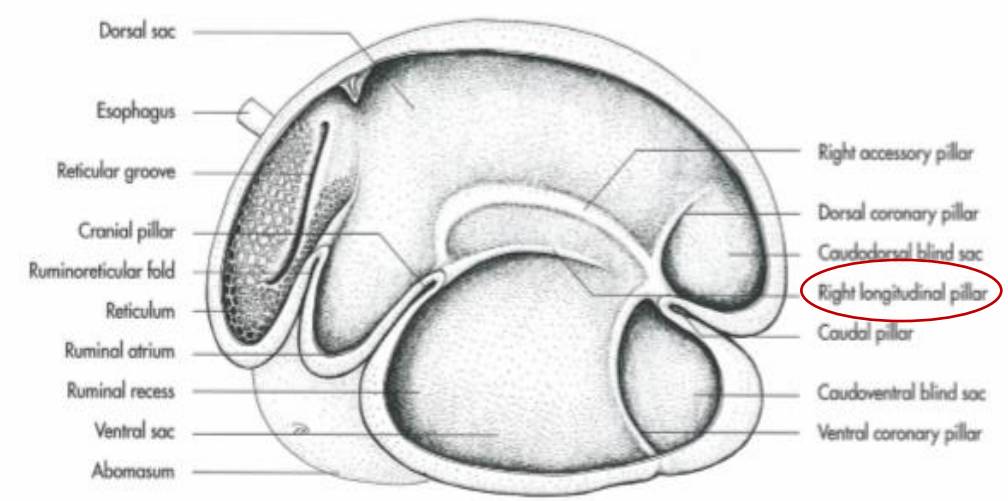
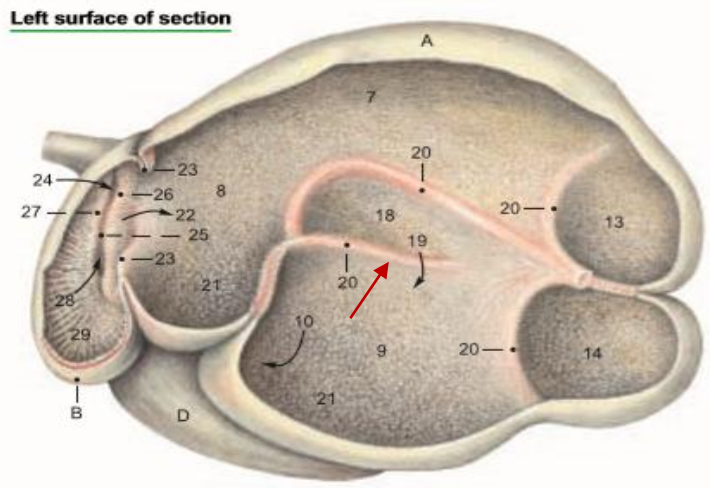


Fig 7-67. Topography of the rumen in an ox. Parts of the lateral body wall, several ribs and the lateral ruminal wall are removed, left lateral aspect (Pavaux, 1983).



Interior of the rumen of the ox, left aspect, schematic (Schaller, 1992).



Legend:

A Rumen
1 Dorsal curvature
2 Ventral curvature
3 Left longitudinal groove
4 Left accessory groove
5 Cranial groove
6 Caudal groove
7 Dorsal sac
8 Atrium
9 Ventral sac
10 Recess of ventr. sac of rumen
11 Dorsal coronary groove
12 Ventral coronary groove
13 Caudodorsal blind sac
14 Caudoventral blind sac
15 Ruminoreticular groove
16 Right longitudinal groove
17 Right accessory groove
18 Insula
19 Intraruminal orifice
20 Pillars
21 Papillae

Legend:

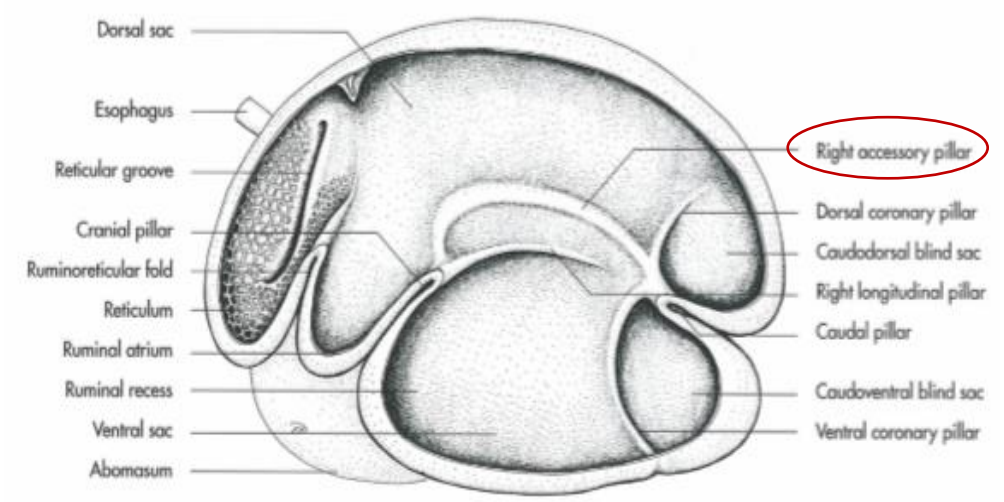
B Reticulum
22 Ruminoreticular orifice
23 Ruminoreticular fold
24 Cardia
25 Reticular groove
26 Right lip
27 Left lip
28 Reticulo-omasal orifice
29 Reticular crests and cells

THE COMPLEX STOMACH

RUMEN:

PILA ACCESSORIA DEXTRA:

- **muscular pillar**
- **projects into the cavity of rumen**
- **marked externally by the sulcus accessorius dexter**
- **dorsal to the right longitudinal pillar**



Interior of the rumen of the ox, left aspect, schematic (Schaller, 1992).

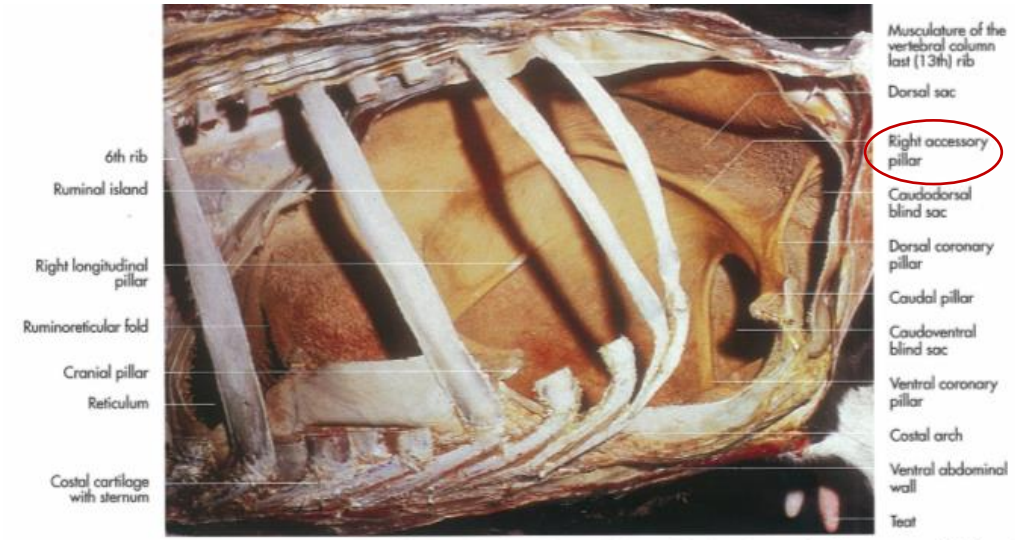
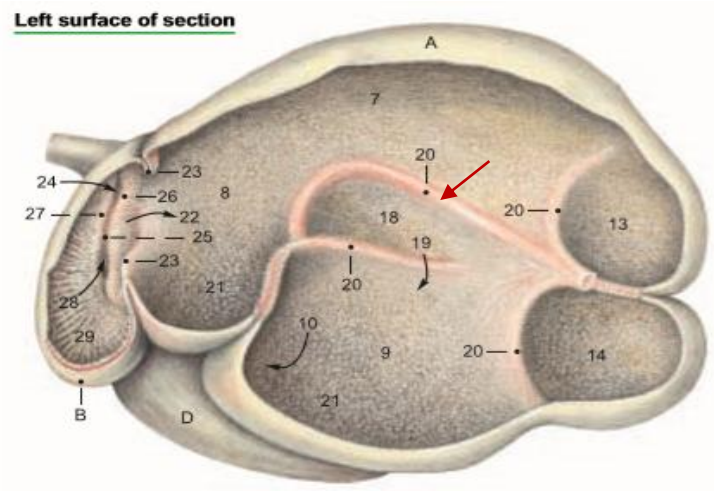


Fig 7-67. Topography of the rumen in an ox. Parts of the lateral body wall, several ribs and the lateral ruminal wall are removed, left lateral aspect (Pavaux, 1983).



Legend:

A Rumen
1 Dorsal curvature
2 Ventral curvature
3 Left longitudinal groove
4 Left accessory groove
5 Cranial groove
6 Caudal groove
7 Dorsal sac
8 Atrium
9 Ventral sac
10 Recess of ventr. sac of rumen
11 Dorsal coronary groove
12 Ventral coronary groove
13 Caudodorsal blind sac
14 Caudoventral blind sac
15 Ruminoreticular groove
16 Right longitudinal groove
17 Right accessory groove
18 Insula
19 Intraruminal orifice
20 Pillars
21 Papillae

Legend:

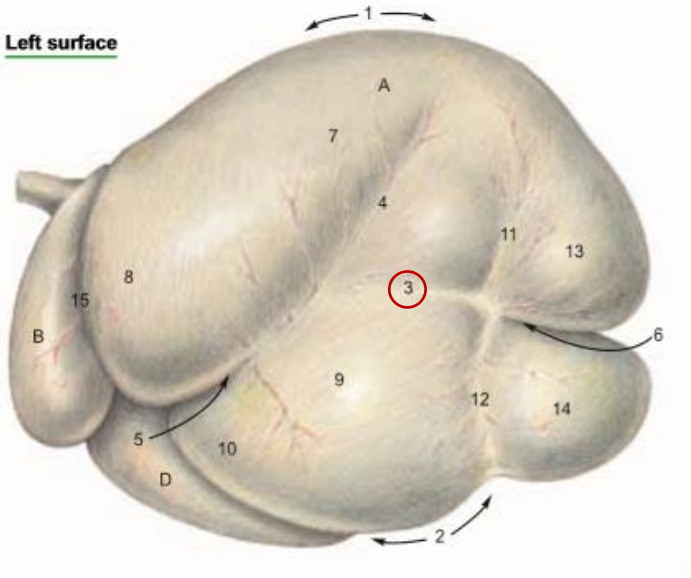
B Reticulum
22 Ruminoreticular orifice
23 Ruminoreticular fold
24 Cardia
25 Reticular groove
26 Right lip
27 Left lip
28 Reticulo-omasal orifice
29 Reticular crests and cells

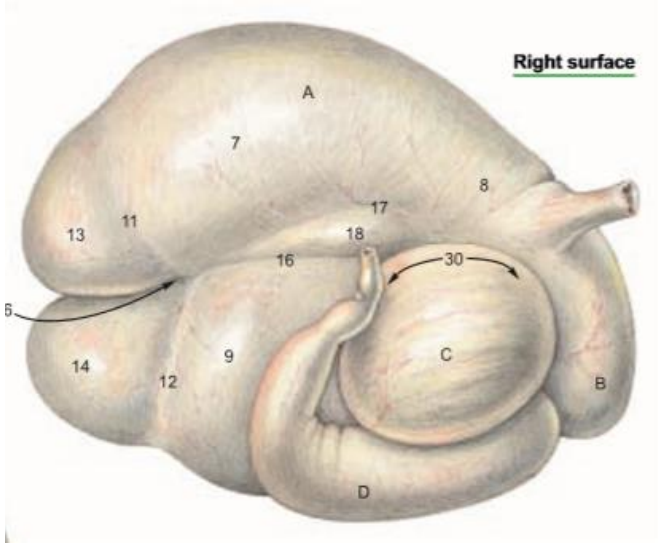
THE COMPLEX STOMACH

RUMEN:

PILA LONGITUDINALIS SINISTRA:

- **muscular pillar**
- **projects into the cavity of rumen**
- **marked externally by the sulcus longitudinalis sinister**





Legend:

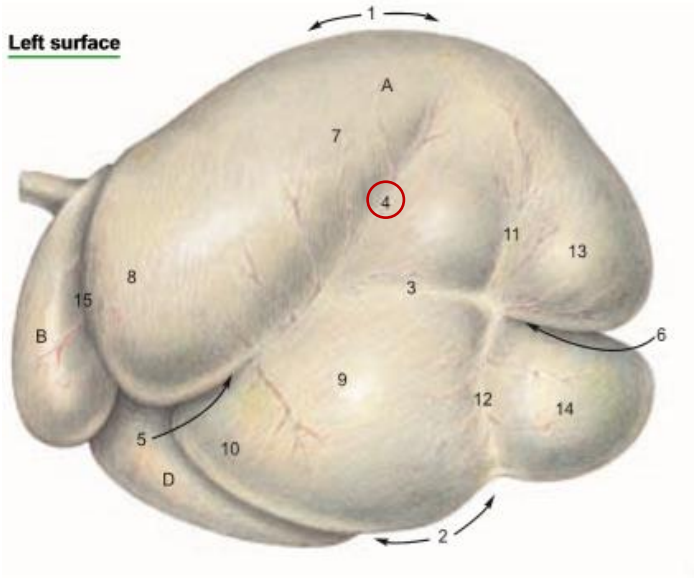
A	**Rumen**	11	Dorsal coronary groove
1	Dorsal curvature	12	Ventral coronary groove
2	Ventral curvature	13	Caudodorsal blind sac
3	Left longitudinal groove	14	Caudoventral blind sac
4	Left accessory groove	15	Ruminoreticular groove
5	Cranial groove	16	Right longitudinal groove
6	Caudal groove	17	Right accessory groove
7	Dorsal sac	18	Insula
8	Atrium	19	Intraruminal orifice
9	Ventral sac	20	Pillars
10	Recess of ventr. sac of rumen	21	Papillae

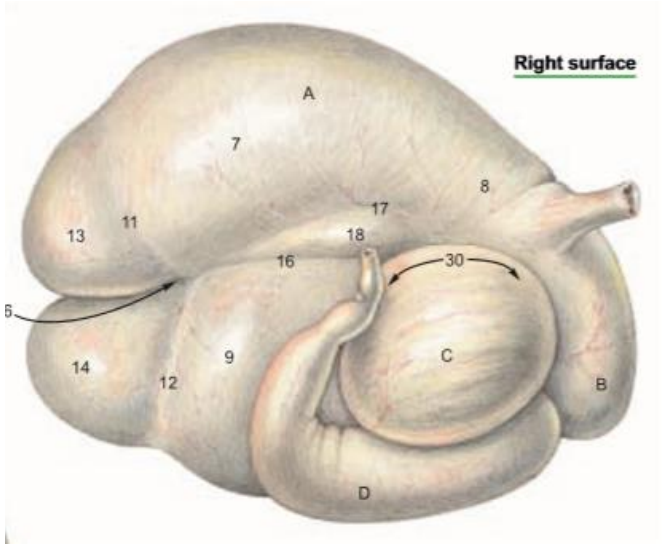
THE COMPLEX STOMACH

RUMEN:

PILA ACCESSORIA SINISTRA:

- **dorsal branch of the left longitudinal pillar**
- **correponding to the sulcus accessorius sinister**





Legend:

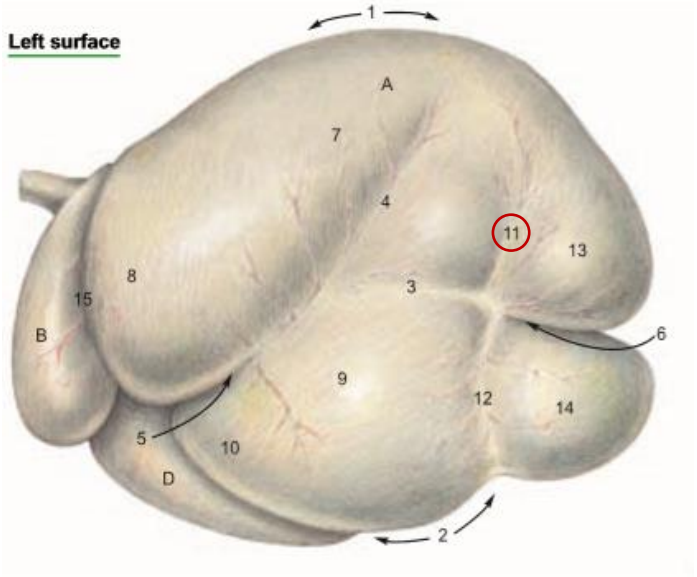
A	**Rumen**	11	Dorsal coronary groove
1	Dorsal curvature	12	Ventral coronary groove
2	Ventral curvature	13	Caudodorsal blind sac
3	Left longitudinal groove	14	Caudoventral blind sac
4	Left accessory groove	15	Ruminoreticular groove
5	Cranial groove	16	Right longitudinal groove
6	Caudal groove	17	Right accessory groove
7	Dorsal sac	18	Insula
8	Atrium	19	Intraruminal orifice
9	Ventral sac	20	Pillars
10	Recess of ventr. sac of rumen	21	Papillae

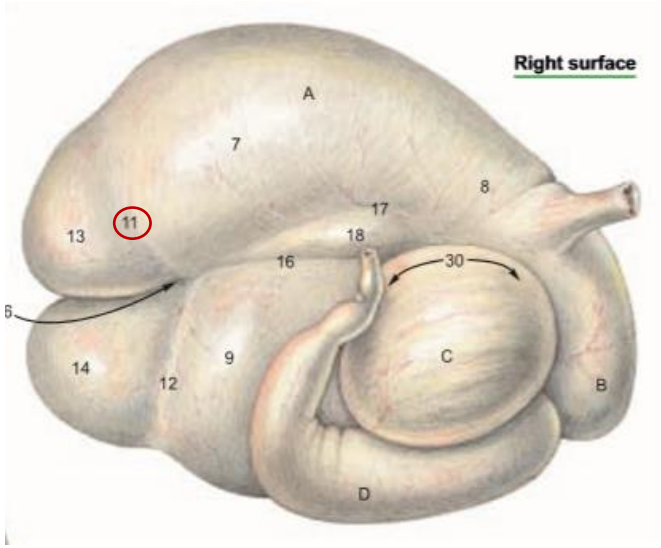
THE COMPLEX STOMACH

RUMEN:

PILA CORONARIA DORSALIS:

- **limits the caudodorsal blind sac**
- **correponding to the sulcus coronarius dorsalis**





Legend:

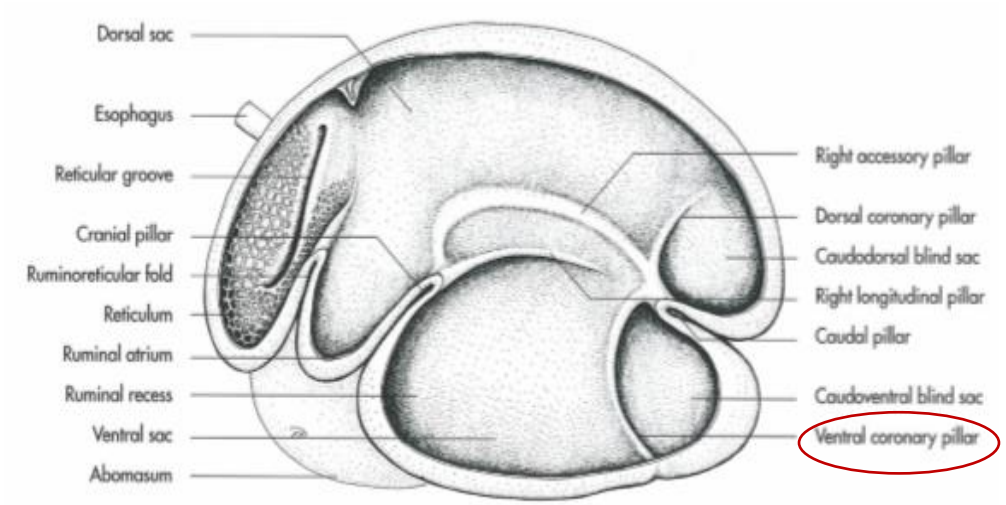
A	**Rumen**	11	Dorsal coronary groove
1	Dorsal curvature	12	Ventral coronary groove
2	Ventral curvature	13	Caudodorsal blind sac
3	Left longitudinal groove	14	Caudoventral blind sac
4	Left accessory groove	15	Ruminoreticular groove
5	Cranial groove	16	Right longitudinal groove
6	Caudal groove	17	Right accessory groove
7	Dorsal sac	18	Insula
8	Atrium	19	Intraruminal orifice
9	Ventral sac	20	Pillars
10	Recess of ventr. sac of rumen	21	Papillae

THE COMPLEX STOMACH

RUMEN:

PILA CORONARIA VENTRALIS:

- **limits the caudoventral blind sac**
- **correponding to the sulcus coronarius ventralis**



Interior of the rumen of the ox, left aspect, schematic (Schaller, 1992).

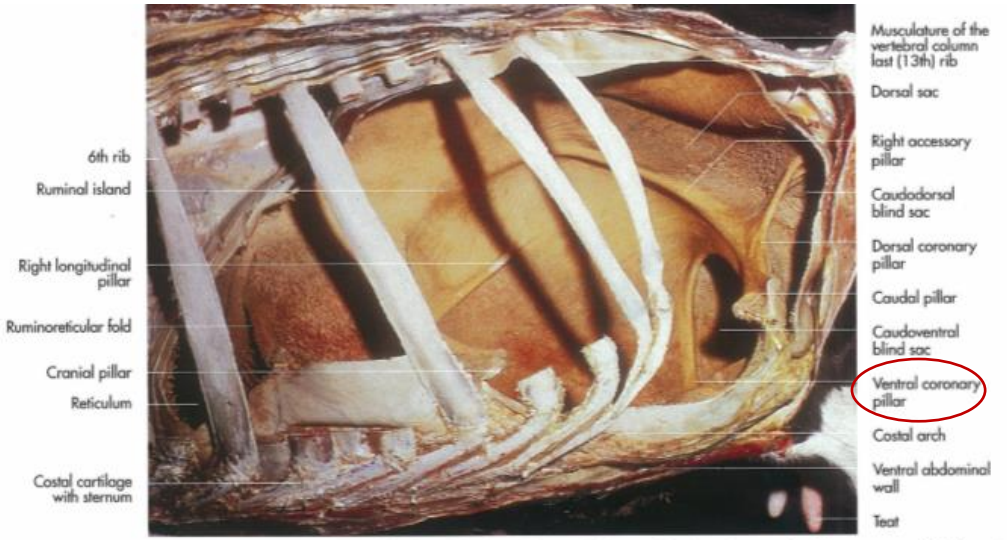
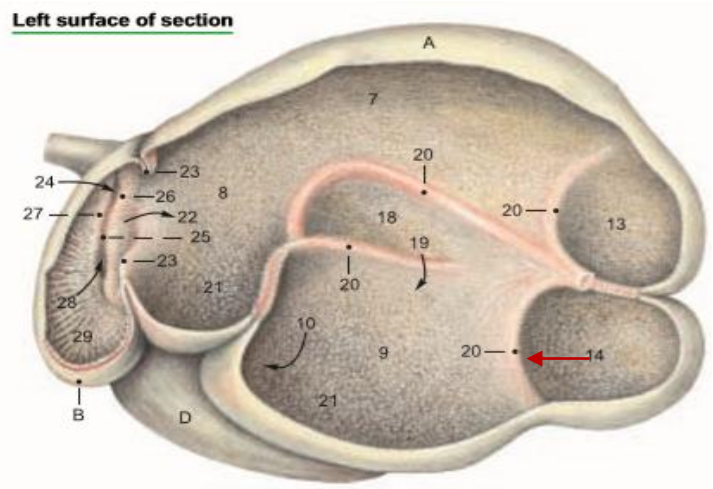


Fig 7-67. Topography of the rumen in an ox. Parts of the lateral body wall, several ribs and the lateral ruminal wall are removed, left lateral aspect (Pavaux, 1983).



Legend:

A Rumen
1 Dorsal curvature
2 Ventral curvature
3 Left longitudinal groove
4 Left accessory groove
5 Cranial groove
6 Caudal groove
7 Dorsal sac
8 Atrium
9 Ventral sac
10 Recess of ventr. sac of rumen
11 Dorsal coronary groove
12 Ventral coronary groove
13 Caudodorsal blind sac
14 Caudoventral blind sac
15 Ruminoreticular groove
16 Right longitudinal groove
17 Right accessory groove
18 Insula
19 Intraruminal orifice
20 Pillars
21 Papillae

Legend:

B Reticulum
22 Ruminoreticular orifice
23 Ruminoreticular fold
24 Cardia
25 Reticular groove
26 Right lip
27 Left lip
28 Reticulo-omasal orifice
29 Reticular crests and cells

THE COMPLEX STOMACH

RUMEN:

PAPILLAE RUMINIS:

- **finger – shaped projections of the mucosa**
- **about 1 cm long**
- **in saccus ventralis are large**
- **in saccus dorsalis small**

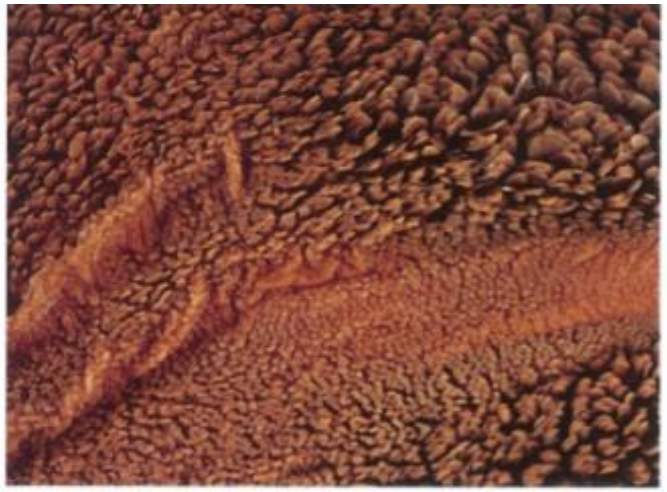


Fig 7-69. Ruminal papillae of the caudodorsal blind sac of an ox.

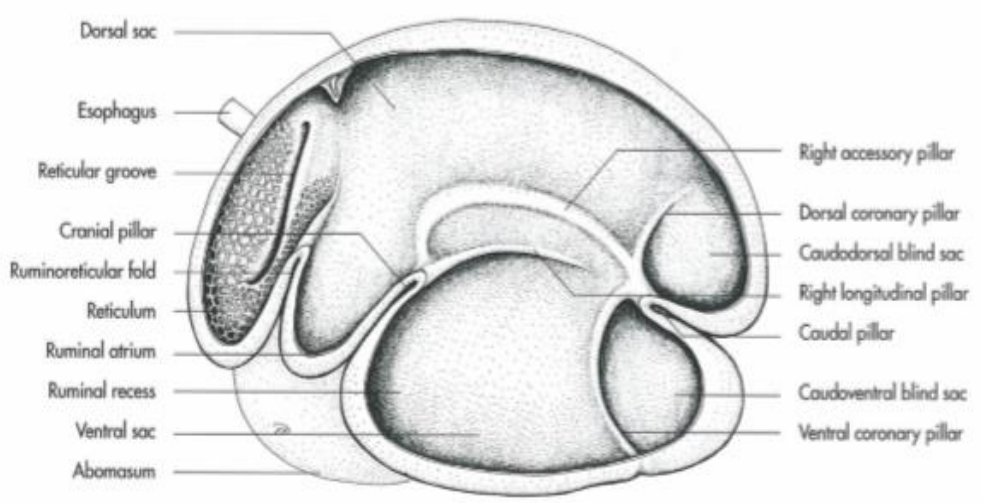
Fig 70. Close-up view of ruminal papillae on the caudodventral sac of an ox.

THE COMPLEX STOMACH

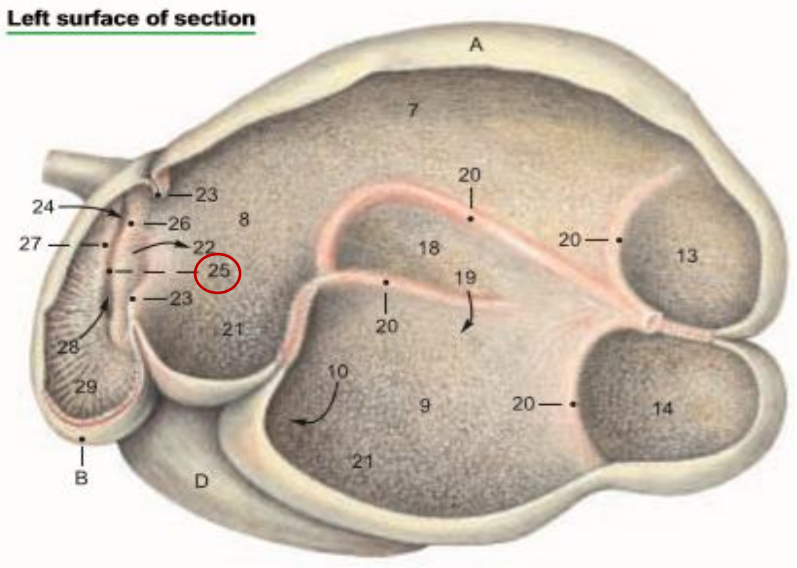
- the esophagus enters the stomach at the junction of rumen and reticulum

SULCUS RUMINORETICULARIS (RETICULAR GROOVE):

- **ruminoreticular groove**
- **separates the rumen from the reticulum**

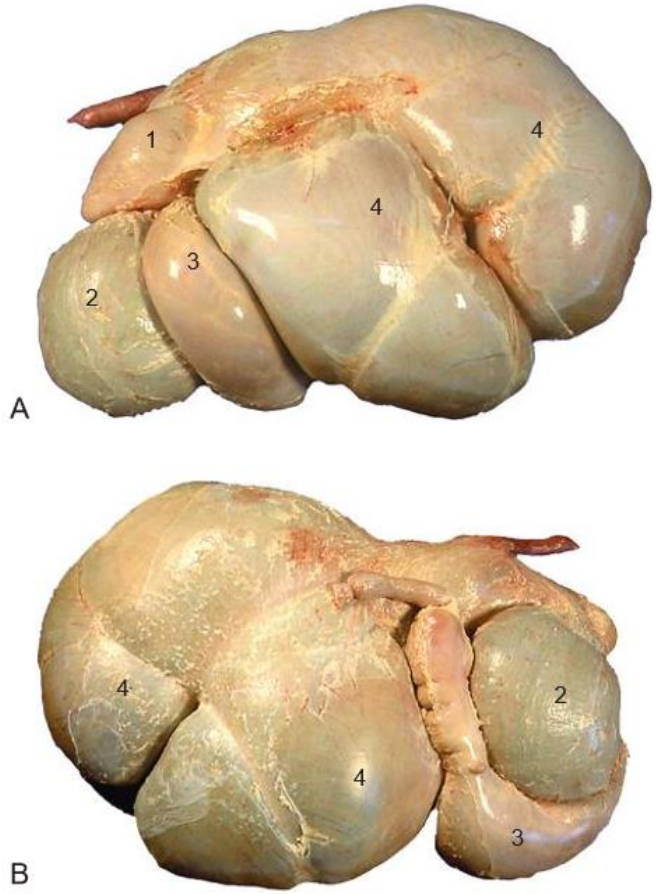


Interior of the rumen of the ox, left aspect, schematic (Schaller, 1992).



Legend:

B Reticulum
22 Ruminoreticular orifice
23 Ruminoreticular fold
24 Cardia
25 Reticular groove
26 Right lip
27 Left lip
28 Reticulo-omasal orifice
29 Reticular crests and cells



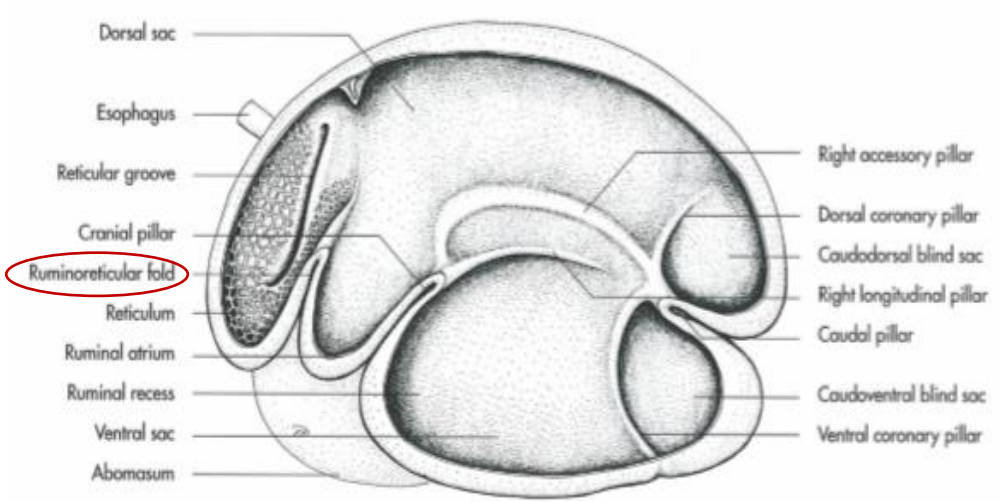
1. Reticulum
2. Omasum
3. Abomasum
4. Rumen

Note: A, Left side. **B,** Right side.

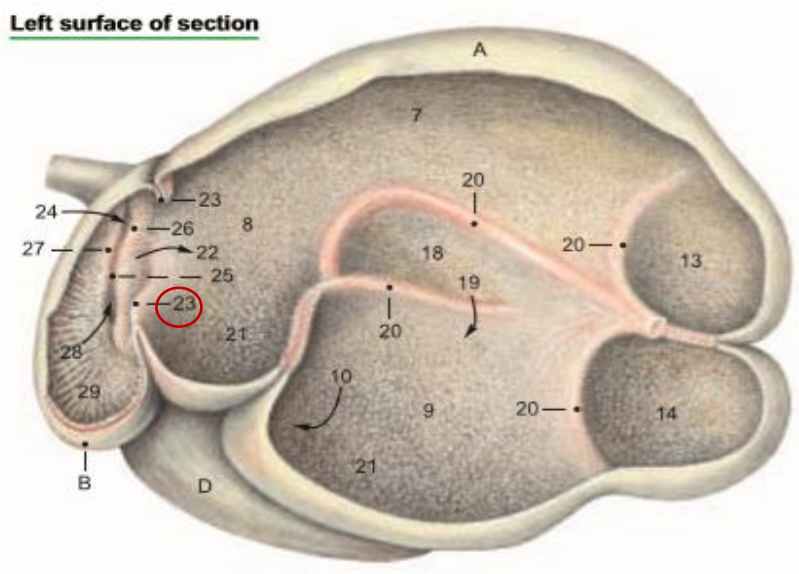
THE COMPLEX STOMACH

PLICA RUMINORETICULARIS:

- **inflection of the wall**
- **projects internally**

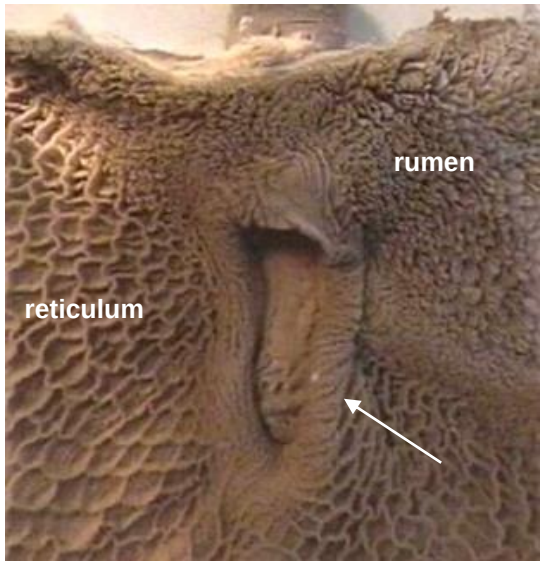


Interior of the rumen of the ox, left aspect, schematic (Schaller, 1992).



Legend:

B Reticulum
22 Ruminoreticular orifice
23 Ruminoreticular fold
24 Cardia
25 Reticular groove
26 Right lip
27 Left lip
28 Reticulo-omasal orifice
29 Reticular crests and cells

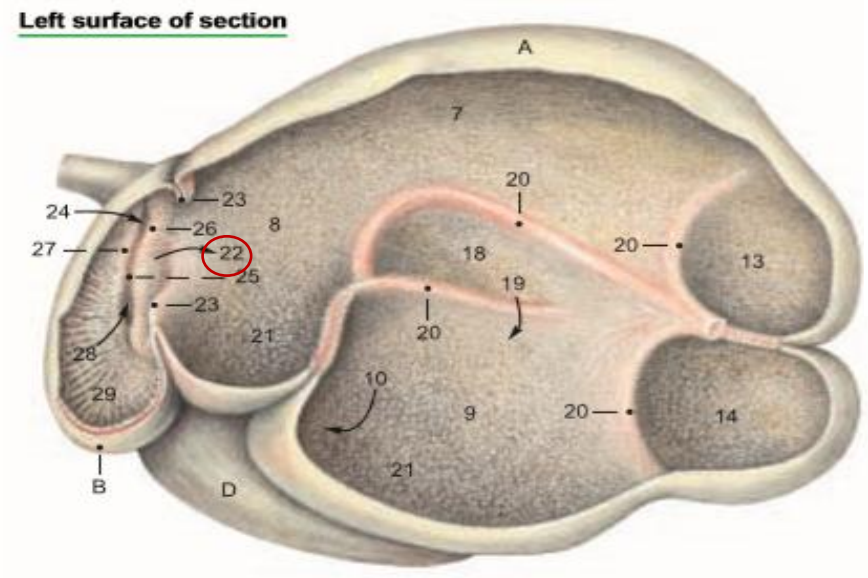


https://slideplayer.com/slide/4157123/

THE COMPLEX STOMACH

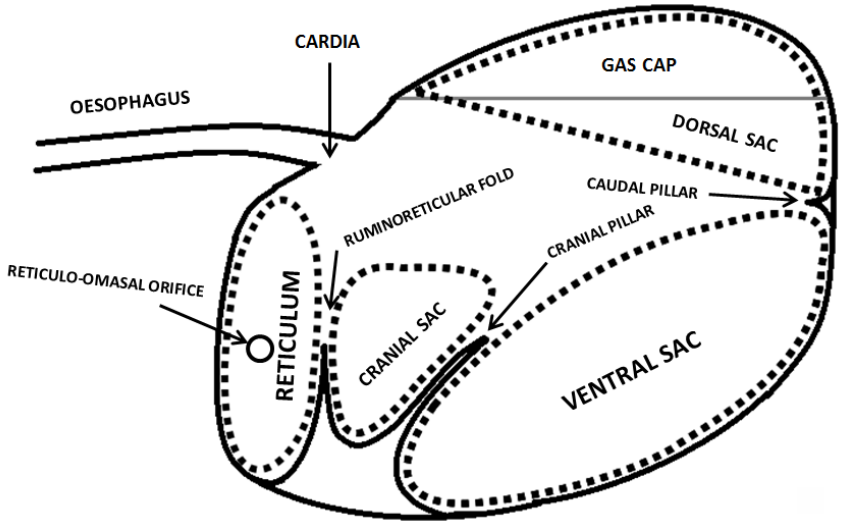
OSTIUM RUMINORETICULARIS:

- opening between rumen and reticulum

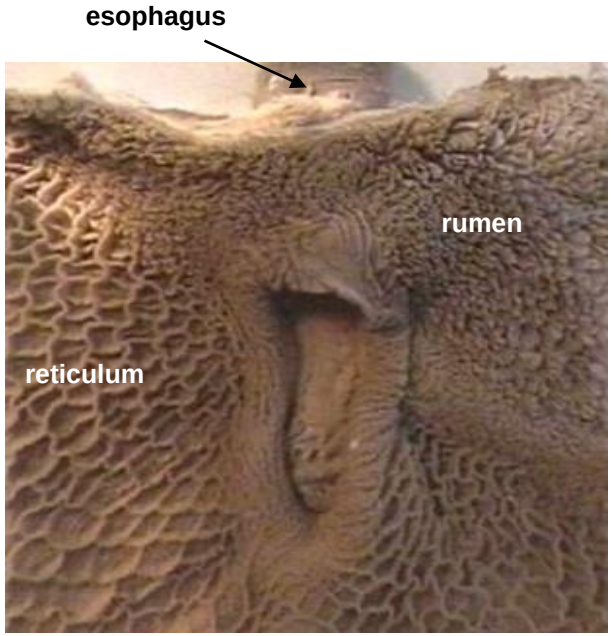


Legend:

B Reticulum
22 Ruminoreticular orifice
23 Ruminoreticular fold
24 Cardia
25 Reticular groove
26 Right lip
27 Left lip
28 Reticulo-omasal orifice
29 Reticular crests and cells

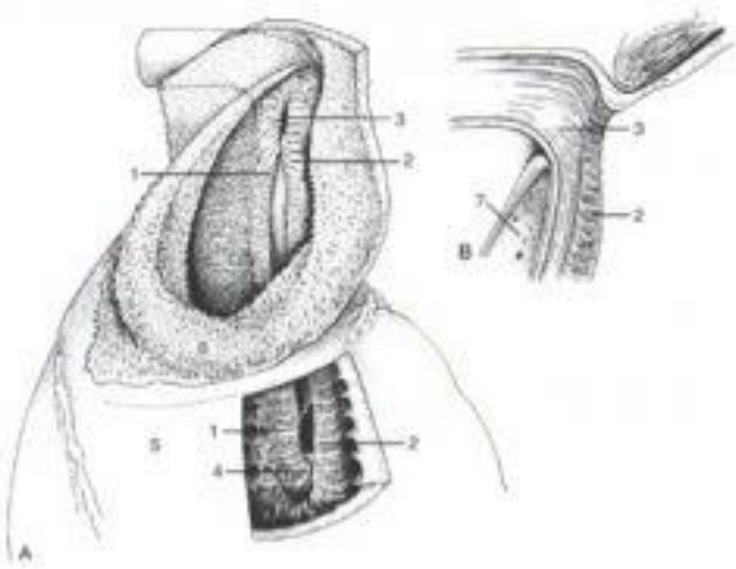


https://ecow.co.uk/biology-of-the-rumen/



https://slideplayer.com/slide/4157123/

1. Left lip of the reticular groove
2. Right lip of the reticular groove
3. Cardia
4. Reticulo-omasal orifice
5. Wall of reticulum
6. Ruminoreticular fold

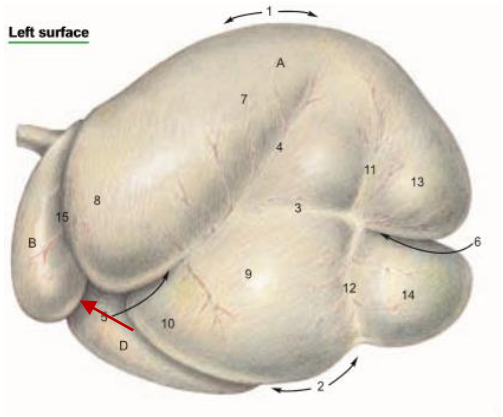


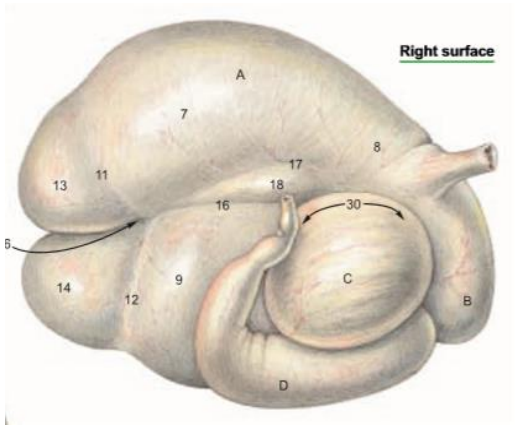
https://www.cram.com/flashcards/gross-spring-equine-and-ruminant-liver-and-stomach-mt2-1322543

THE COMPLEX STOMACH

RETICULUM:

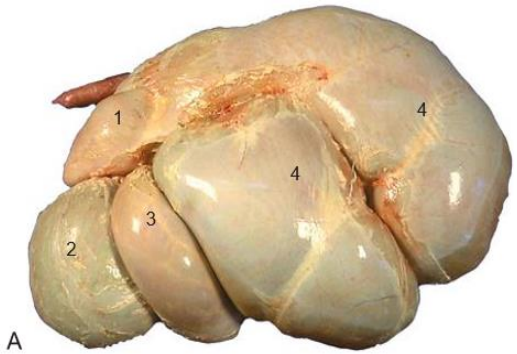
- **most cranial compartment**
- **lies between the diaphragm and rumen at the level of 6th – 9th intercostal spaces**

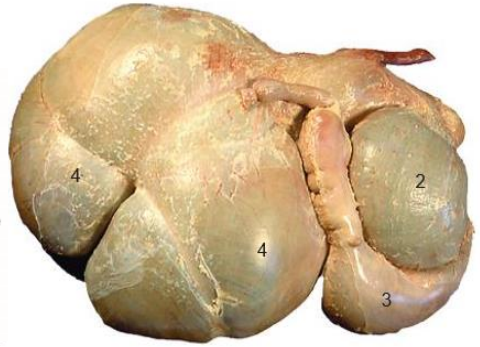




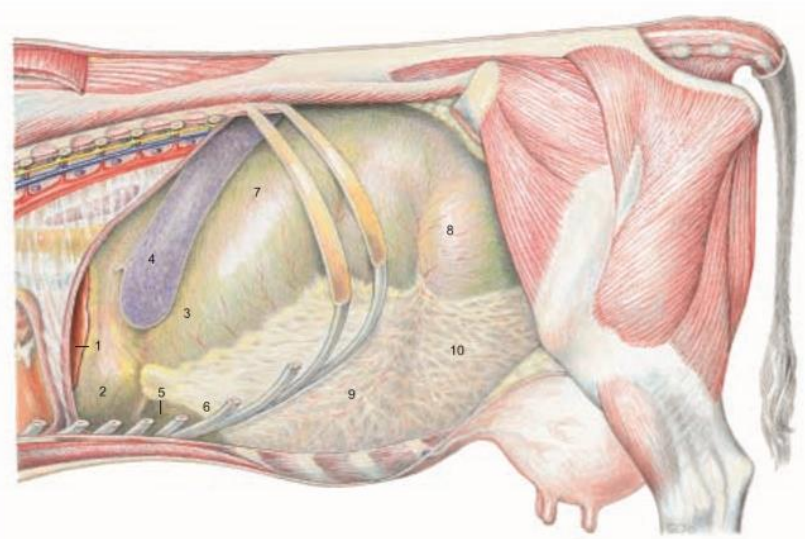
Legend:

A Rumen
1 Dorsal curvature
2 Ventral curvature
3 Left longitudinal groove
4 Left accessory groove
5 Cranial groove
6 Caudal groove
7 Dorsal sac
8 Atrium
9 Ventral sac
10 Recess of ventr. sac of rumen
11 Dorsal coronary groove
12 Ventral coronary groove
13 Caudodorsal blind sac
14 Caudoventral blind sac
15 Ruminoreticular groove
16 Right longitudinal groove
17 Right accessory groove
18 Insula
19 Intraruminal orifice
20 Pillars
21 Papillae



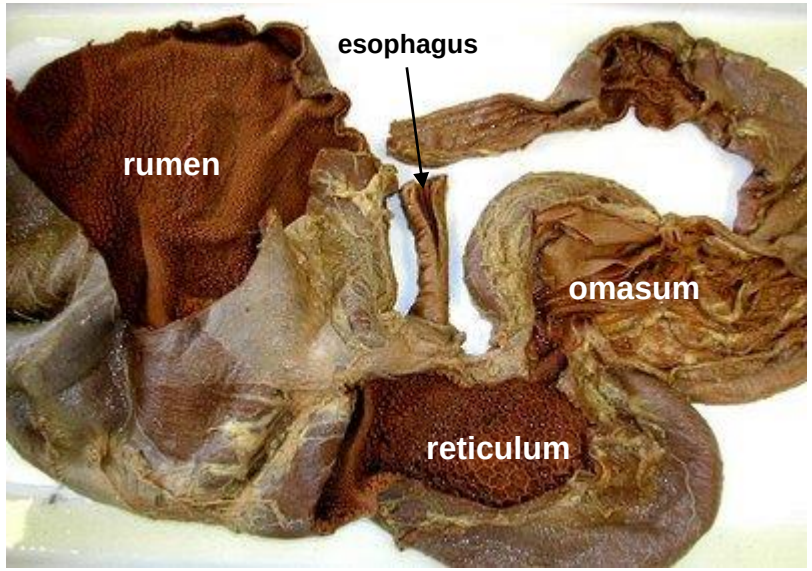


(Left side)



Legend:

1 Left lobe of liver
2 Reticulum
3 Atrium of rumen
4 Spleen
5 Fundus of abomasum
6 Recess of ventral sac of rumen covered by omentum
7 Dorsal sac of rumen
8 Caudodorsal blind sac of rumen
9 Ventral sac of rumen covered by omentum
10 Caudoventral blind sac of rumen covered by omentum
11 Sigmoid part of descending colon
12 Caudal flexure of duodenum
13 Descending duodenum
14 Right kidney
15 Right lobe of pancreas



1. Reticulum
2. Omasum
3. Abomasum
4. Rumen

Note: A, Left side. **B,** Right side.

http://fanaticcook.blogspot.com/2006/10/cows-stomachs-harbor-e-coli-o157h7-but.html

THE COMPLEX STOMACH

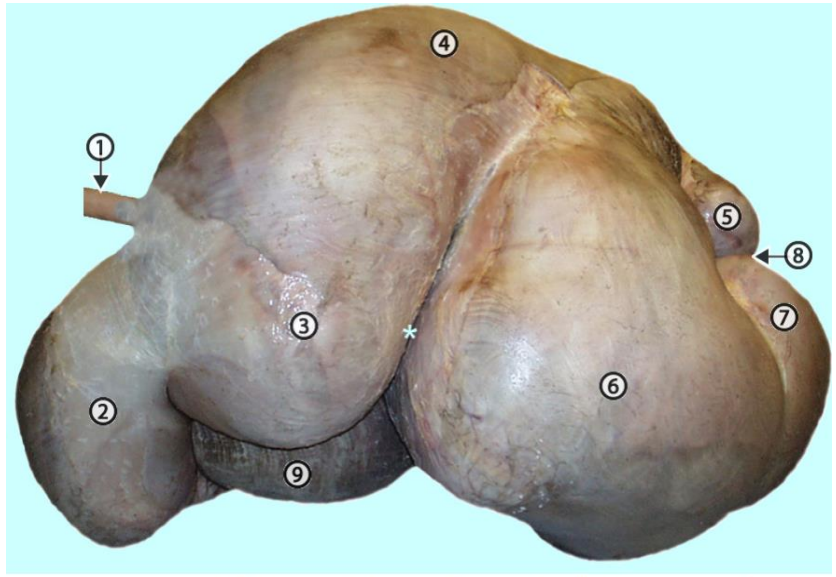
RETICULUM:

FACIES DIAPHRAGMATICA:

- **surface in contact with the diaphragm**

FACIES VISCERALIS:

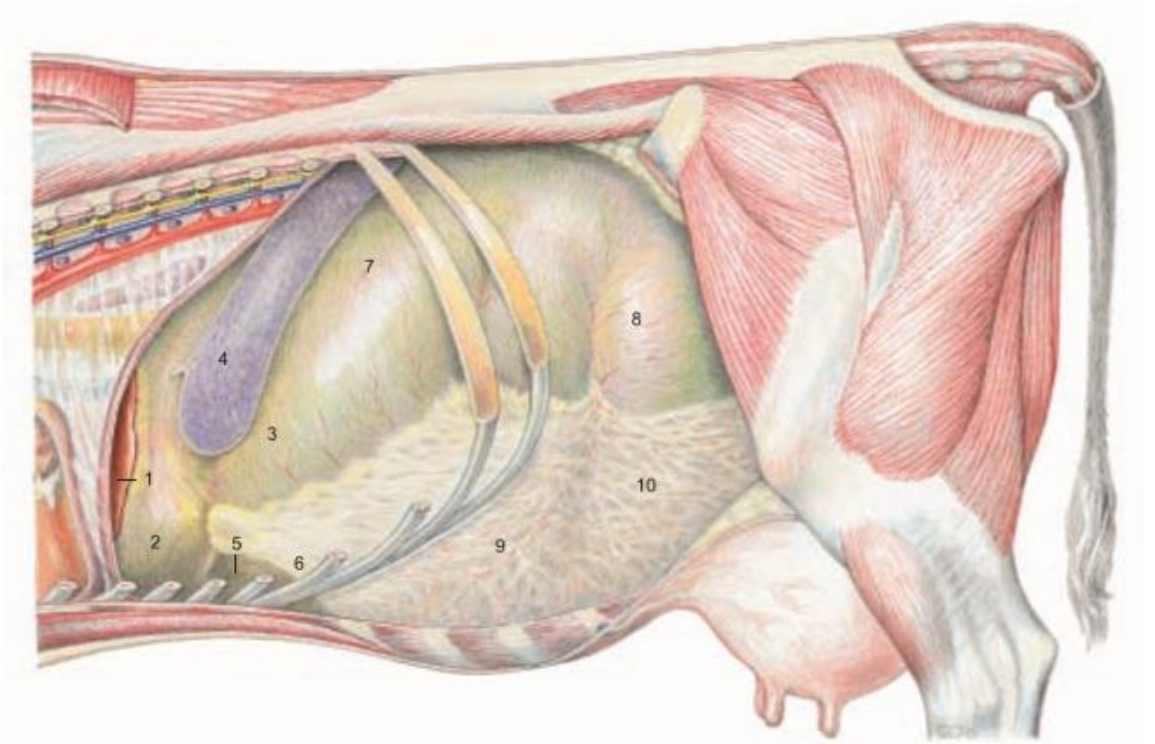
- surface towerd the rumen



Left/cranial view of inflated bovine reticulorumen (inflation may distort the relative proportions of an organ). 1, esophagus; 2, reticulum; 3, cranial sac, a.k.a., atrium ruminis; 4, dorsal sac; 5, caudodorsal blind sac; 6, ventral sac; 7, caudoventral blind sac; 8, caudal groove; 9, abomasum; blue asterisk, cranial groove.

http://vanat.cvm.umn.edu/ungDissect/Lab14/Img14-2.html

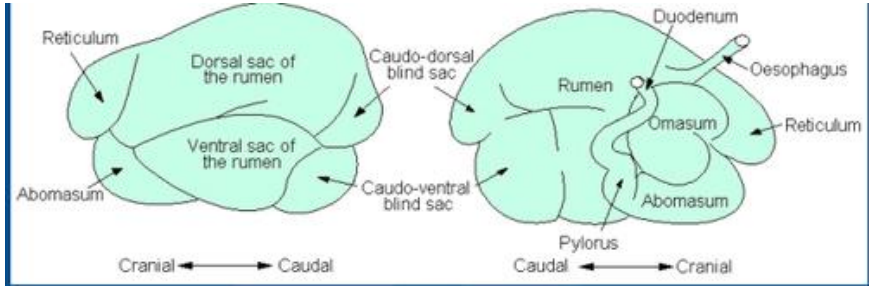
(Left side)



Legend:

1 Left lobe of liver
2 Reticulum
3 Atrium of rumen
4 Spleen
5 Fundus of abomasum
6 Recess of ventral sac of rumen covered by omentum
7 Dorsal sac of rumen
8 Caudodorsal blind sac of rumen
9 Ventral sac of rumen covered by omentum
10 Caudoventral blind sac of rumen covered by omentum
11 Sigmoid part of descending colon
12 Caudal flexure of duodenum
13 Descending duodenum
14 Right kidney
15 Right lobe of pancreas

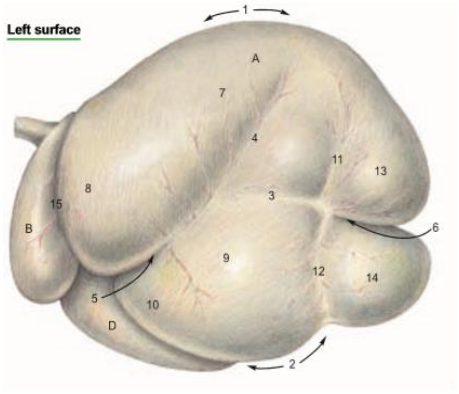
THE COMPLEX STOMACH

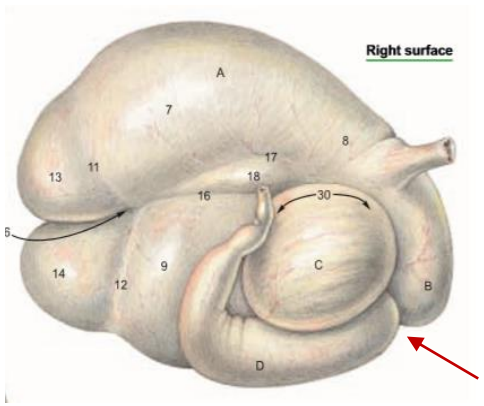


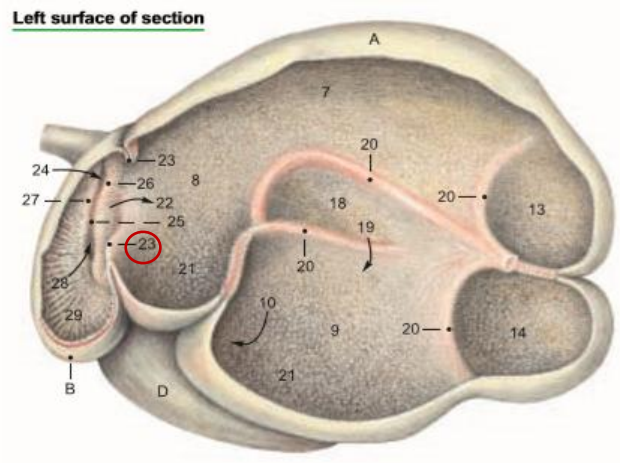
RETICULUM:

CURVATORA MINOR:

- **lesser curvature**
- **faces to the right and caudally**
- **connected to the omasum**

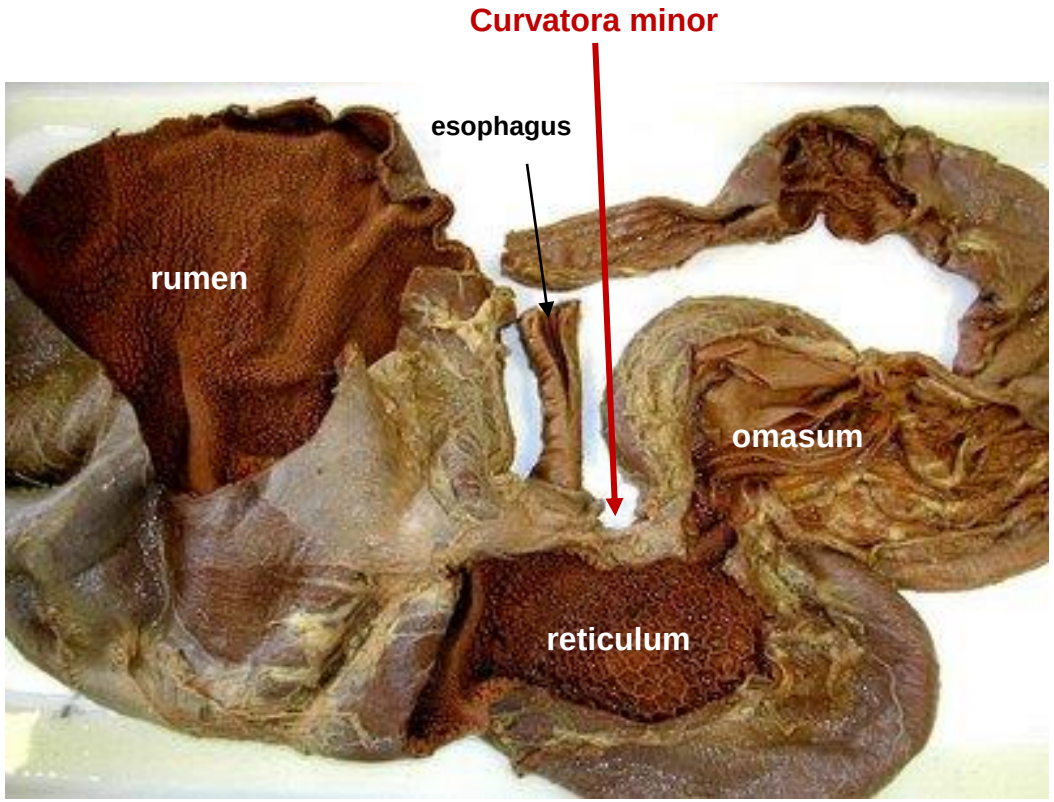




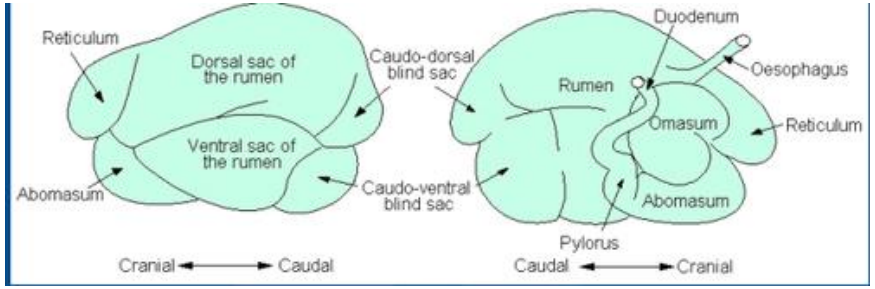


Legend:

B Reticulum
22 Ruminoreticular orifice
23 Ruminoreticular fold
24 Cardia
25 Reticular groove
26 Right lip
27 Left lip
28 Reticulo-omasal orifice
29 Reticular crests and cells



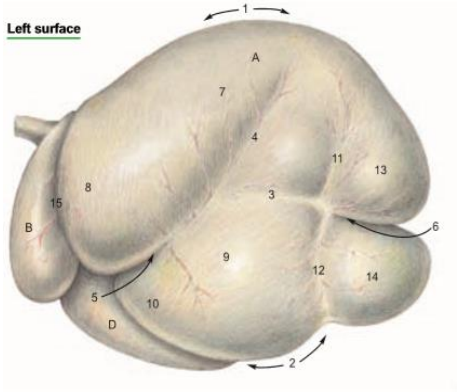
THE COMPLEX STOMACH

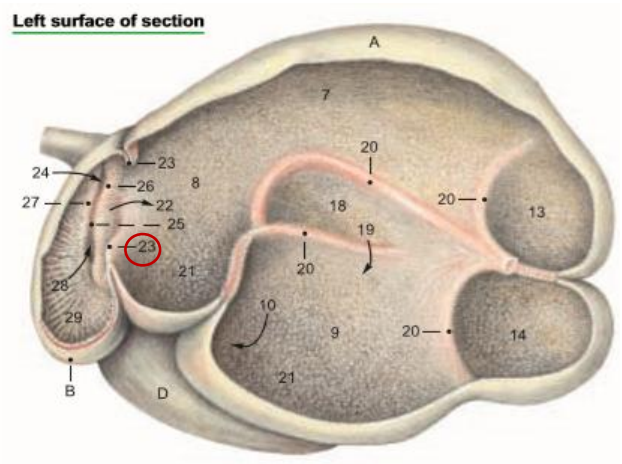


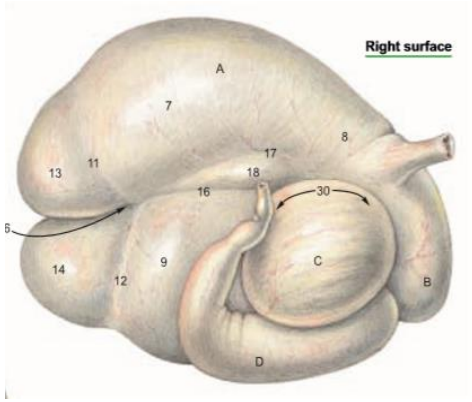
RETICULUM:

CURVATORA MAJOR:

- **greater curvature**
- **courses on the left side, ventrally**

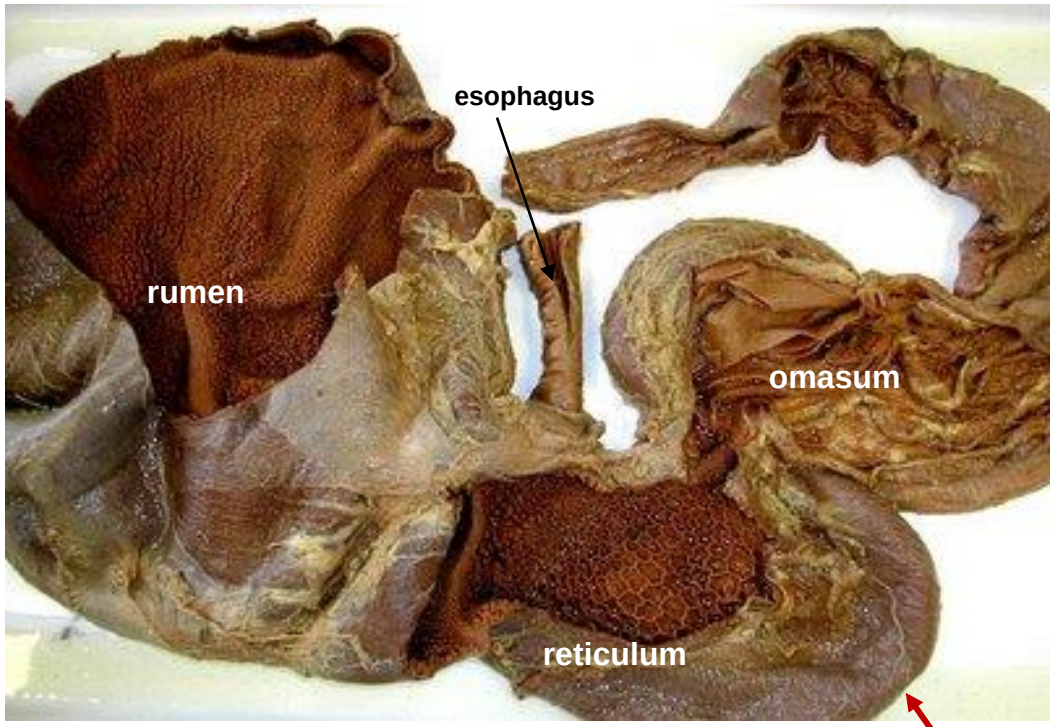






Legend:

B Reticulum
22 Ruminoreticular orifice
23 Ruminoreticular fold
24 Cardia
25 Reticular groove
26 Right lip
27 Left lip
28 Reticulo-omasal orifice
29 Reticular crests and cells



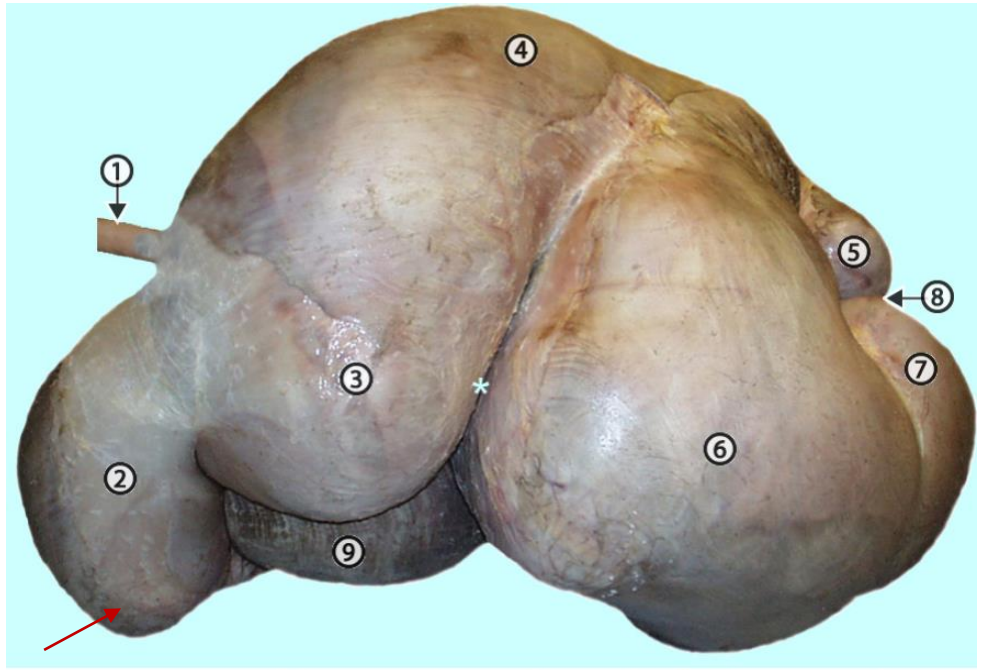
Curvatora major

THE COMPLEX STOMACH

RETICULUM:

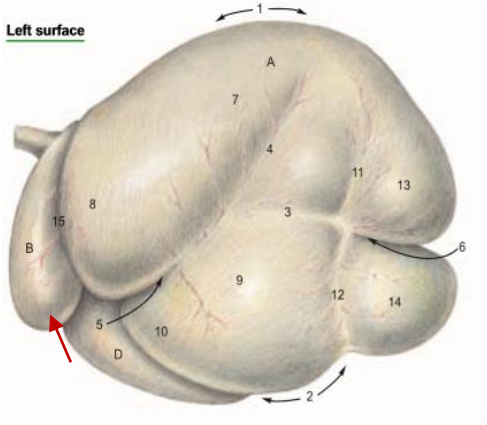
FUNDUS RETICULI:

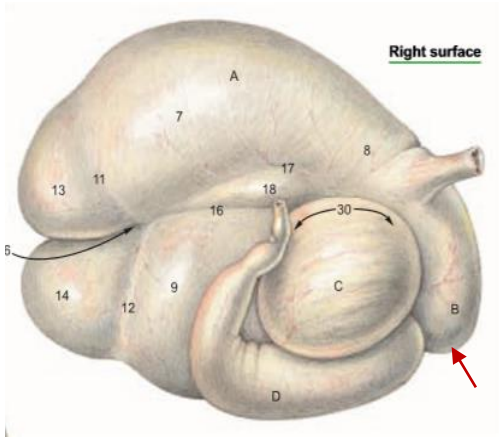
- rounded ventral portion

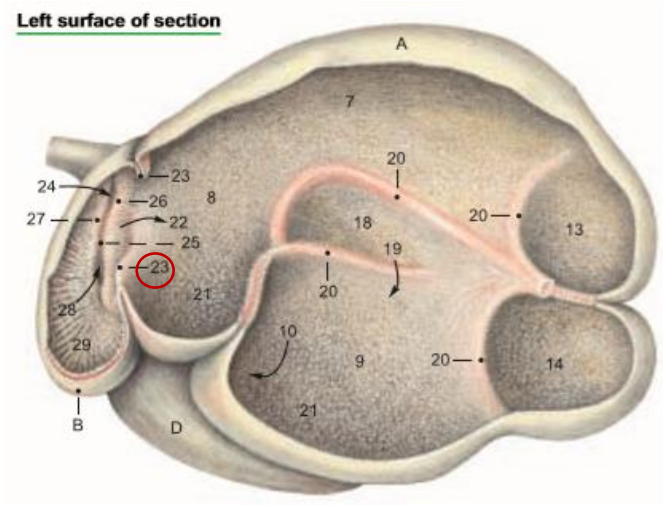


Left/cranial view of inflated bovine reticulorumen (inflation may distort the relative proportions of an organ). 1, esophagus; 2, reticulum; 3, cranial sac, a.k.a., atrium ruminis; 4, dorsal sac; 5, caudodorsal blind sac; 6, ventral sac; 7, caudoventral blind sac; 8, caudal groove; 9, abomasum; blue asterisk, cranial groove.

http://vanat.cvm.umn.edu/ungDissect/Lab14/Img14-2.html







Legend:

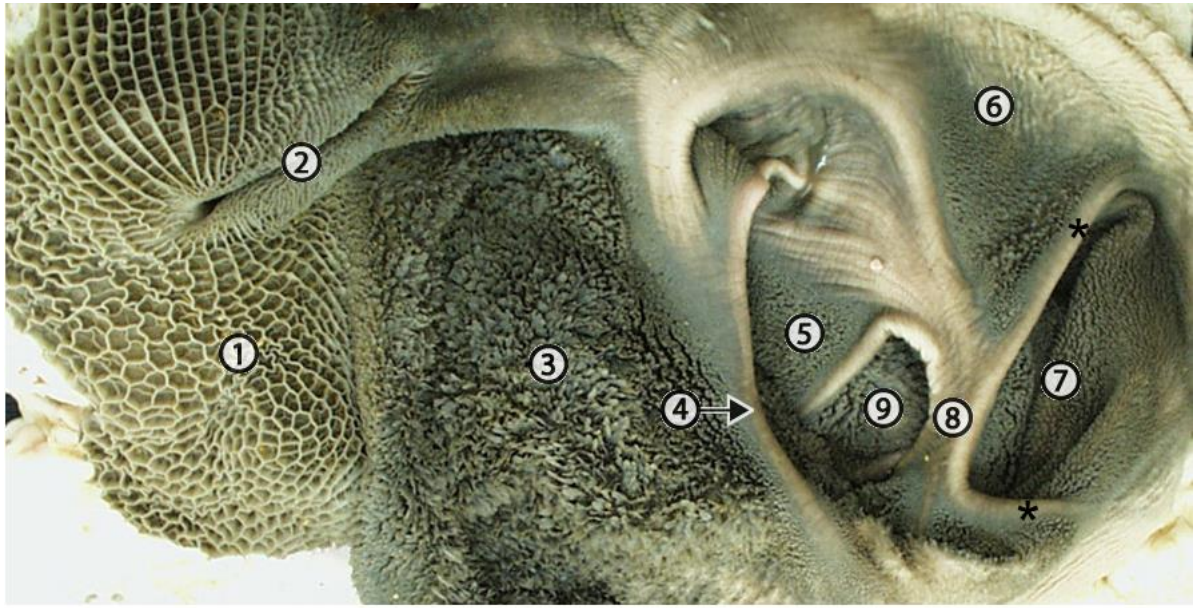
B Reticulum
22 Ruminoreticular orifice
23 Ruminoreticular fold
24 Cardia
25 Reticular groove
26 Right lip
27 Left lip
28 Reticulo-omasal orifice
29 Reticular crests and cells

THE COMPLEX STOMACH

RETICULUM:

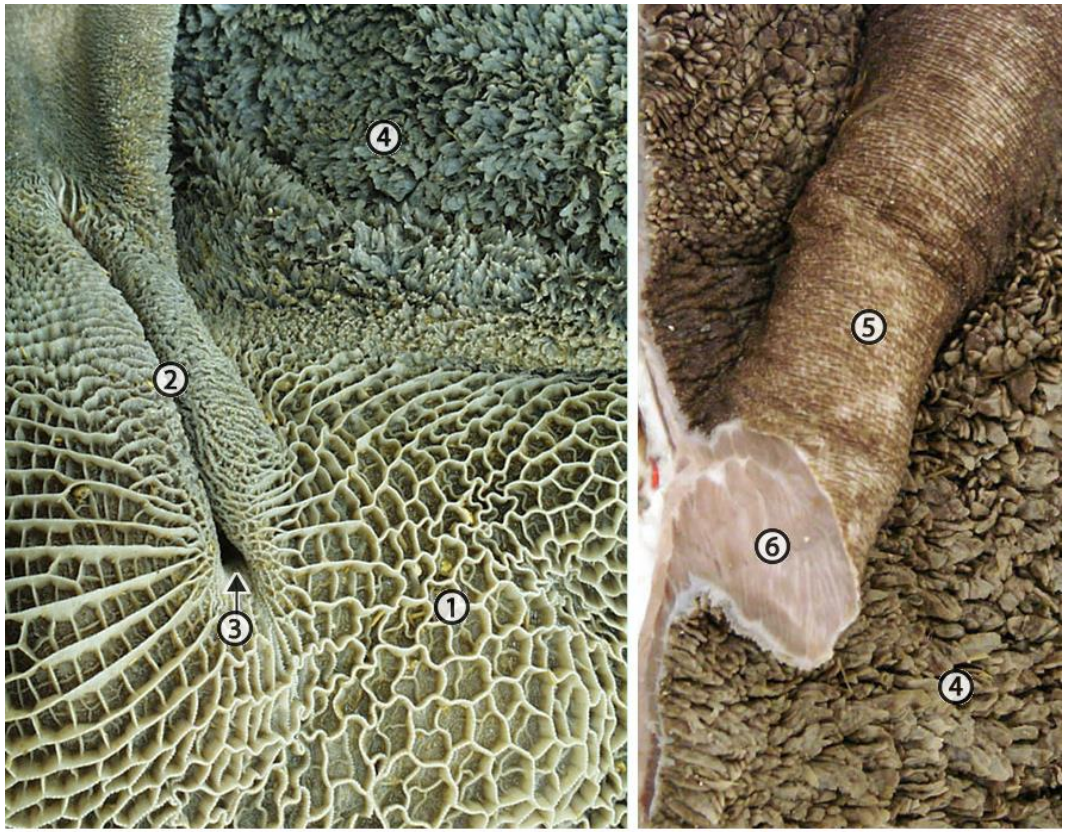
SULCUS RETICULI:

- **reticular groove**
- **extends from the cardiac orifice to the reticulo – omasal orifice**
- **along the inside of lesser curvature**



Interior view of a bovine ruminoreticulum (with some distortion due to flattening). 1, reticulum; 2, reticular groove between two folds (lips); 3, cranial sac; 4, cranial pillar; 5, ventral sac; 6, dorsal sac; 7, caudodorsal blind sac; 8, caudal pillar; asterisks, dorsal coronary pillars; 9, caudoventral blind sac. The pillars are devoid of papillae.

http://vanat.cvm.umn.edu/ungDissect/Lab14/Img14-4.html



Closer interior view of a bovine ruminoreticulum. 1, reticulum; 2, reticular groove between two folds (lips); 3, entrance to the omasum; 4, ruminal papillae; 5, a ruminal pillar; 6, cut edge of the pillar to show abundant smooth muscle.

http://vanat.cvm.umn.edu/ungDissect/Lab14/Img14-5.html

THE COMPLEX STOMACH

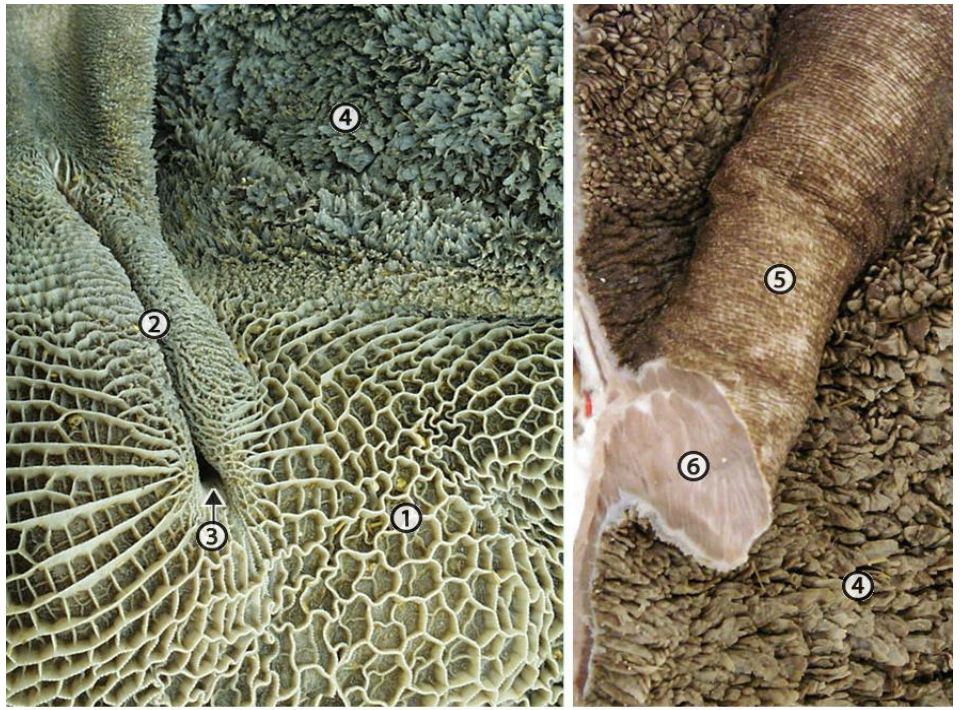
RETICULUM:

LABIUM DEXTRUM:

- **right lip**
- **at the cardiac orifice**

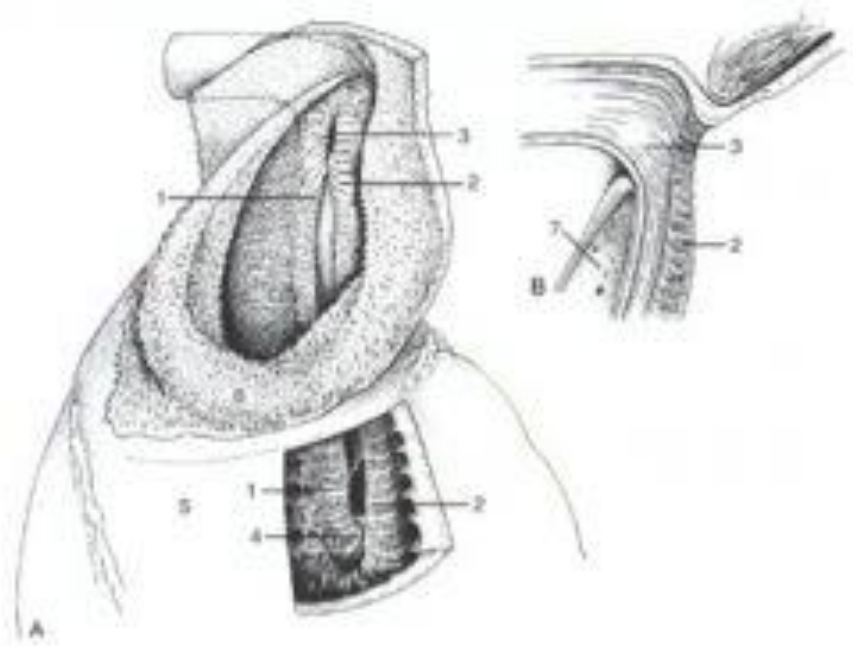
LABIUM SINISTRUM:

- **left lip**
- **at the cardiac orifice**



Closer interior view of a bovine ruminoreticulum. 1, reticulum; 2, reticular groove between two folds (lips); 3, entrance to the omasum; 4, ruminal papillae; 5, a ruminal pillar; 6, cut edge of the pillar to show abundant smooth muscle.

http://vanat.cvm.umn.edu/ungDissect/Lab14/Img14-5.html



1. Left lip of the reticular groove
2. Right lip of the reticular groove
3. Cardia
4. Reticulo-omasal orifice
5. Wall of reticulum
6. Ruminoreticular fold

https://www.cram.com/flashcards/gross-spring-equine-and-ruminant-liver-and-stomach-mt2-1322543

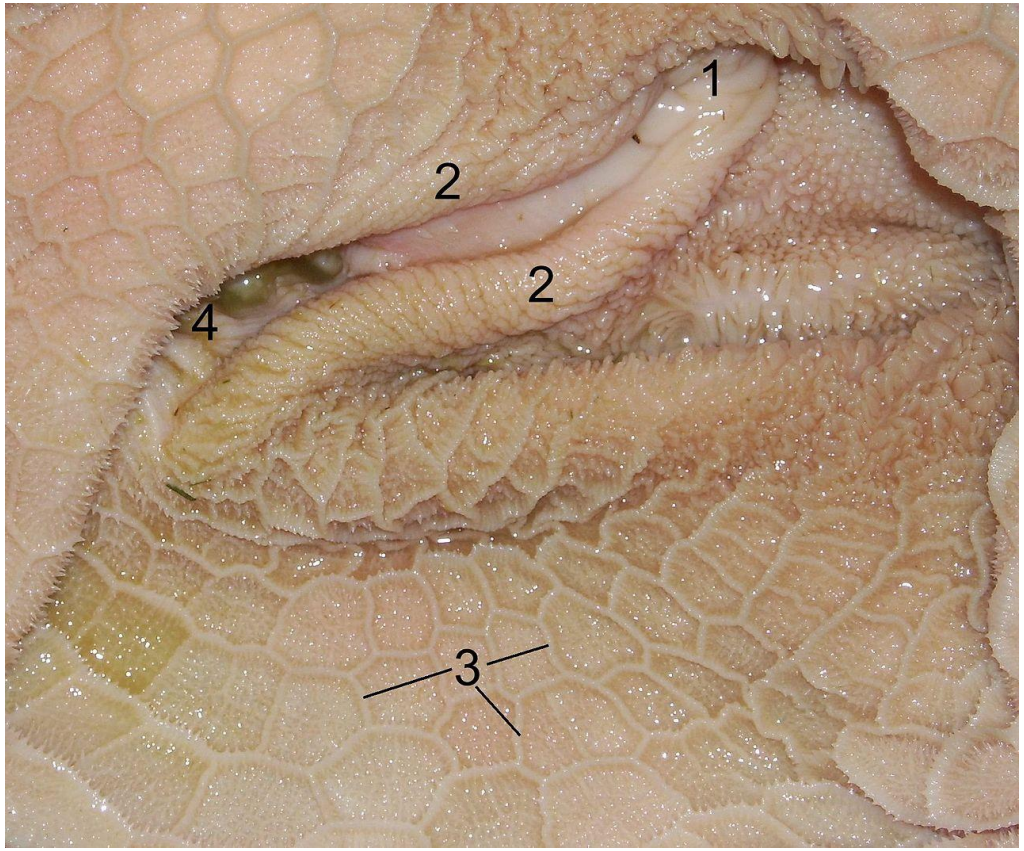
THE COMPLEX STOMACH

RETICULUM:

FUNDUS SULCI RETICULI:

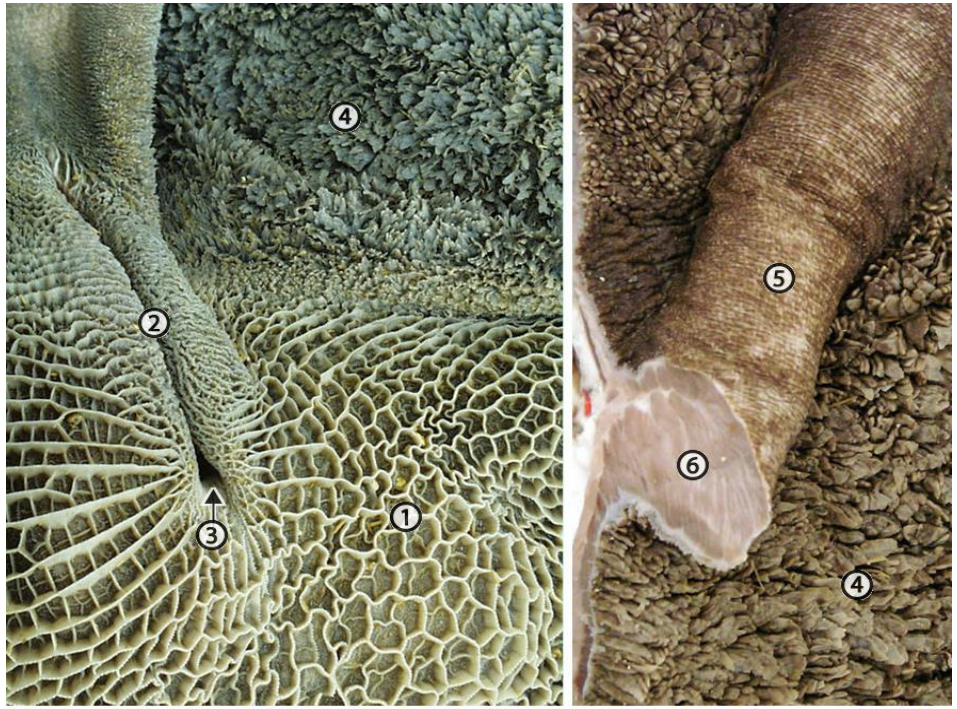
- floor of the reticular groove

- between the labia



Mucosa of the reticulum of a sheep.
1 esophageal opening, 2 lips of reticulum, 3 cristae, 4 reticulo-omasial opening

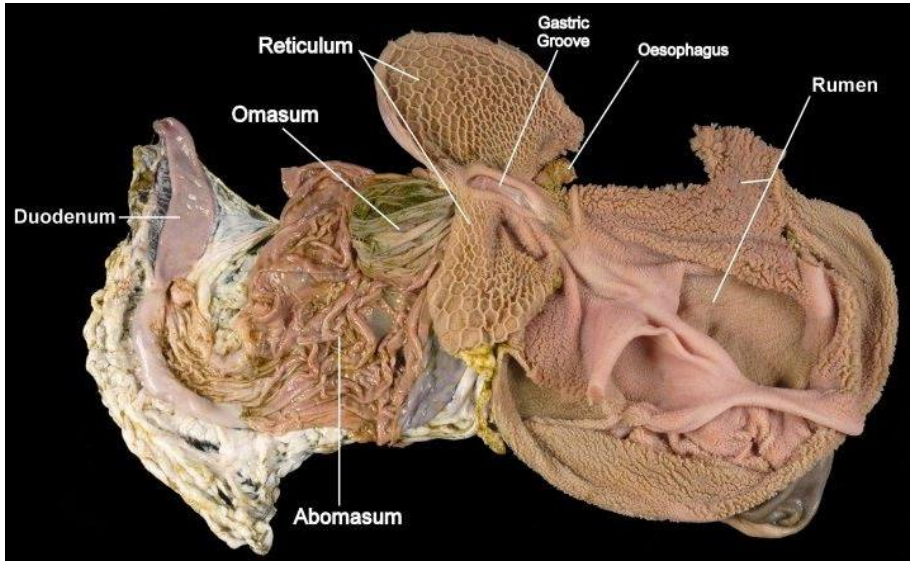
https://pl.wikipedia.org/wiki/Rynienka_czepca#/media/File:Reticulum-mucosa.jpg



Closer interior view of a bovine ruminoreticulum. 1, reticulum; 2, reticular groove between two folds (lips); 3, entrance to the omasum; 4, ruminal papillae; 5, a ruminal pillar; 6, cut edge of the pillar to show abundant smooth muscle.

http://vanat.cvm.umn.edu/ungDissect/Lab14/Img14-5.html

THE COMPLEX STOMACH



https://www.imagessure.com/pictures/sheep-stomach-anatomy-68.html

RETICULUM:

CRISTAE RETICULI:

- **reticular crest**
- **folds of the mucosa**

CELLULAE RETICULI:

- **cells of the reticulum**
- **4-5-6 – sided recesses enclosed by the cristae reticuli**

PAPILLAE RETICULI:

- **on the crests**
- **in the cellulae reticuli**

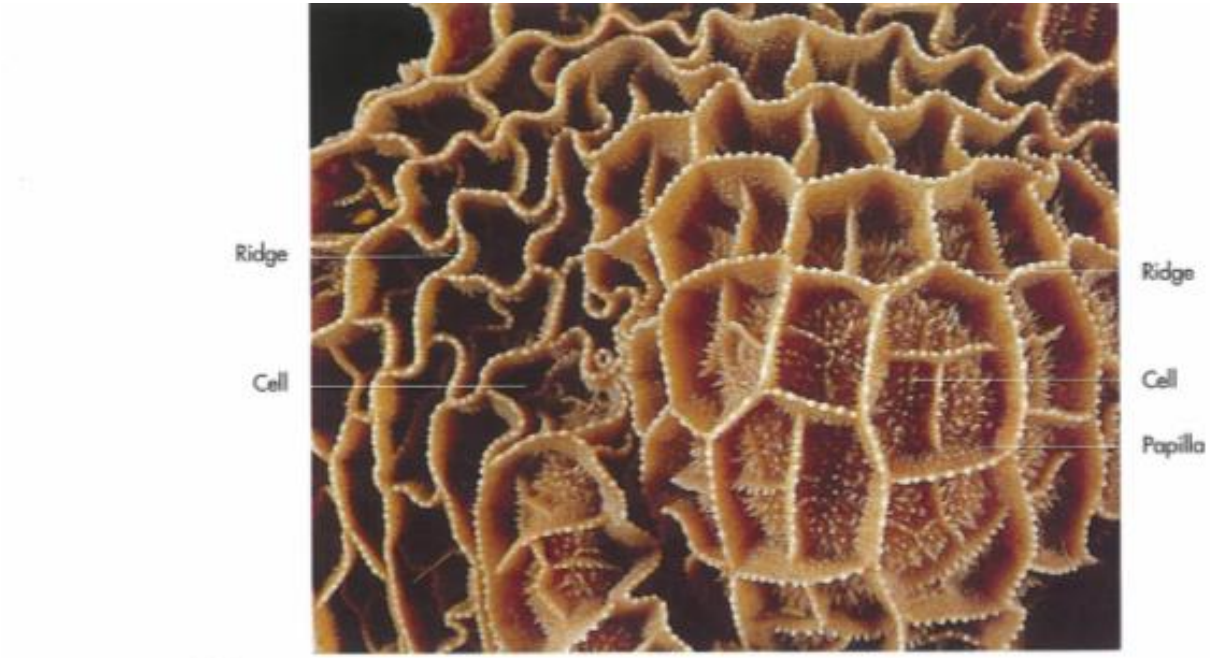
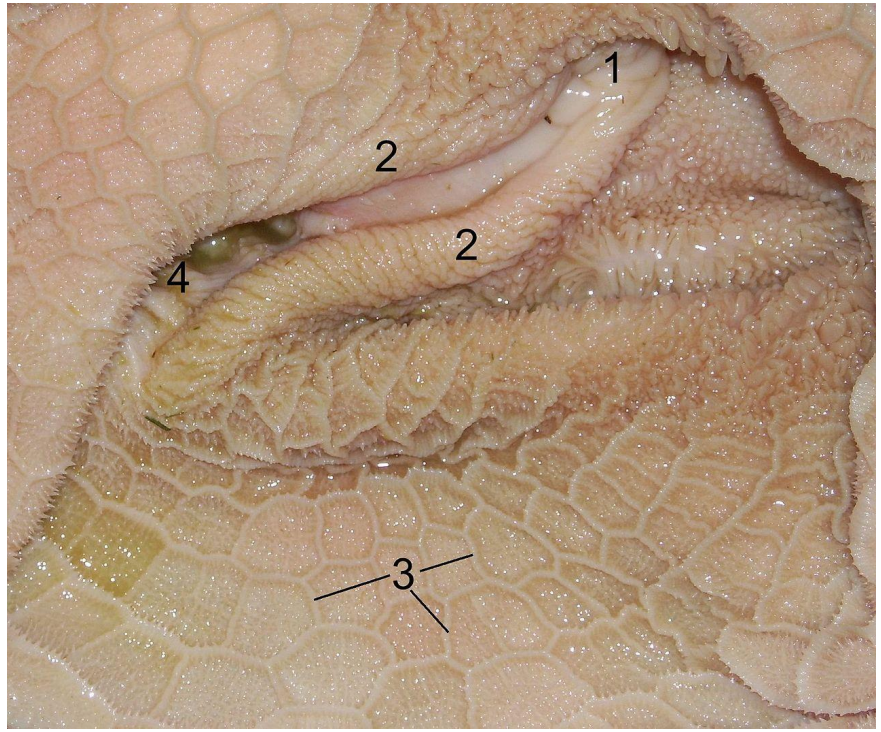


Fig 7-72. Interior of a bovine reticulum.

THE COMPLEX STOMACH

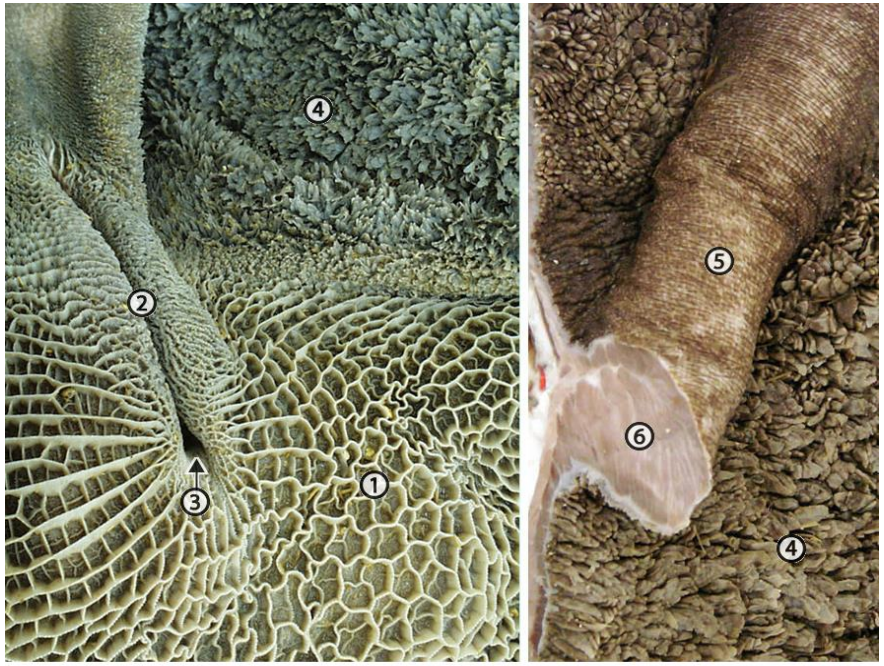
OSTIUM RETICULO – OMASICUM:

- opening from the reticulum to the omasum



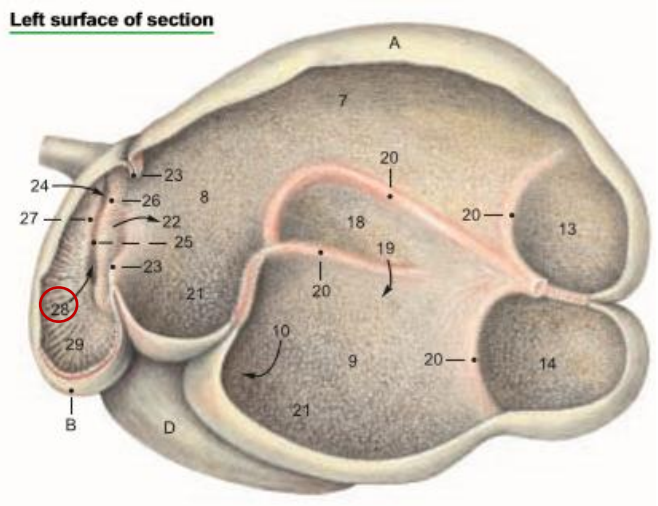
Mucosa of the reticulum of a sheep.
1 esophageal opening,
2 lips of reticulum,
3 cristae,
4 reticulo-omasial opening

https://pl.wikipedia.org/wiki/Rynienka_czepca#/media/File:Reticulum-mucosa.jpg



Closer interior view of a bovine ruminoreticulum. 1, reticulum; 2, reticular groove between two folds (lips); 3, entrance to the omasum; 4, ruminal papillae; 5, a ruminal pillar; 6, cut edge of the pillar to show abundant smooth muscle.

http://vanat.cvm.umn.edu/ungDissect/Lab14/Img14-5.html



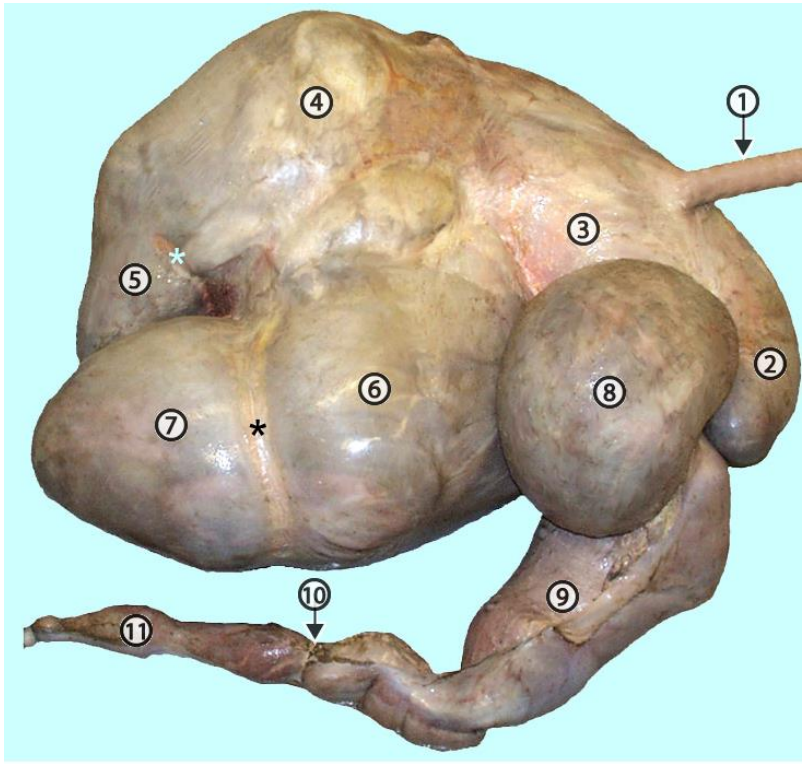
Legend:

B Reticulum
22 Ruminoreticular orifice
23 Ruminoreticular fold
24 Cardia
25 Reticular groove
26 Right lip
27 Left lip
28 Reticulo-omasal orifice
29 Reticular crests and cells

THE COMPLEX STOMACH

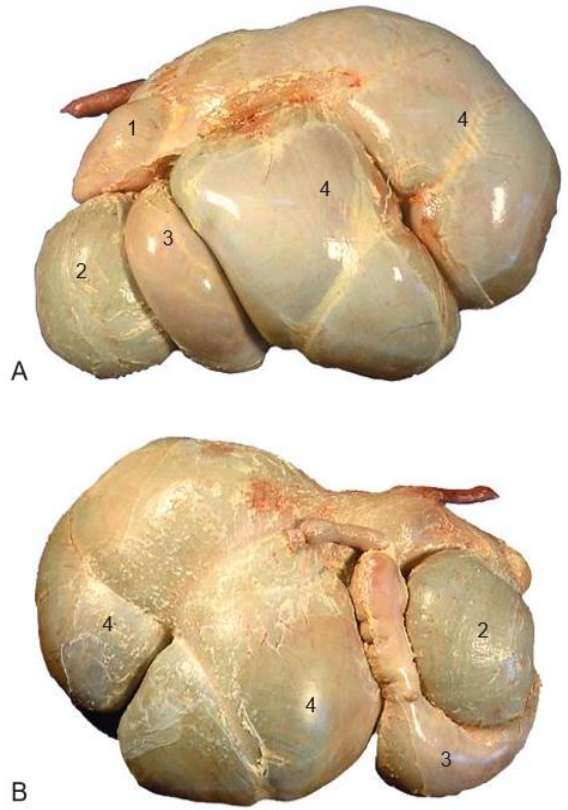
OMASUM:

- **third compartment**



Right side of inflated bovine stomach. 1, esophagus; 2, reticulum; 3, cranial sac, a.k.a., atrium ruminis; 4, dorsal sac; 5, caudodorsal blind sac; blue asterisk, right dorsal coronary groove; 6, ventral sac; 7, caudoventral blind sac; black asterisk, right ventral coronary groove; 8, omasum; 9, abomasum; 10, pyloris; 11, descending duodenum.

http://vanat.cvm.umn.edu/ungDissect/Lab14/Img14-3.html

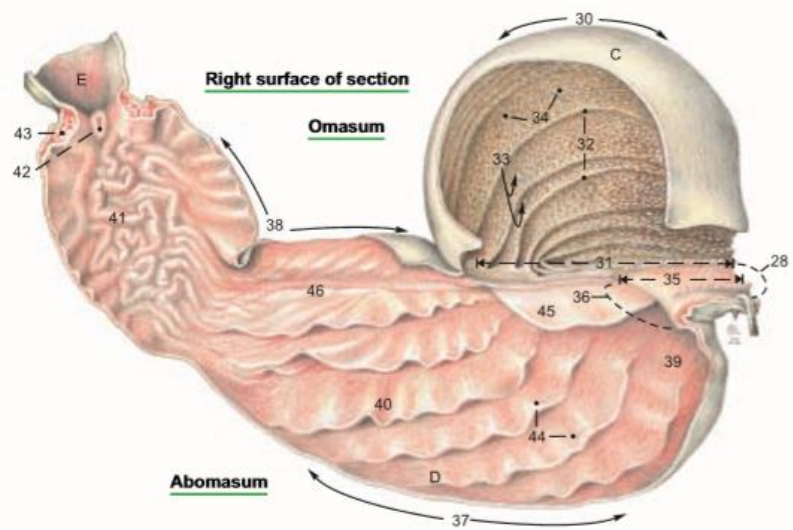


1. Reticulum
2. Omasum
3. Abomasum
4. Rumen

Note: **A,** Left side. **B,** Right side.

Legend:

C Omasum
30 Curvature
31 Base
32 Omasal laminae
33 Interlaminar recesses
34 Papillae
35 Omasal groove
36 Omasoabomasal orifice



THE COMPLEX STOMACH

OMASUM:

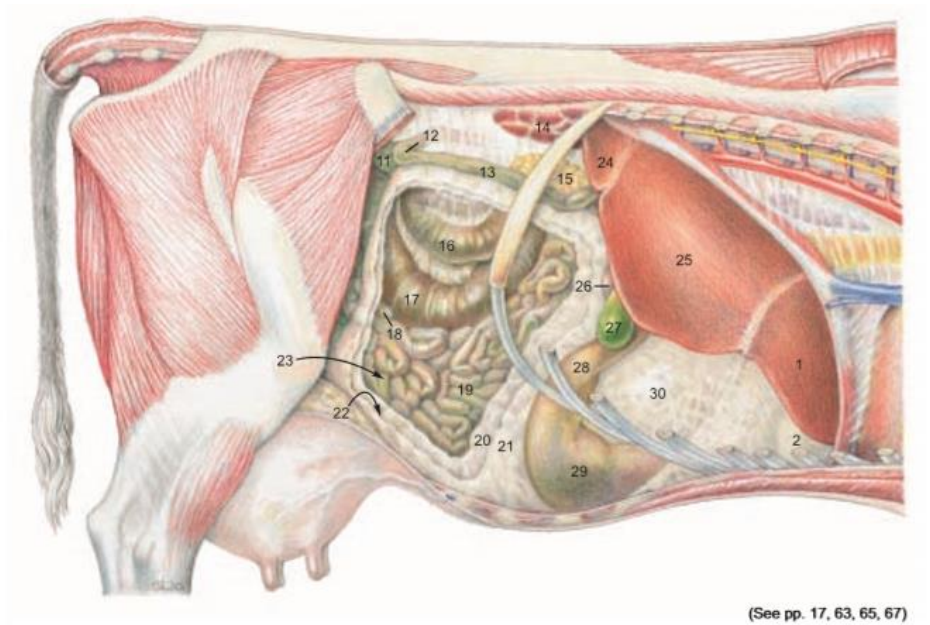
FACIES PARIETALIS:

- **surface facing the liver**

FACIES VISCERALIS:

- surface facing the rumen

(Right side)



(See pp. 17, 63, 65, 67)

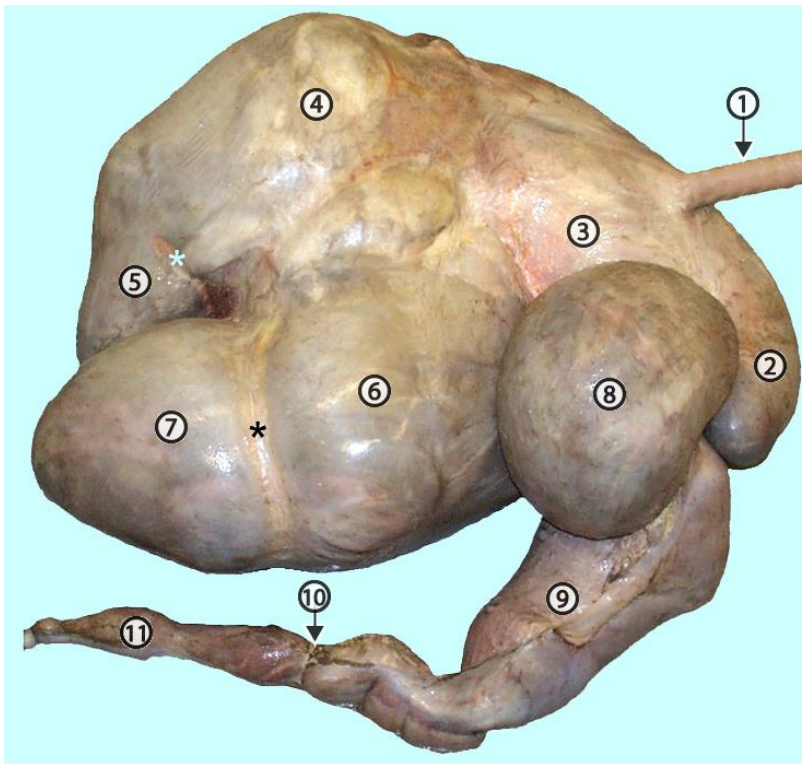
Legend:

16 Prox. loop of ascending colon
17 Cecum
18 Ileum
19 Jejunum

Greater omentum:
20 Deep wall
21 Supf. wall
22 Caudal recess

23 Supraomental recess
24 Caudate process of liver
25 Right lobe of liver
26 Cranial part of duodenum

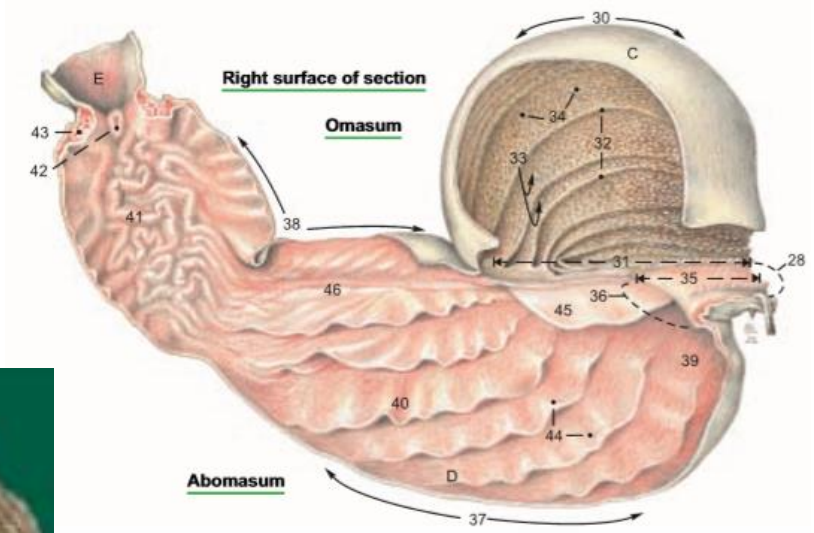
27 Gall bladder
28 Pyloric part of abomasum
29 Body of abomasum
30 Omasum covered by lesser omentum



Right side of inflated bovine stomach. 1, esophagus; 2, reticulum; 3, cranial sac, a.k.a., atrium ruminis; 4, dorsal sac; 5, caudodorsal blind sac; blue asterisk, right dorsal coronary groove; 6, ventral sac; 7, caudoventral blind sac; black asterisk, right ventral coronary groove; 8, omasum; 9, abomasum; 10, pyloris; 11, descending duodenum.

http://vanat.cvm.umn.edu/ungDissect/Lab14/Img14-3.html

THE COMPLEX STOMACH



Legend:

C Omasum
30 Curvature
31 Base
32 Omasal laminae
33 Interlaminar recesses
34 Papillae
35 Omasal groove
36 Omasoabomasal orifice

OMASUM:

CURVATORA OMASI:

faces:

- **dorsally**
- **caudally**
- **to the right**

A light photograph of the omasum of goat (A. closed B. opened by sagittal section).1. Reticulo-omasal orifice, 2. Omaso-abomasal orifice, 3. lesser curvature, 4. greater curvature, 5. large conical papillae, 6. Pedunculated base, 7. Omasal groove, 8. Conical and hooked papillae, 9. dome-shape papillae, 10. Free border of laminae, 11. Vela abomasica and a, b, c, d were 1st, 2nd, 3rd and 4th order laminae

https://scialert.net/fulltextmobile/?doi=jbs.2010.596.607

THE COMPLEX STOMACH

OMASUM:

BASIS OMASI:

faces:

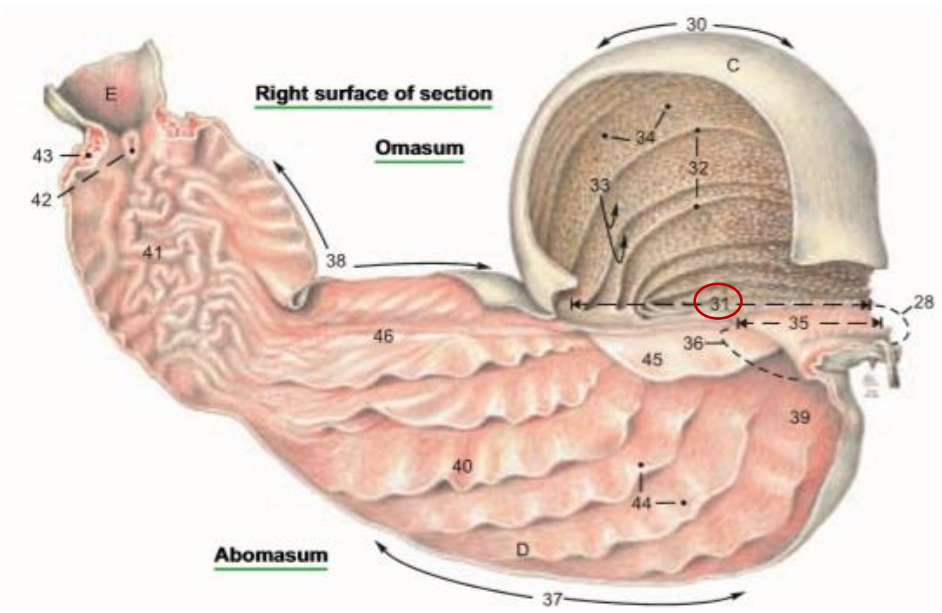
- **cranially**
- **to the left**

attached to:

a. the reticulum

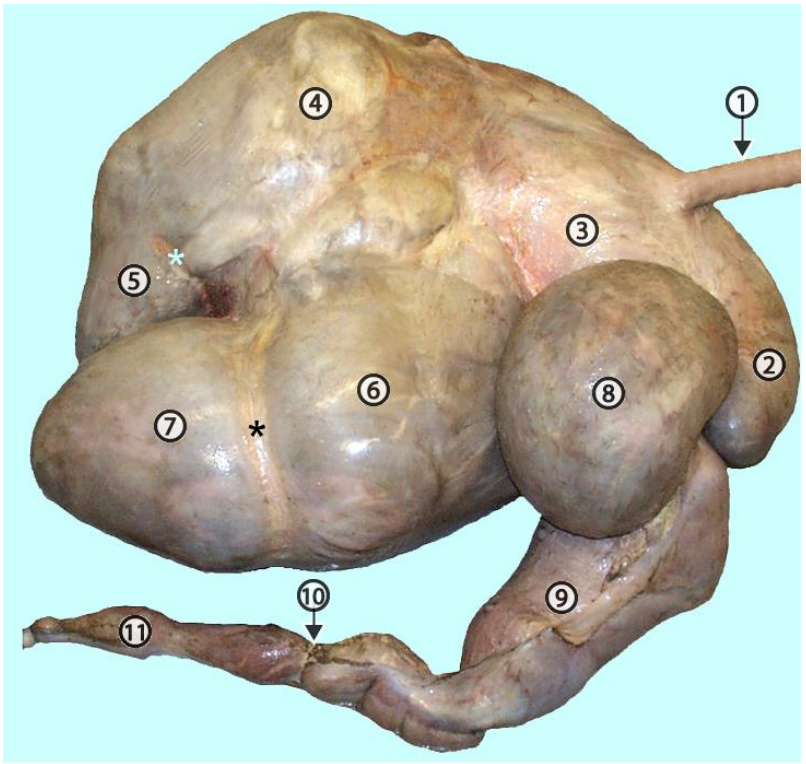
b. the abomasum

- **contains the sulcus omasi**



Legend:

C Omasum
30 Curvature
31 Base
32 Omasal laminae
33 Interlaminar recesses
34 Papillae
35 Omasal groove
36 Omasoabomasal orifice



Right side of inflated bovine stomach. 1, esophagus; 2, reticulum; 3, cranial sac, a.k.a., atrium ruminis; 4, dorsal sac; 5, caudodorsal blind sac; blue asterisk, right dorsal coronary groove; 6, ventral sac; 7, caudoventral blind sac; black asterisk, right ventral coronary groove; 8, omasum; 9, abomasum; 10, pyloris; 11, descending duodenum.

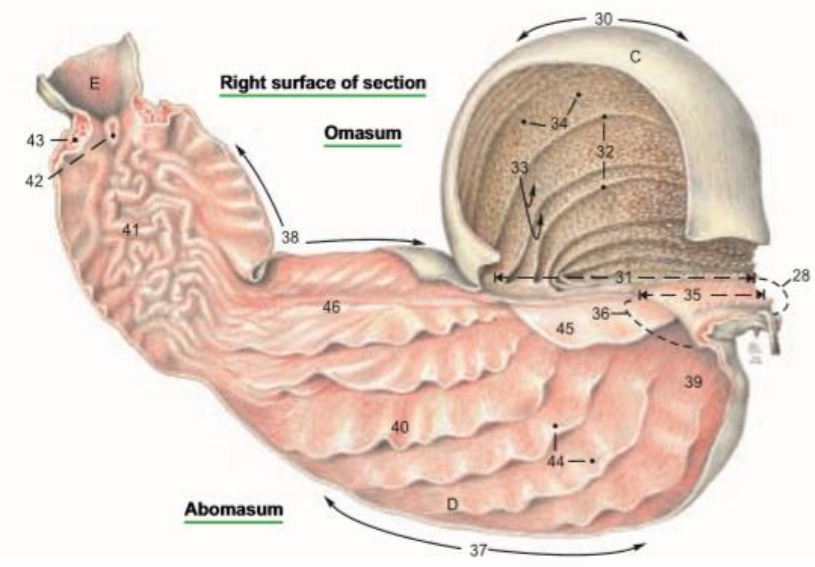
http://vanat.cvm.umn.edu/ungDissect/Lab14/Img14-3.html

THE COMPLEX STOMACH

OMASUM:

SULCUS OMASI:

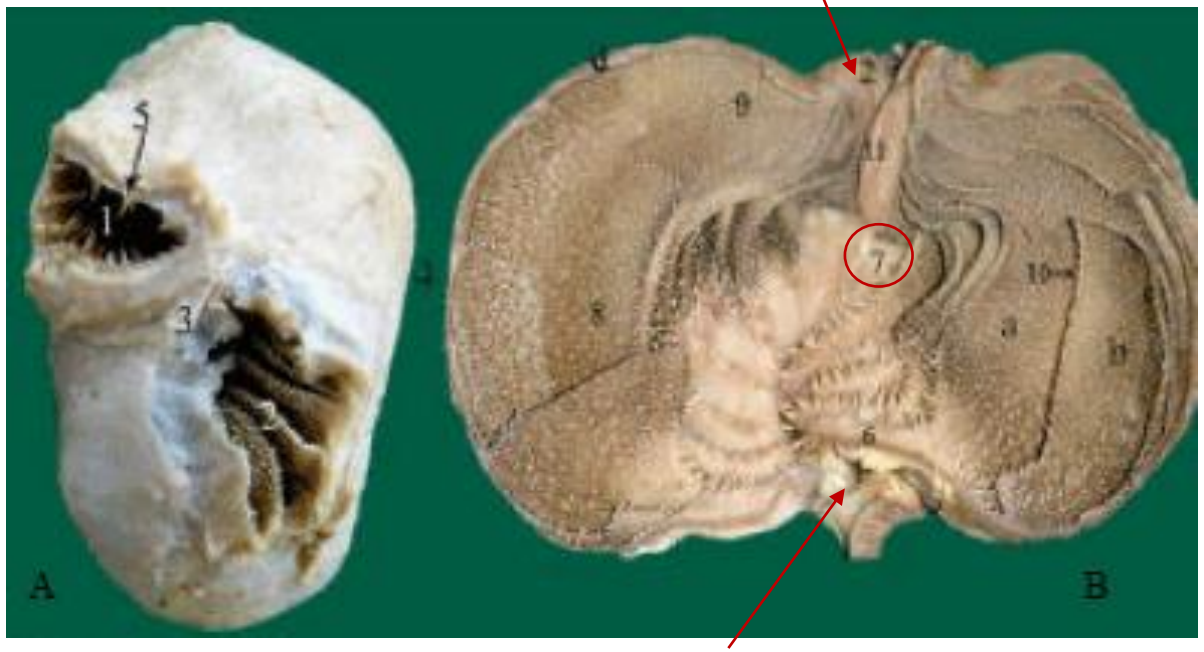
- extends from the ostium reticulo - omasicum to the ostium omasoabomasicum



Legend:

C Omasum
30 Curvature
31 Base
32 Omasal laminae
33 Interlaminar recesses
34 Papillae
35 Omasal groove
36 Omasoabomasal orifice

Ostium omasoabomasicum



Ostium reticuloomasicum

A light photograph of the omasum of goat (A. closed B. opened by sagittal section).1. Reticulo-omasal orifice, 2. Omaso-abomasal orifice, 3. lesser curvature, 4. greater curvature, 5. large conical papillae, 6. Pedunculated base, 7. Omasal groove, 8. Conical and hooked papillae, 9. dome-shape papillae, 10. Free border of laminae, 11. Vela abomasica and a, b, c, d were 1st, 2nd, 3rd and 4th order laminae

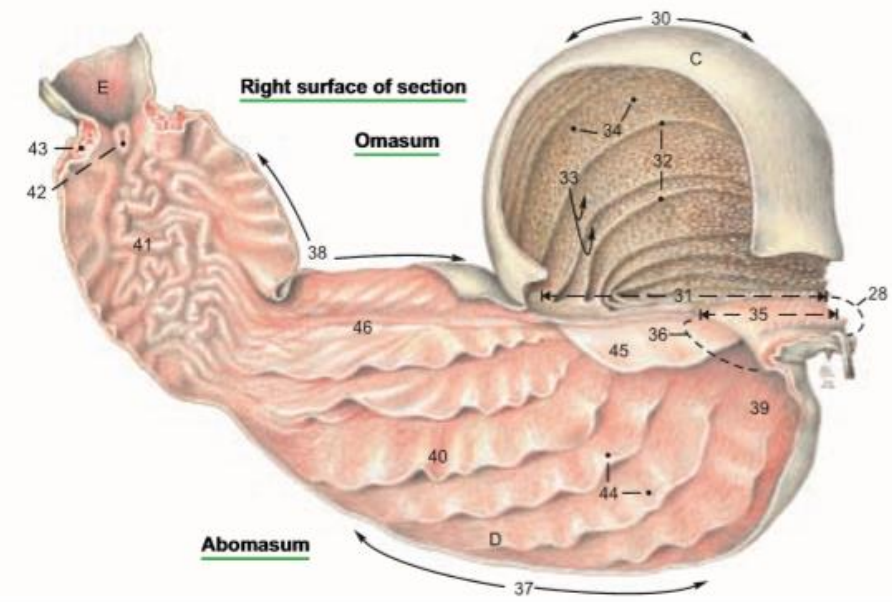
https://scialert.net/fulltextmobile/?doi=jbs.2010.596.607

THE COMPLEX STOMACH

OMASUM:

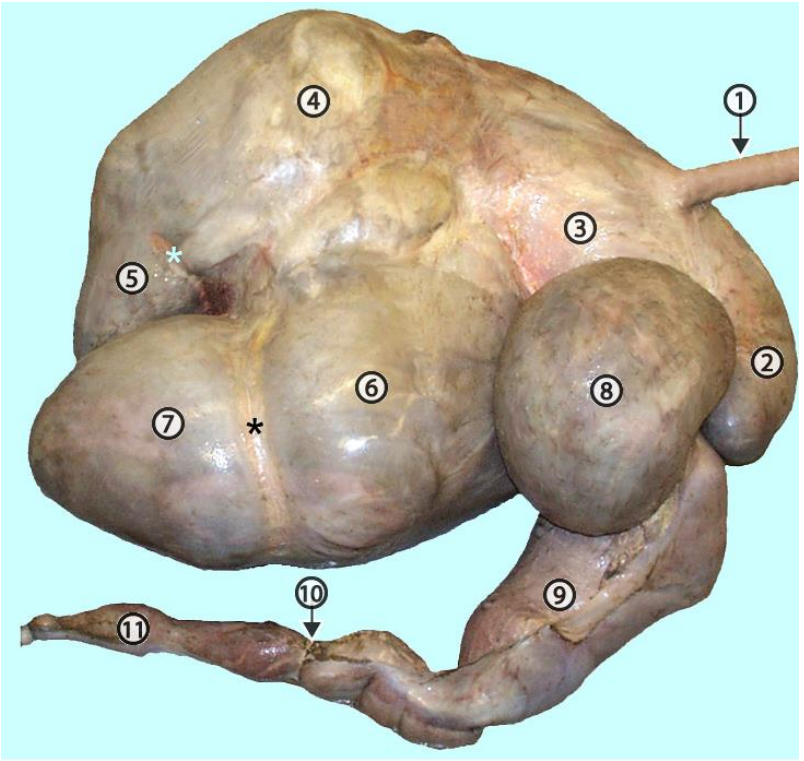
CORPUS OMASI:

- **body of the omasum**
- **between the curvatora and the basis**



Legend:

C Omasum
30 Curvature
31 Base
32 Omasal laminae
33 Interlaminar recesses
34 Papillae
35 Omasal groove
36 Omasoabomasal orifice



Right side of inflated bovine stomach. 1, esophagus; 2, reticulum; 3, cranial sac, a.k.a., atrium ruminis; 4, dorsal sac; 5, caudodorsal blind sac; blue asterisk, right dorsal coronary groove; 6, ventral sac; 7, caudoventral blind sac; black asterisk, right ventral coronary groove; 8, omasum; 9, abomasum; 10, pyloris; 11, descending duodenum.

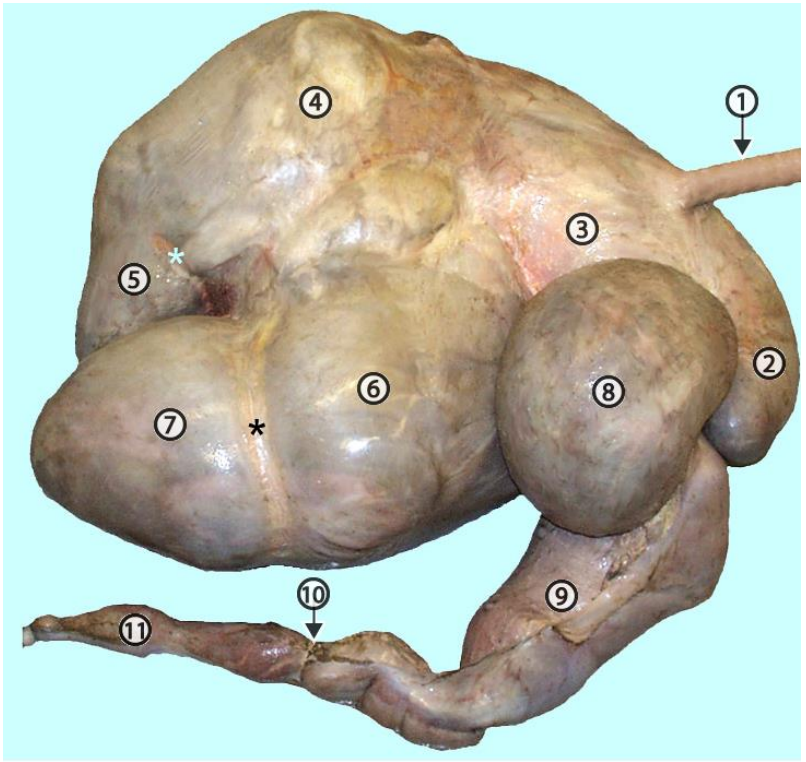
http://vanat.cvm.umn.edu/ungDissect/Lab14/Img14-3.html

THE COMPLEX STOMACH

OMASUM:

COLLUM OMASI:

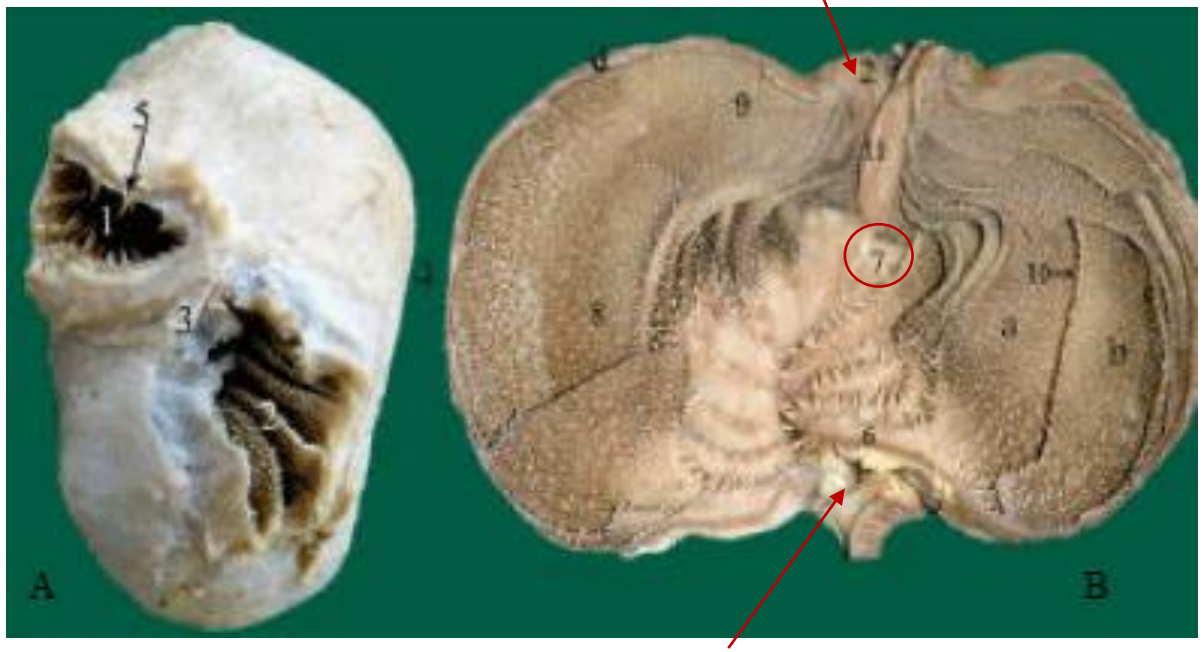
- **atteched to the reticulum**
- **contains the ostium reticulo - omasicum**



Right side of inflated bovine stomach. 1, esophagus; 2, reticulum; 3, cranial sac, a.k.a., atrium ruminis; 4, dorsal sac; 5, caudodorsal blind sac; blue asterisk, right dorsal coronary groove; 6, ventral sac; 7, caudoventral blind sac; black asterisk, right ventral coronary groove; 8, omasum; 9, abomasum; 10, pyloris; 11, descending duodenum.

http://vanat.cvm.umn.edu/ungDissect/Lab14/Img14-3.html

Ostium omasoabomasicum



Ostium reticuloomasicum

A light photograph of the omasum of goat (A. closed B. opened by sagittal section).1. Reticulo-omasal orifice, 2. Omaso-abomasal orifice, 3. lesser curvature, 4. greater curvature, 5. large conical papillae, 6. Pedunculated base, 7. Omasal groove, 8. Conical and hooked papillae, 9. dome-shape papillae, 10. Free border of laminae, 11. Vela abomasica and a, b, c, d were 1st, 2nd, 3rd and 4th order laminae

https://scialert.net/fulltextmobile/?doi=jbs.2010.596.607

THE COMPLEX STOMACH

OMASUM:

LAMINAE OMASI:

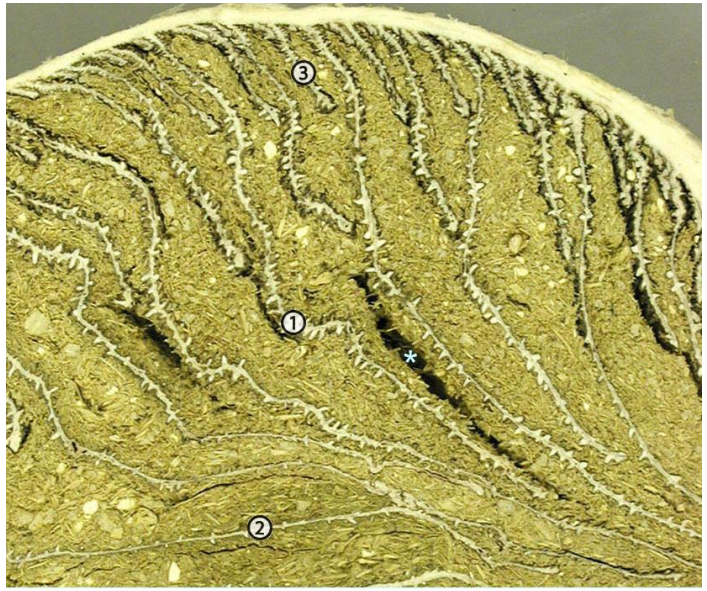
- **flat, paralell folds of mucosa**
- **extend from the curvatora omasi to the sulcus omasi**

PAPILLAE OMASI:

- on the laminae omasi

Fig 7-73. Bovine omasum.

Fig 7-74. Section of a bovine omasum.



Close up view of previous image. Some omasal laminae have large papillae (1, 3) while other laminae are thin and have subtle papillae (2). Some of the laminae are long (1) and others are short (3).

http://vanat.cvm.umn.edu/ungDissect/Lab14/Img14-7.html

Cross section of a bovine omasum which is firm because it is packed with rather dry ingesta. The ingesta is separated by omasal laminae which have many papillae (black asterisks, on left side) or lack obvious papillae (blue asterisks).

http://vanat.cvm.umn.edu/ungDissect/Lab14/Img14-6.html

Papillae omasi
http://www.doctorc.net/Labs/Lab21/Examples/exomasum.htm

THE COMPLEX STOMACH

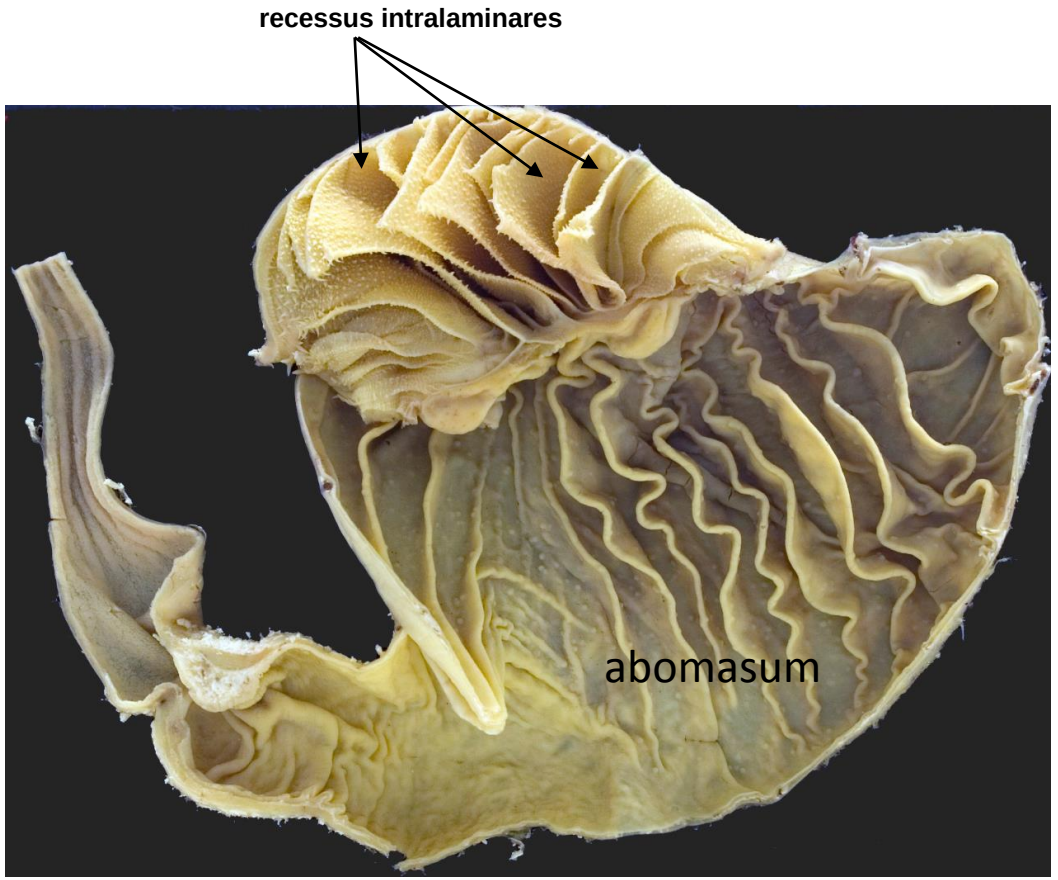
OMASUM:

RECESSUS INTERLAMINARES:

- spaces between the laminae omasi

Fig 7-73. Bovine omasum.

Fig 7-74. Section of a bovine omasum.



http://www.onlineveterinaryanatomy.net/content/omasum-and-abomasum-goat

THE COMPLEX STOMACH

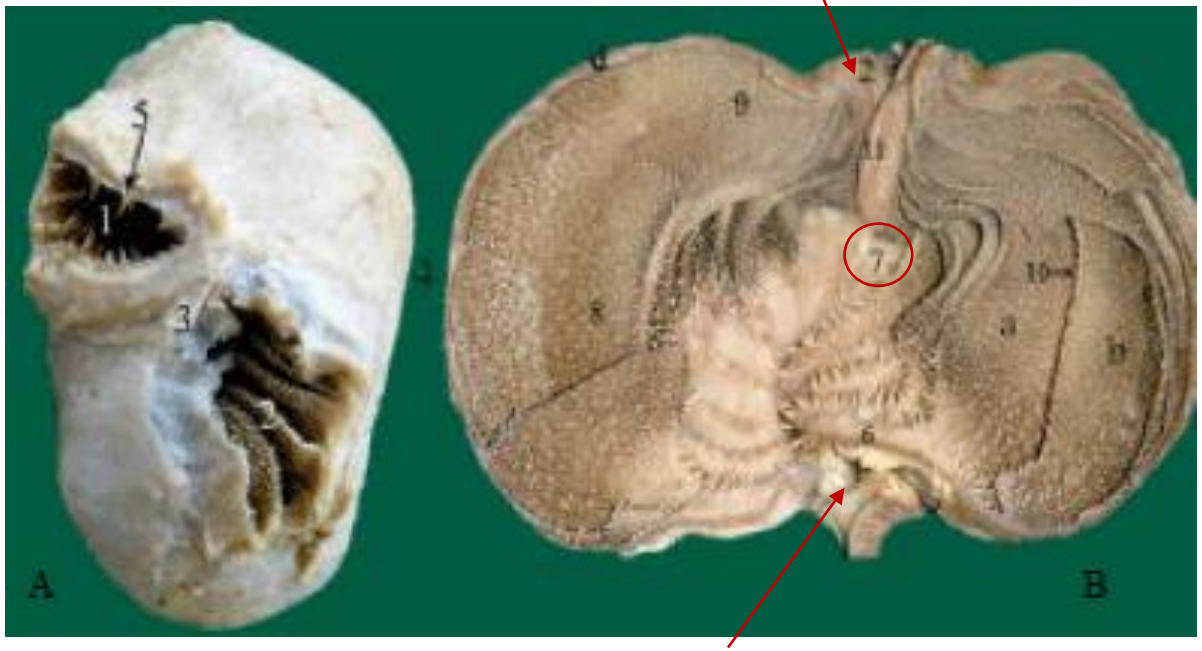
OMASUM:

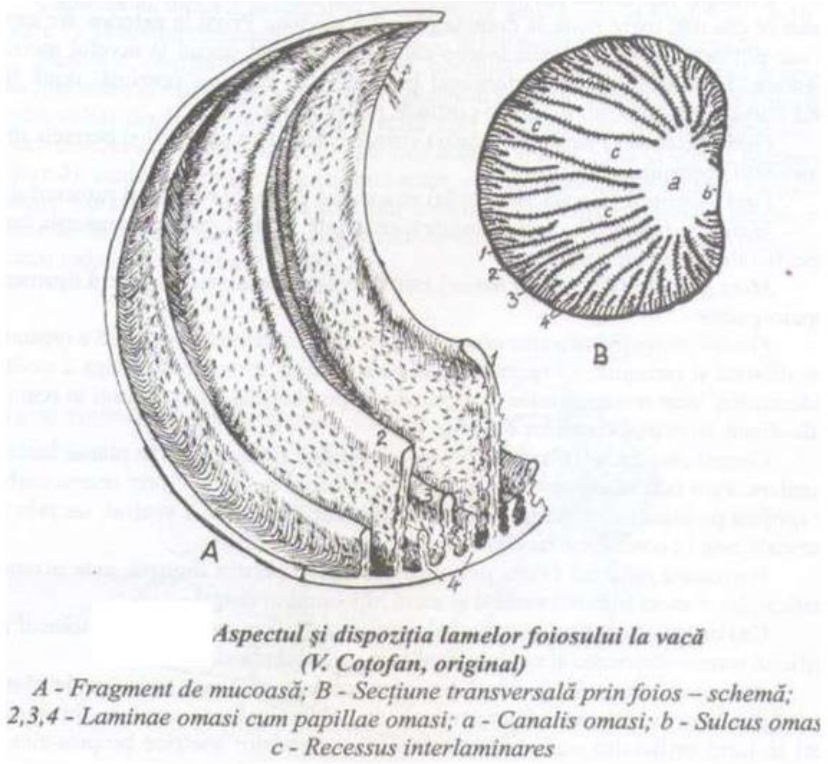
CANALIS OMASI:

formed by:

- sulcus omasi

- free borders of the laminae omasi





Aspectul și dispoziția lamelor foiosului la vacă
(V. Cotofan, original)
A - Fragment de mucoasă; B - Secțiune transversală prin foios – schemă;
2,3,4 - Laminae omasi cum papillae omasi; a - Canalis omasi; b - Sulcus omas
c - Recessus interlaminares

https://en.ppt-online.org/128226

A light photograph of the omasum of goat (A. closed B. opened by sagittal section).1. Reticulo-omasal orifice, 2. Omaso-abomasal orifice, 3. lesser curvature, 4. greater curvature, 5. large conical papillae, 6. Pedunculated base, 7. Omasal groove, 8. Conical and hooked papillae, 9. dome-shape papillae, 10. Free border of laminae, 11. Vela abomasica and a, b, c, d were 1st, 2nd, 3rd and 4th order laminae

https://scialert.net/fulltextmobile/?doi=jbs.2010.596.607

THE COMPLEX STOMACH

OSTIUM OMASOABOMASICUM:

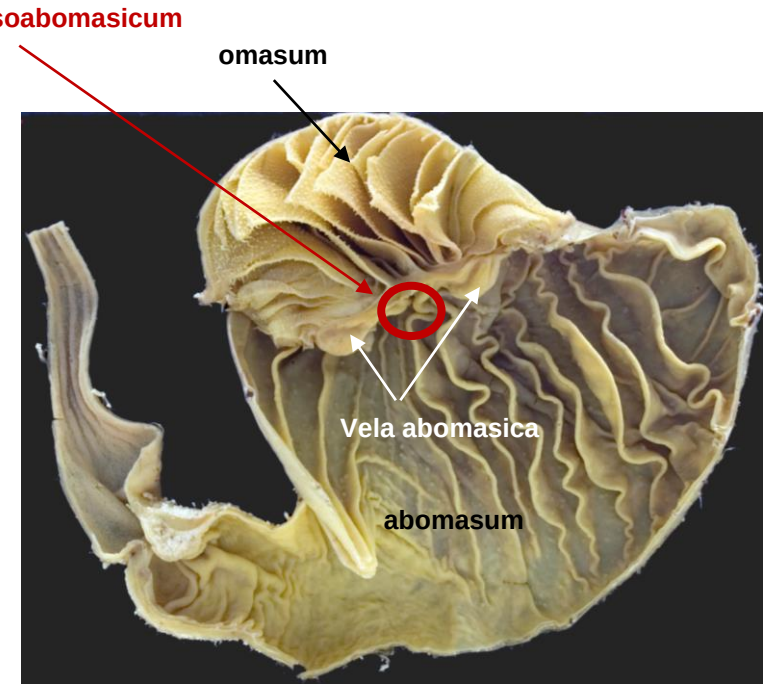
- **opening between omasum and abomasum**

SULCUS OMASOABOMASICUM:

- exterior groove between omasum and abomasum

VELA ABOMASICA:

- **folds of mucous membrane**
- **on both sides of the ostium omasoabomasicum**



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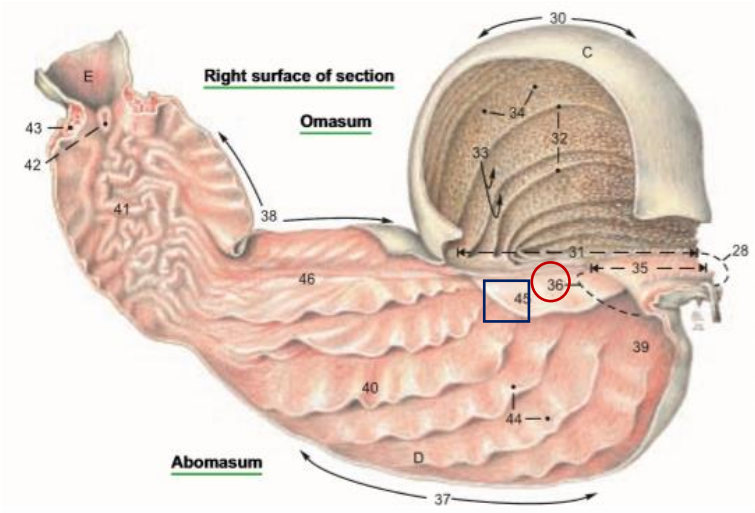


Legend:

C Omasum
30 Curvature
31 Base
32 Omasal laminae
33 Interlaminar recesses
34 Papillae
35 Omasal groove
36 Omasoabomasal orifice

D Abomasum
37 Greater curvature
38 Lesser curvature
39 Fundus
40 Body
41 Pyloric part
42 Torus pyloricus
43 Pyloric sphincter
44 Abomasal folds
45 Velum
46 Abomasal groove
E Duodenum

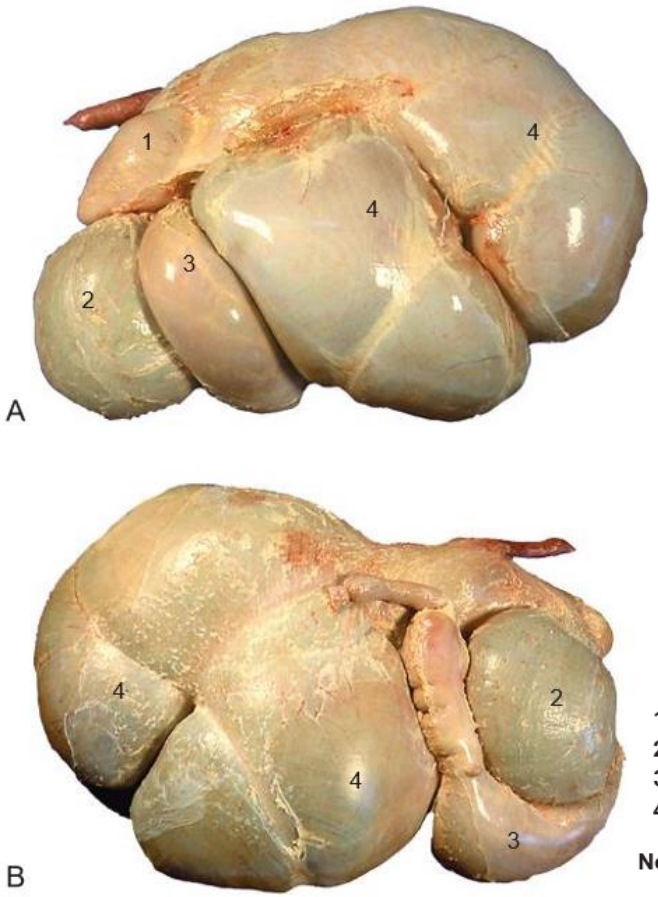
A light photograph showing the cross sections in omasum at level of. (A) Reticulo-omasal orifice B andC. Lesser curvature D. Omaso-abomasal orifice 1, 2, 3 and 4 were 1st, 2nd, 3rd and 4th order laminae 5. remenant of 5th order laminae 6. Reticulo-omasal orifice, 7. Pedunculated base, 8.Bifid conical papilla, 9. Omasal groove, 10. lateral fold with large conical papillae, 11. Omaso-abomasal orifice, 12. Abomasum, 13. Small conical and hook papillae, 14. Dome shape papillae and 15. Vela abomasica

https://scialert.net/fulltext/?doi=jbs.2010.596.607

THE COMPLEX STOMACH

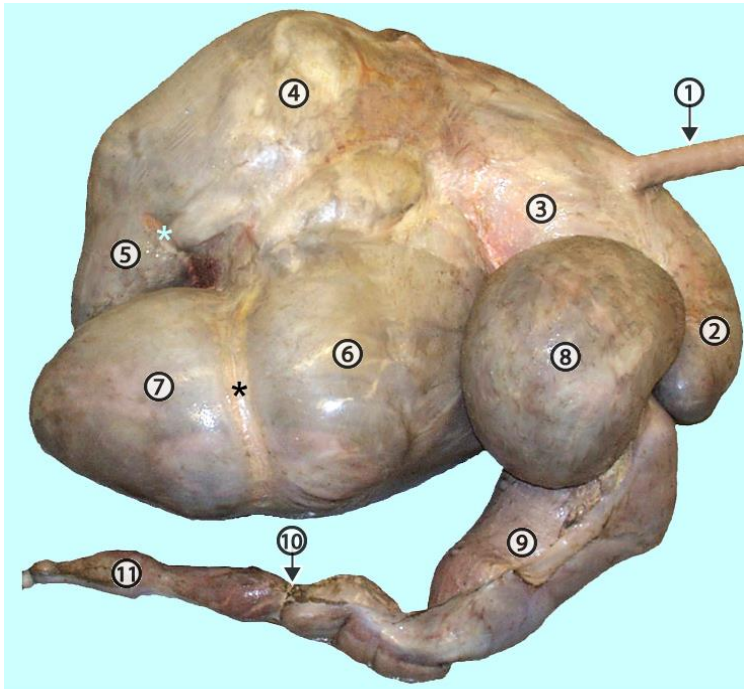
ABOMASUM:

- **corresponds to the simple stomach**
- **glandular stomach**



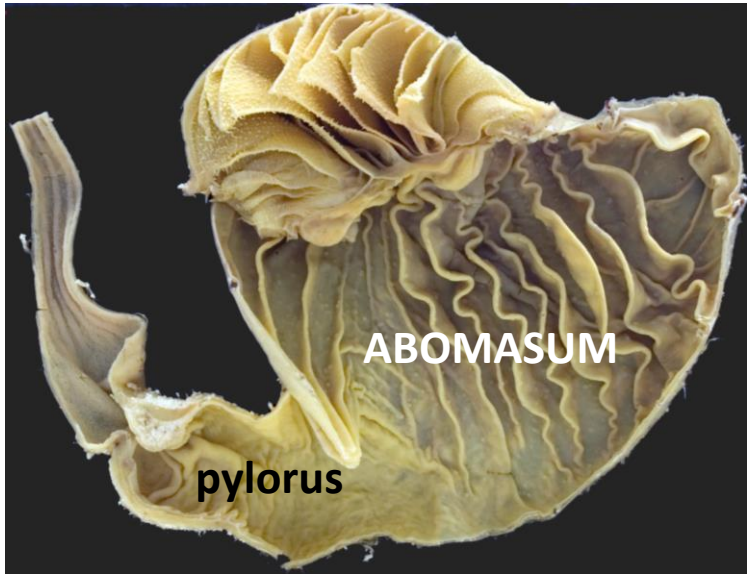
1. Reticulum
2. Omasum
3. Abomasum
4. Rumen

Note: A, Left side. **B,** Right side.



Right side of inflated bovine stomach. 1, esophagus; 2, reticulum; 3, cranial sac, a.k.a., atrium ruminis; 4, dorsal sac; 5, caudodorsal blind sac; blue asterisk, right dorsal coronary groove; 6, ventral sac; 7, caudoventral blind sac; black asterisk, right ventral coronary groove; 8, omasum; 9, abomasum; 10, pyloris; 11, descending duodenum.

http://vanat.cvm.umn.edu/ungDissect/Lab14/Img14-3.html



OSTIUM OMASOABOMASICUM:

http://www.onlineveterinaryanatomy.net/content/omasum-and-abomasum-goat

THE COMPLEX STOMACH

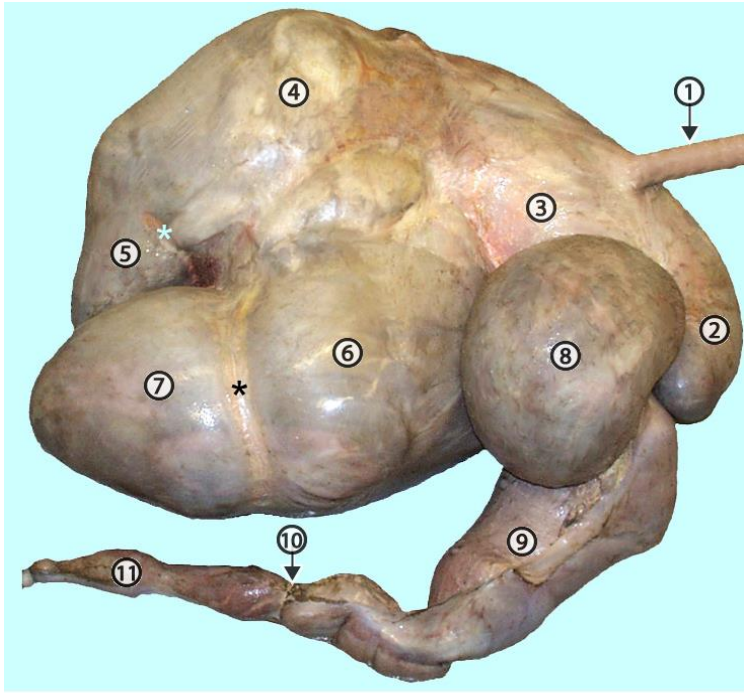
ABOMASUM:

FACIES PARIETALIS:

- **faces the abdominal wall**

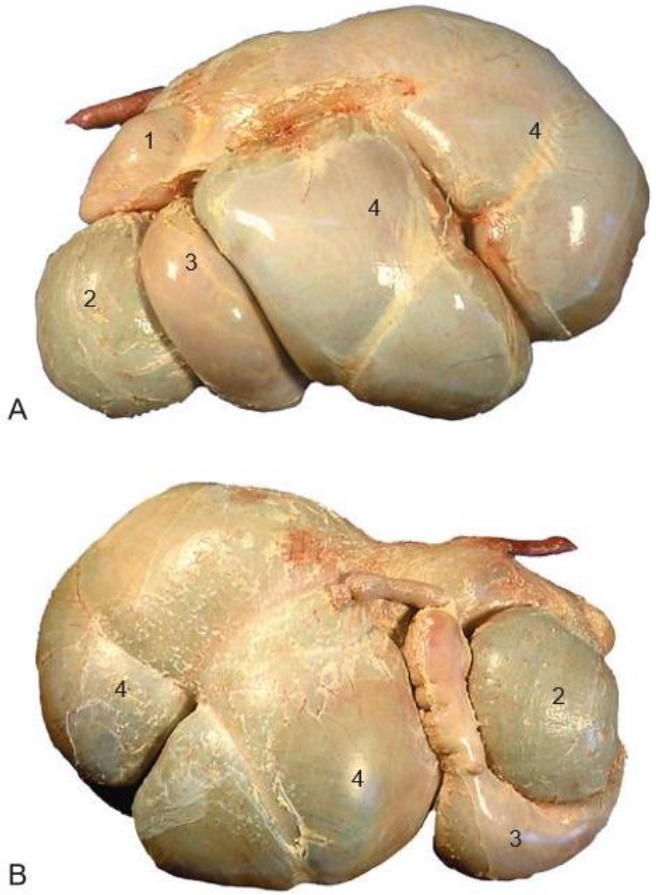
FACIES VISCERALIS:

- faces the rumen



Right side of inflated bovine stomach. 1, esophagus; 2, reticulum; 3, cranial sac, a.k.a., atrium ruminis; 4, dorsal sac; 5, caudodorsal blind sac; blue asterisk, right dorsal coronary groove; 6, ventral sac; 7, caudoventral blind sac; black asterisk, right ventral coronary groove; 8, omasum; 9, abomasum; 10, pyloris; 11, descending duodenum.

http://vanat.cvm.umn.edu/ungDissect/Lab14/Img14-3.html



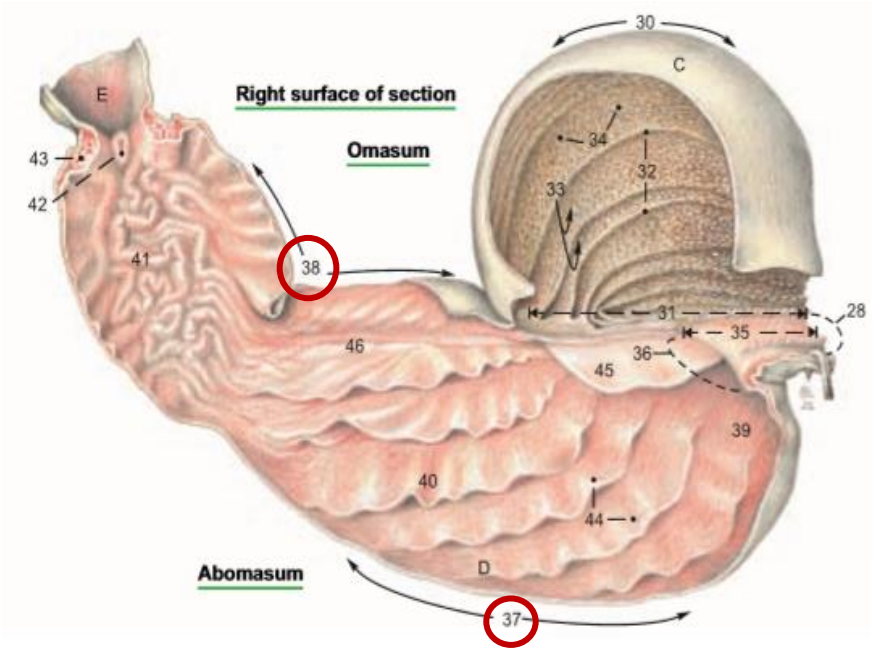
1. Reticulum
2. Omasum
3. Abomasum
4. Rumen

Note: A, Left side. **B,** Right side.

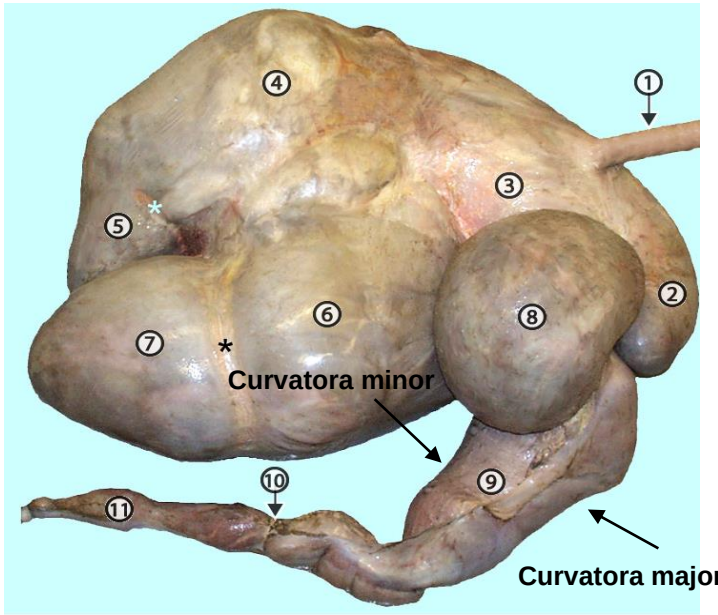
THE COMPLEX STOMACH

ABOMASUM:

- **CURVATORA MAJOR**
- **CURVATORA MINOR**



D Abomasum
37 Greater curvature
38 Lesser curvature
39 Fundus
40 Body
41 Pyloric part
42 Torus pyloricus
43 Pyloric sphincter
44 Abomasal folds
45 Velum
46 Abomasal groove
E Duodenum



Right side of inflated bovine stomach. 1, esophagus; 2, reticulum; 3, cranial sac, a.k.a., atrium ruminis; 4, dorsal sac; 5, caudodorsal blind sac; blue asterisk, right dorsal coronary groove; 6, ventral sac; 7, caudoventral blind sac; black asterisk, right ventral coronary groove; 8, omasum; 9, abomasum; 10, pyloris; 11, descending duodenum.

http://vanat.cvm.umn.edu/ungDissect/Lab14/Img14-3.html

Curvatora minor

Curvatora major

https://www.youtube.com/watch?v=kc4kHO7YQhk

THE COMPLEX STOMACH

ABOMASUM:

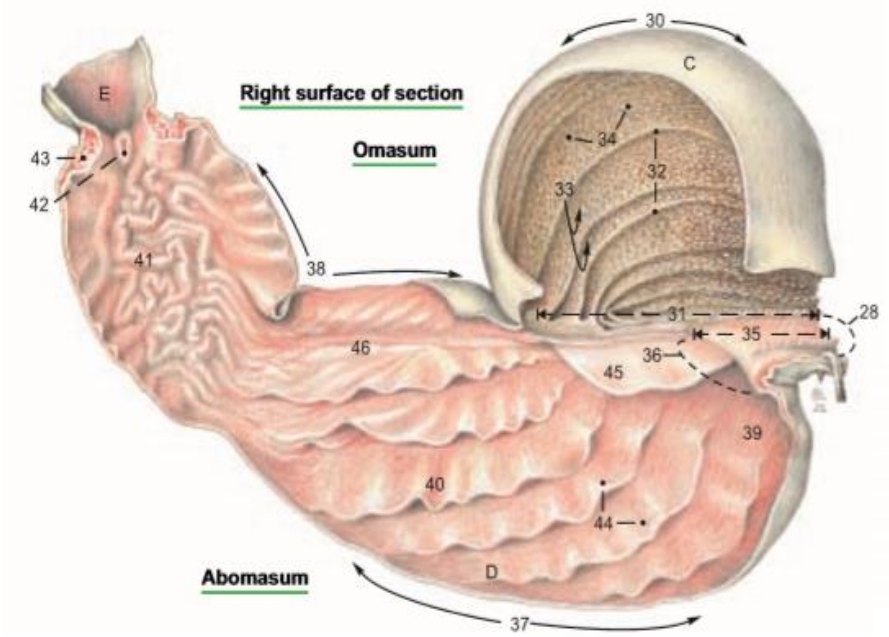
FUNDUS ABOMASI:

- **dilatation cranial and to the left of the ostium omasoabomasicum**

CORPUS ABOMASI

PARS PYLORICA

PYLORUS



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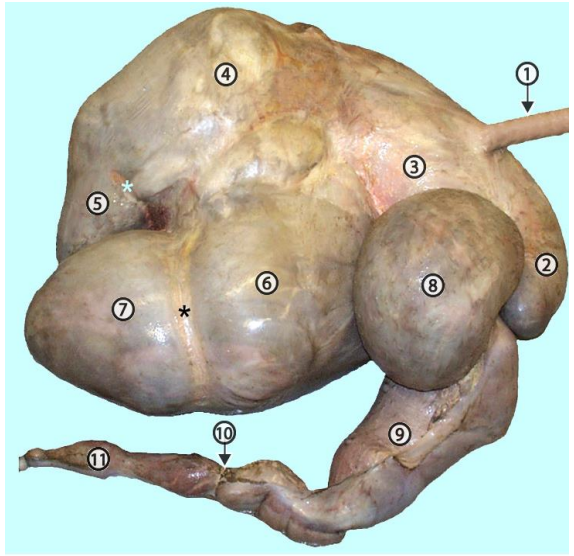

Right side of inflated bovine stomach. 1, esophagus; 2, reticulum; 3, cranial sac, a.k.a., atrium ruminis; 4, dorsal sac; 5, caudodorsal blind sac; blue asterisk, right dorsal coronary groove; 6, ventral sac; 7, caudoventral blind sac; black asterisk, right ventral coronary groove; 8, omasum; 9, abomasum; 10, pyloris; 11, descending duodenum.

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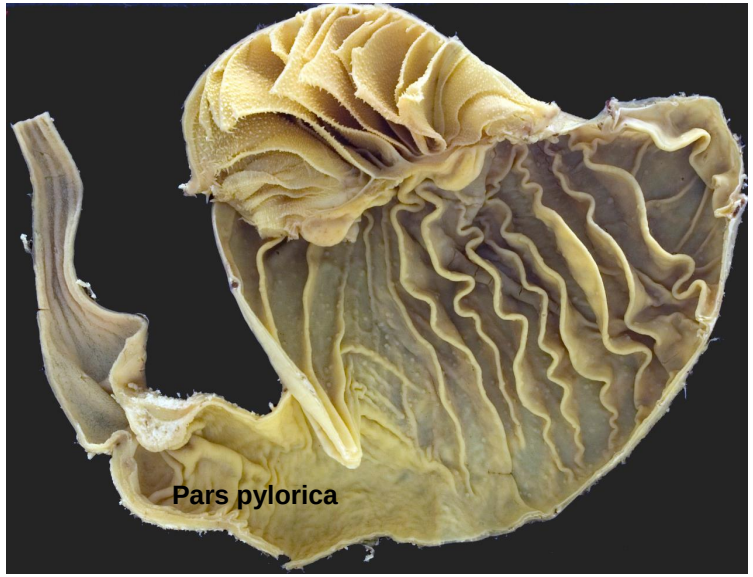


m. sphincter pylori

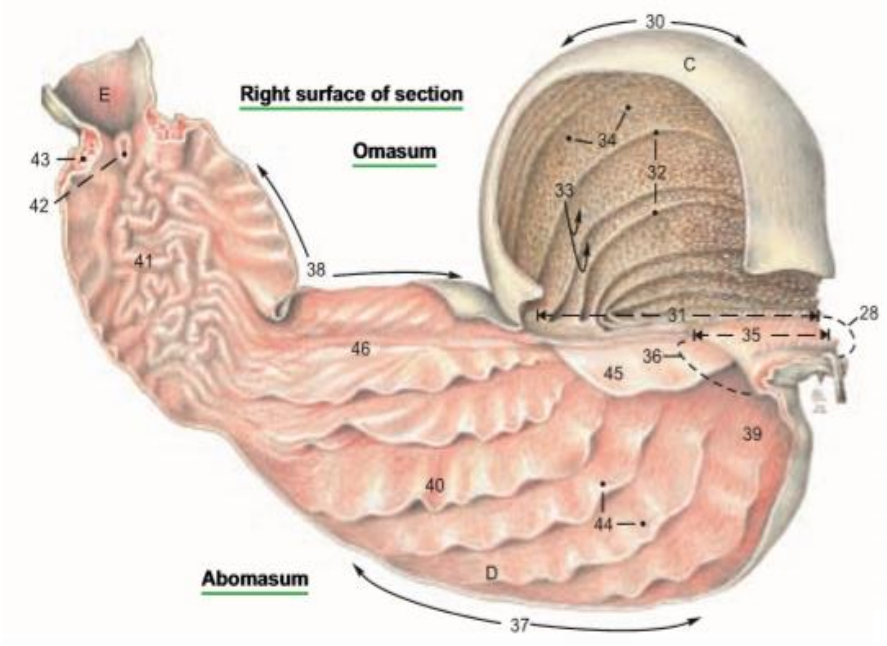
http://www.onlineveterinaryanatomy.net/content/omasum-and-abomasum-goat

THE COMPLEX STOMACH

ABOMASUM:

PLICAE SPIRALES ABOMASI:

- **large, mucosal folds**
- **in fundus and corpus**



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45 Velum
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E Duodenum

Plicae gastricae

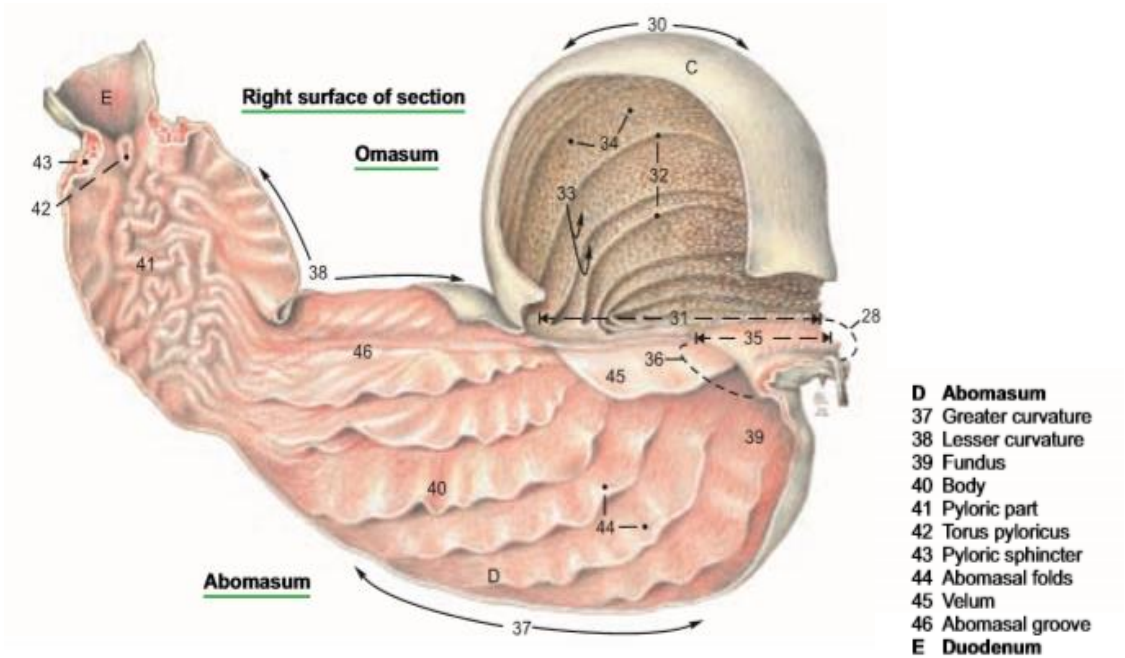
http://www.onlineveterinaryanatomy.net/content/omasum-and-abomasum-goat

THE COMPLEX STOMACH

ABOMASUM:

SULCUS ABOMASI:

- groove between mucosal folds along the inside of the lesser curvature



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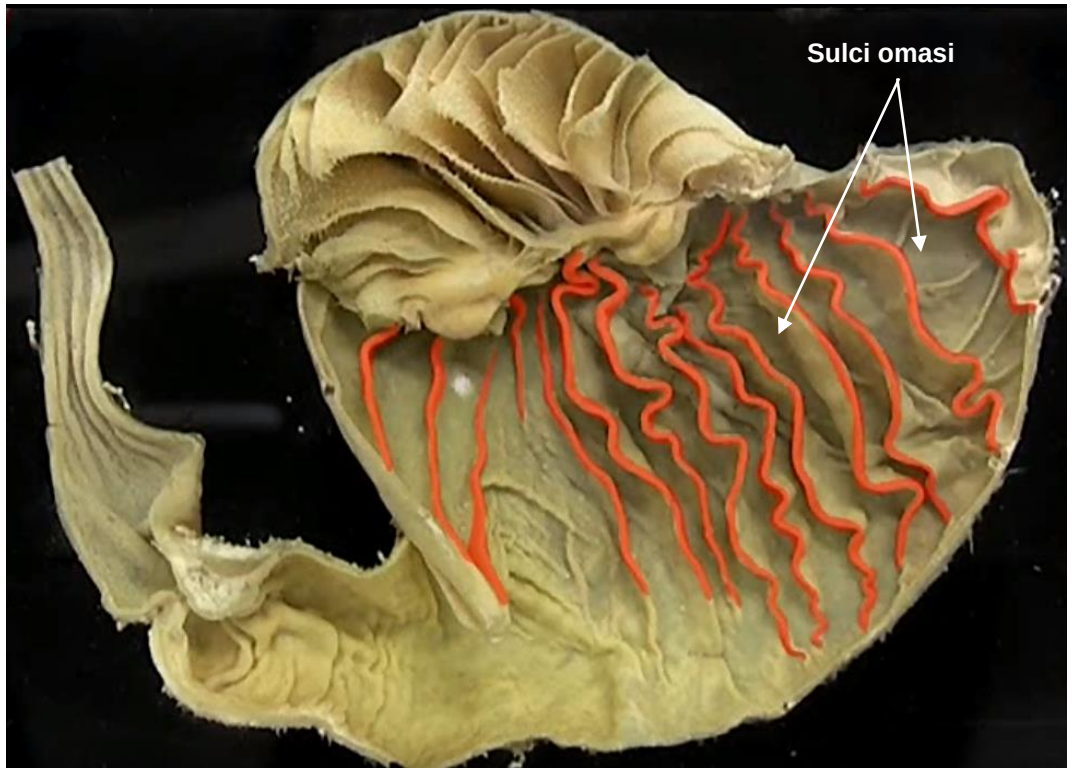


Plicae gastricae

http://www.onlineveterinaryanatomy.net/content/omasum-and-abomasum-goat

SULCUS VENTRICULI (GASTRIC GROOVE)

- **extends along the inside of the curvatora minor from the cardiac orifice to the pylorus**

in Ruminants:

devided by:

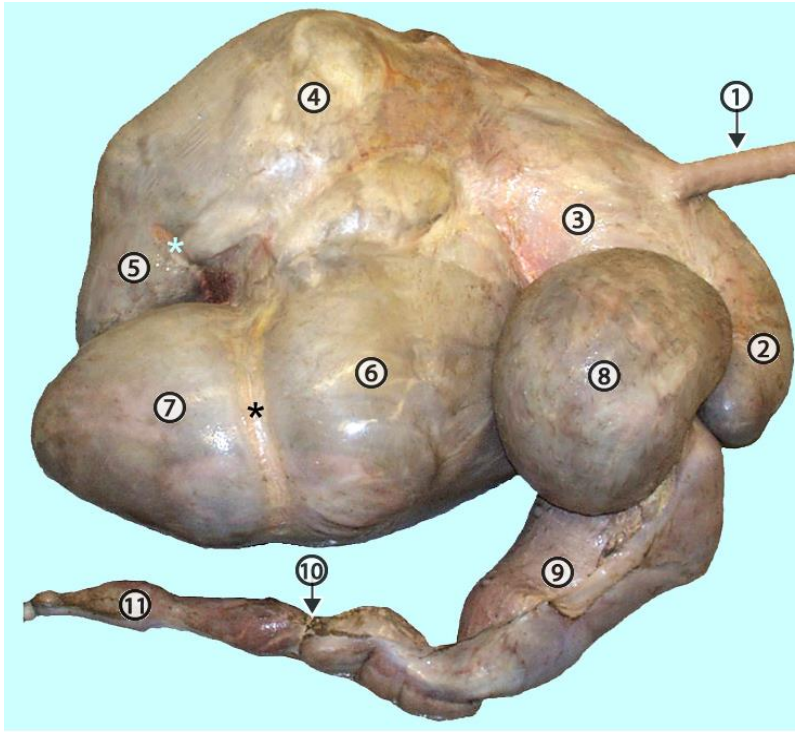
a. ostium reticulo – omasicum

b. ostium amoso – abomasicum into three segments:

1. sulcus reticuli

2. sulcus omasi

3. sulcus abomasi



Right side of inflated bovine stomach. 1, esophagus; 2, reticulum; 3, cranial sac, a.k.a., atrium ruminis; 4, dorsal sac; 5, caudodorsal blind sac; blue asterisk, right dorsal coronary groove; 6, ventral sac; 7, caudoventral blind sac; black asterisk, right ventral coronary groove; 8, omasum; 9, abomasum; 10, pyloris; 11, descending duodenum.

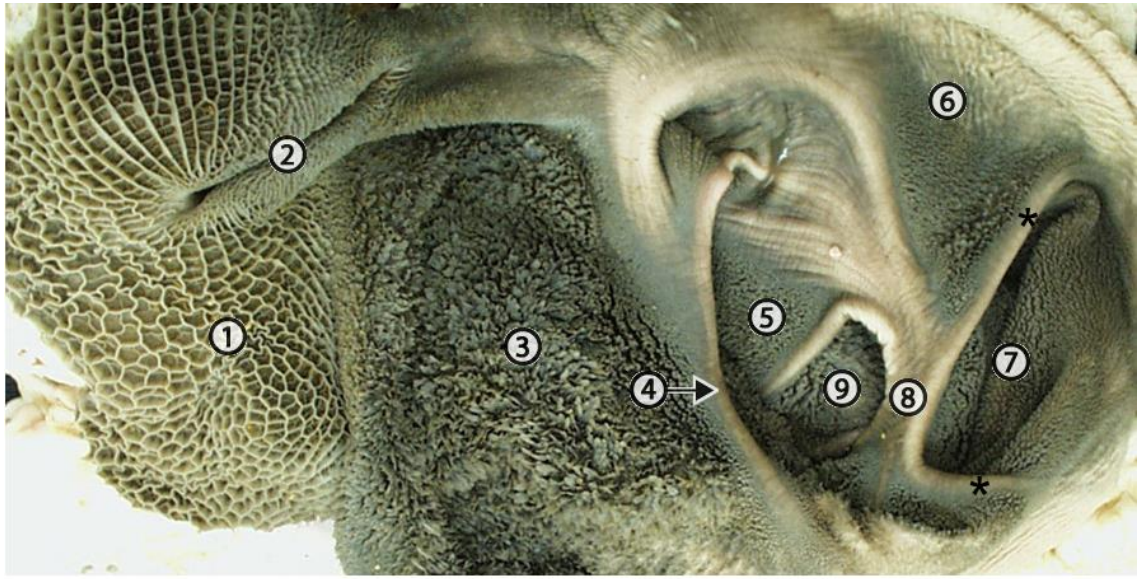
http://vanat.cvm.umn.edu/ungDissect/Lab14/Img14-3.html

SULCUS VENTRICULI (GASTRIC GROOVE)

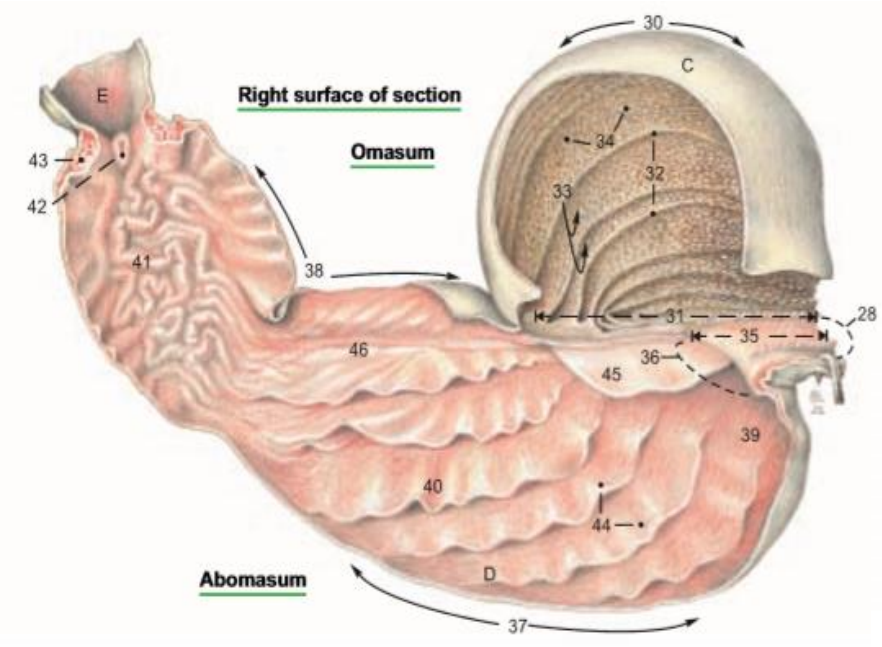
in Ruminants:

SULCUS RETICULI (RETICULAR GROOVE):

- **extends from the esophagus**
- **esophagus joints the forestomach at the junction of rumen and reticulum, to the omasum**
- **in omasum continues as omasal canal to the abomasum**



Interior view of a bovine ruminoreticulum (with some distortion due to flattening). 1, reticulum; 2, reticular groove between two folds (lips); 3, cranial sac; 4, cranial pillar; 5, ventral sac; 6, dorsal sac; 7, caudodorsal blind sac; 8, caudal pillar; asterisks, dorsal coronary pillars; 9, caudoventral blind sac. The pillars are devoid of papillae.



D Abomasum
37 Greater curvature
38 Lesser curvature
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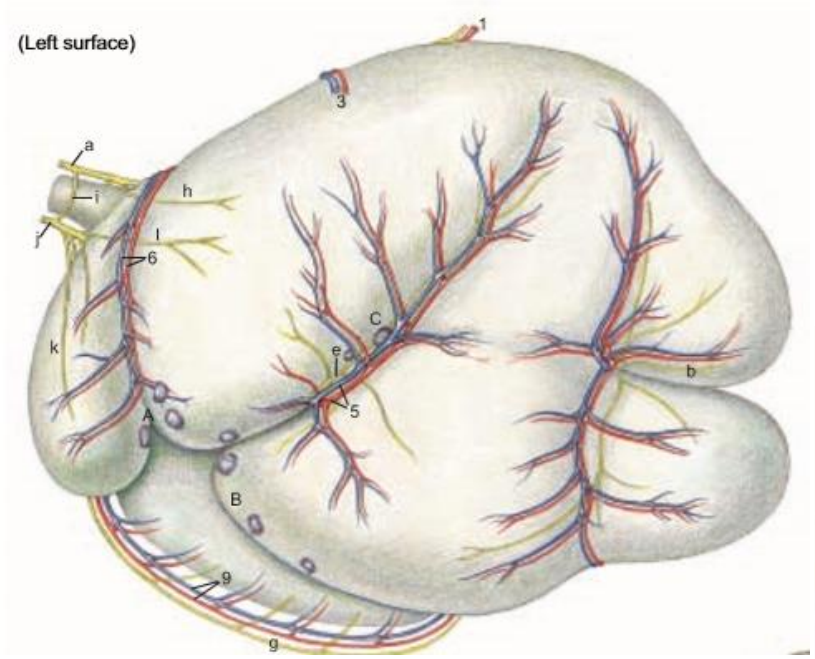
E Duodenum

BLOOD SUPPLY OF THE COMPLEX STOMACH

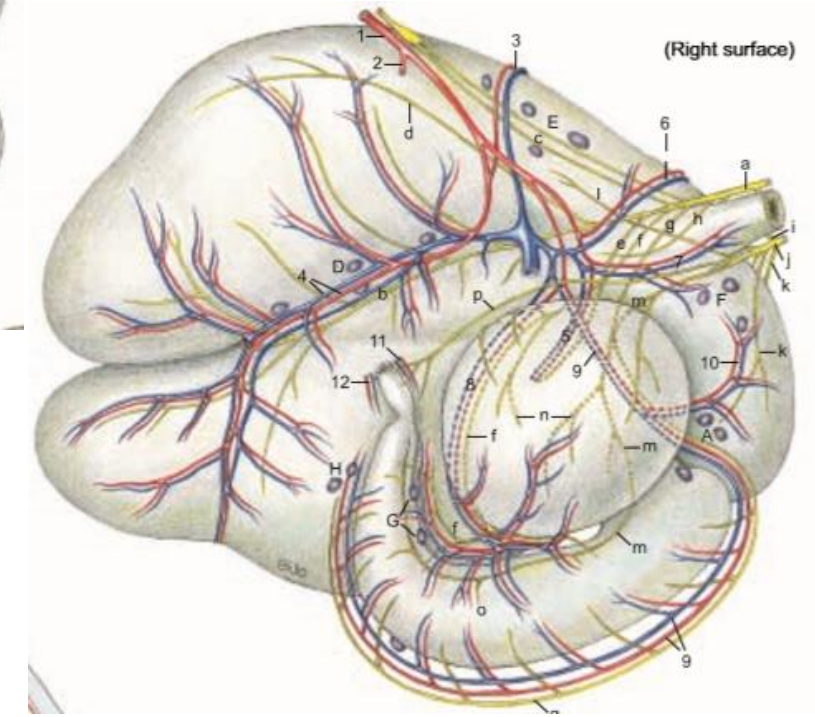
I. A. coeliaca:

1. A. ruminalis dextra

2. A. ruminalis sinistra



1 Celiac a.
2 Hepatic a.
3 Splenic a. and v.
4 Right ruminal a. and v.
5 Left ruminal a.
6 Reticular a. and v.
7 Caud. esophageal brr.
8 Left gastric a. and v.
9 Left gastroepiploic a. and v.
10 Accessory reticular a. and v.
11 Right gastric a. and v.
12 Right gastroepiploic a. and v.



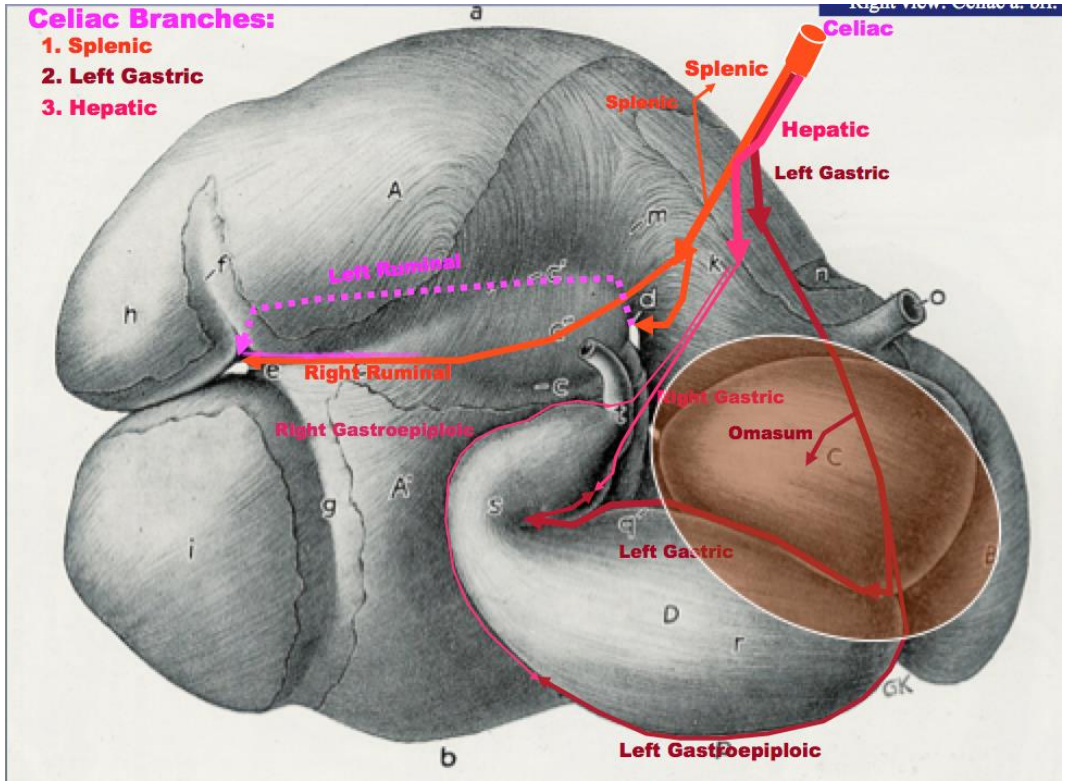
A Reticuloabomasal lnn.
B Ruminoabomasal lnn.
C Left ruminal lnn.
D Right ruminal lnn.
E Splenic (or atrial) lnn.
F Reticular lnn.
G Dorsal abomasal lnn.
H Ventral abomasal lnn.

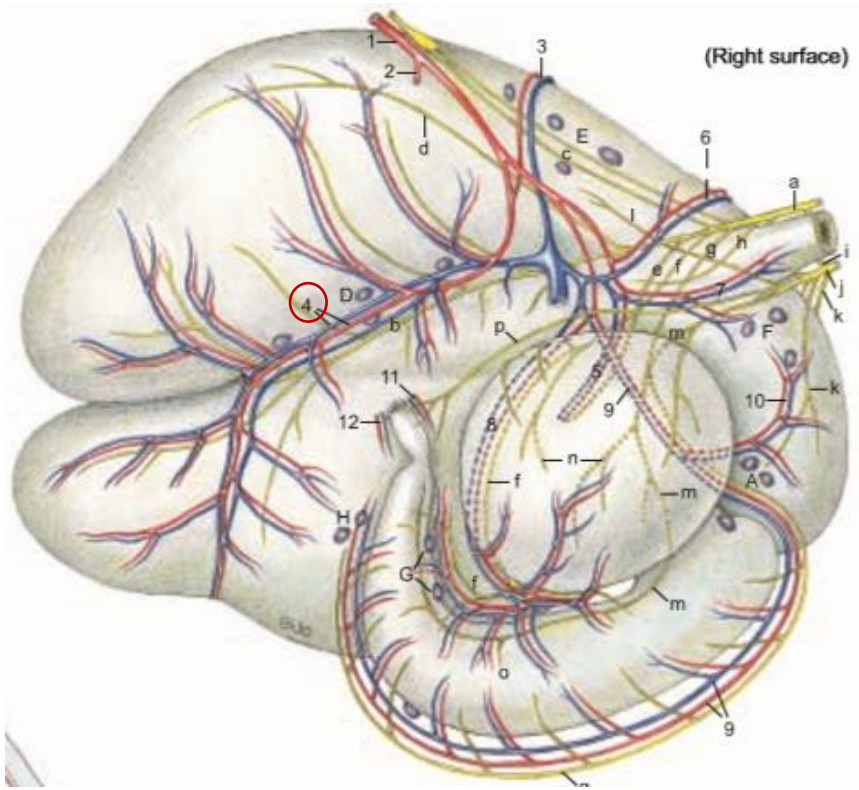
a Dorsal vagal trunk
b Right ruminal br.
c Brr. to celiac plexus
d Dorsal ruminal brr.
e Left ruminal br.
f Brr. of the dorsal vagal trunk
g Br. to greater curvature of abomasum
h Atrial brr.
i Communicating br.
j Ventral vagal trunk
k Cran. reticular brr.
l Atrial brr.
m Brr. of the ventral vagal trunk
n Omasal brr.
o Parietal abomasal brr.
p Long pyloric br.

BLOOD SUPPLY OF THE COMPLEX STOMACH

A. ruminalis dextra:

- **runs caudally in the right longitudinal groove**
- **continues into the left longitudinal groove**
- **by passing between the dorsal and ventral blind sacs**
- **anastomosis with the left ruminal artery**





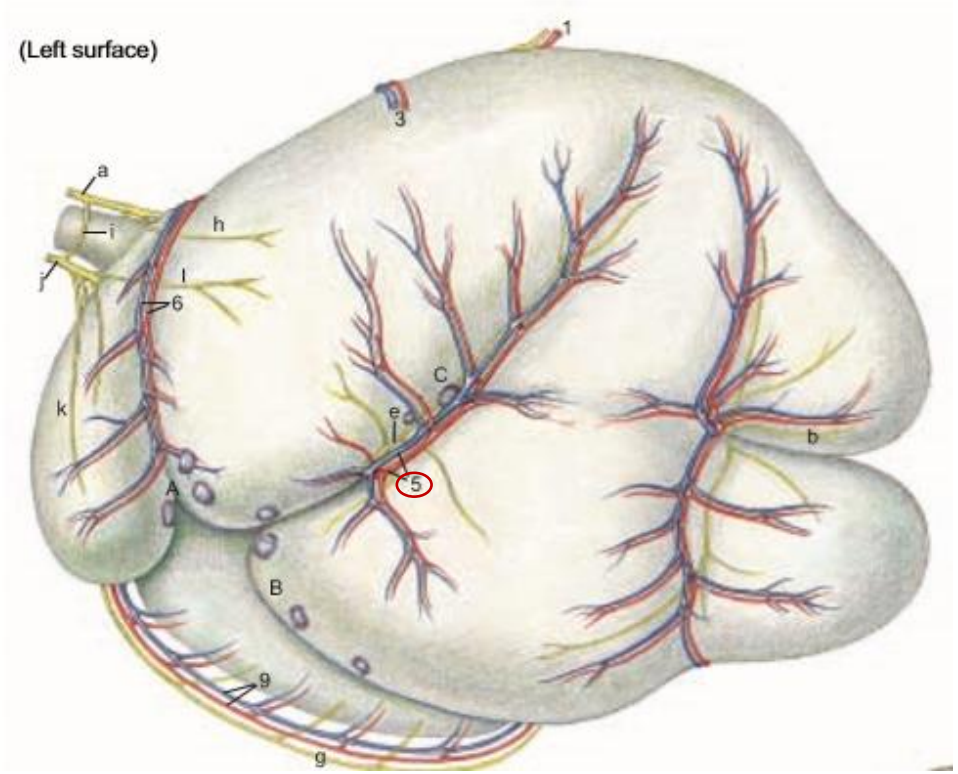
1 Celiac a.
2 Hepatic a.
3 Splenic a. and v.
4 Right ruminal a. and v.
5 Left ruminal a.
6 Reticular a. and v.
7 Caud. esophageal brr.
8 Left gastric a. and v.
9 Left gastroepiploic a. and v.
10 Accessory reticular a. and v.
11 Right gastric a. and v.
12 Right gastroepiploic a. and v.

https://www.memorangapp.com/flashcards/39973/Anatomy-+Bovine%2C+ruminant+and+horse+skull/

BLOOD SUPPLY OF THE COMPLEX STOMACH

A. ruminalis sinistra:

- **follows the cranial groove between the atrium and ventral sac**
- **lies caudally in the left longitudinal groove**
- **gives the reticular artery – for reticulum**



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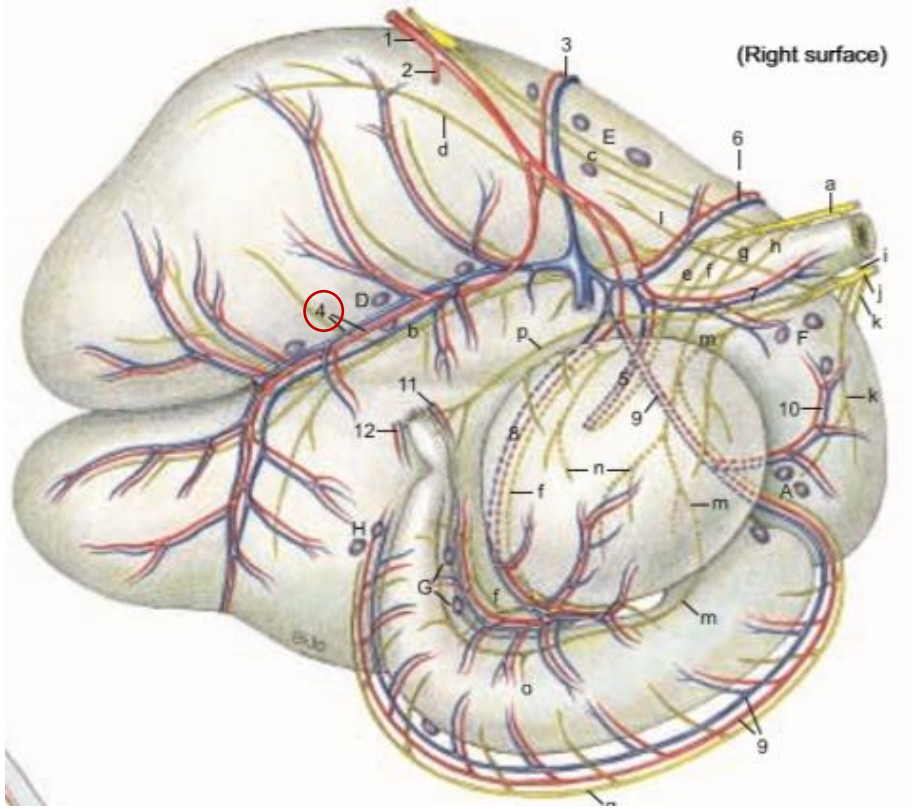
8 Left gastric a. and v.
9 Left gastroepiploic a. and v.
10 Accessory reticular a. and v.
11 Right gastric a. and v.
12 Right gastroepiploic a. and v.



BLOOD SUPPLY OF THE COMPLEX STOMACH

OMASUM and ABOMASUM supplied by:

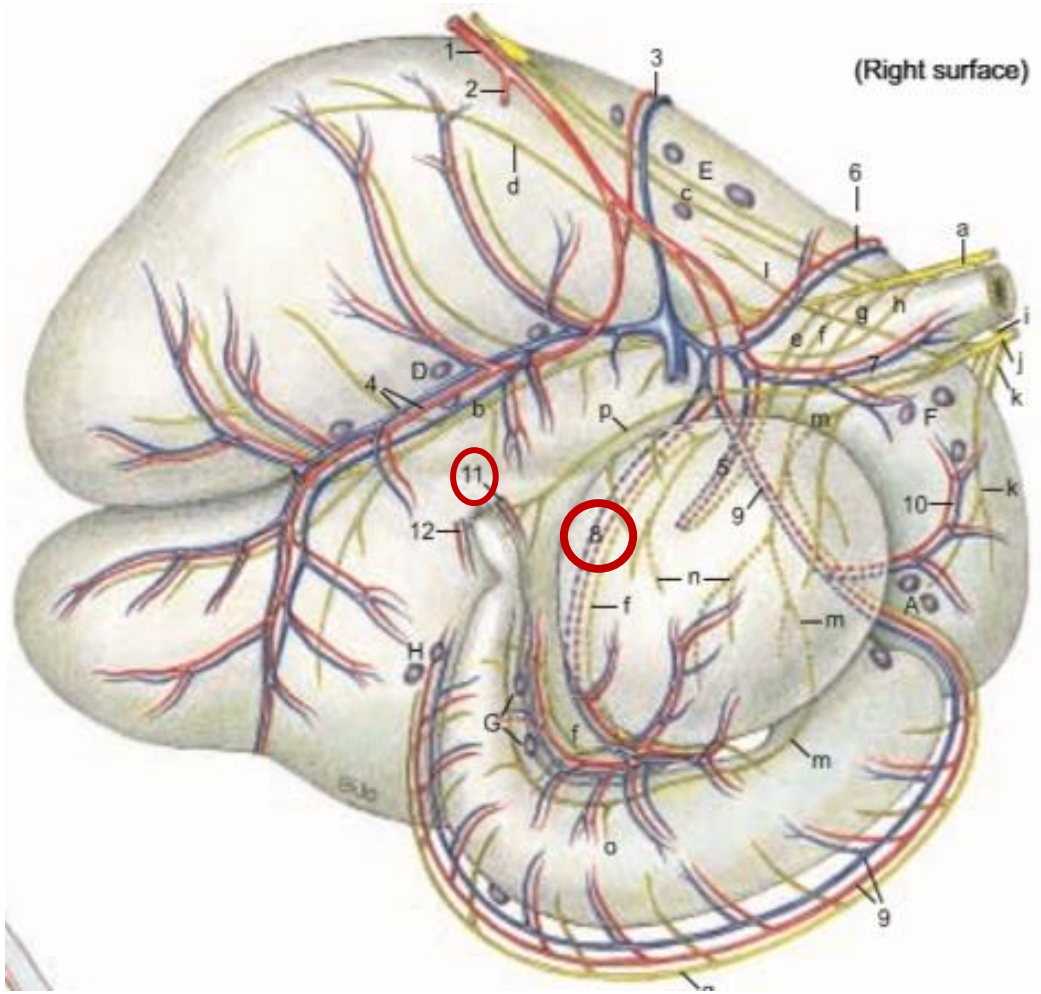
1. A. gastrica sinistra

- **from the A. coeliaca**
- **passes on the right side of the rumen to the lesser curvature of the abomasum**
- **at the lesser curvature unites with the right gastric artery**
- **gives branches to the omasum**

2. A gastrica dextra

- **branch of the A. hepatica**
- **gives branches to the omasum**

1 Celiac a.
2 Hepatic a.
3 Splenic a. and v.
4 Right ruminal a. and v.
5 Left ruminal a.
6 Reticular a. and v.
7 Caud. esophageal brr.
8 Left gastric a. and v.
9 Left gastroepiploic a. and v.
10 Accessory reticular a. and v.
11 Right gastric a. and v.
12 Right gastroepiploic a. and v.



BLOOD SUPPLY OF THE COMPLEX STOMACH

OMASUM and ABOMASUM supplied by:

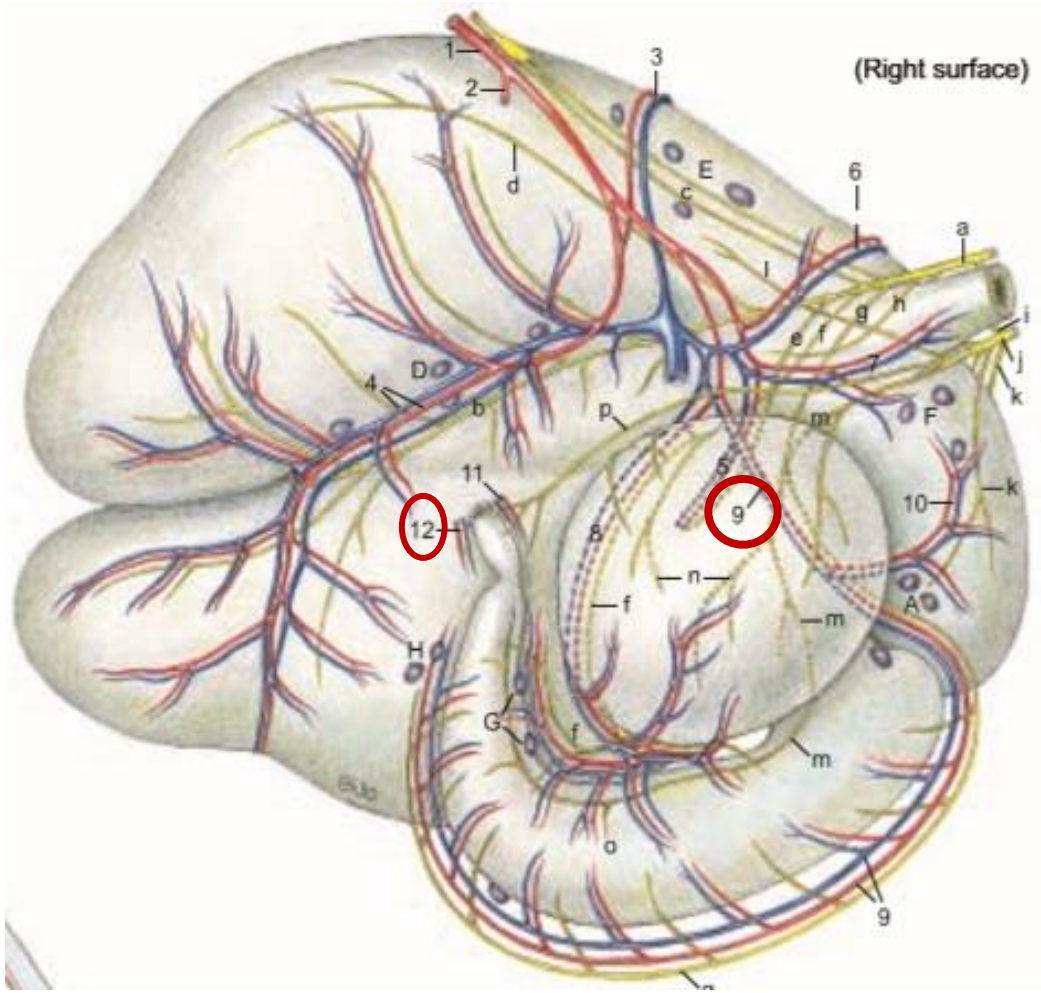
1. A. gastroepiploica sinistra:

- **from the A. gastrica sin. at the level of omasum**
- **runs to the greater curvature of the abomasum**
- **at the greater curvature anastomoses with the right gastroepiploic artery**

2. A. gastroepiploica dextra:

- branch of the A. hepatica

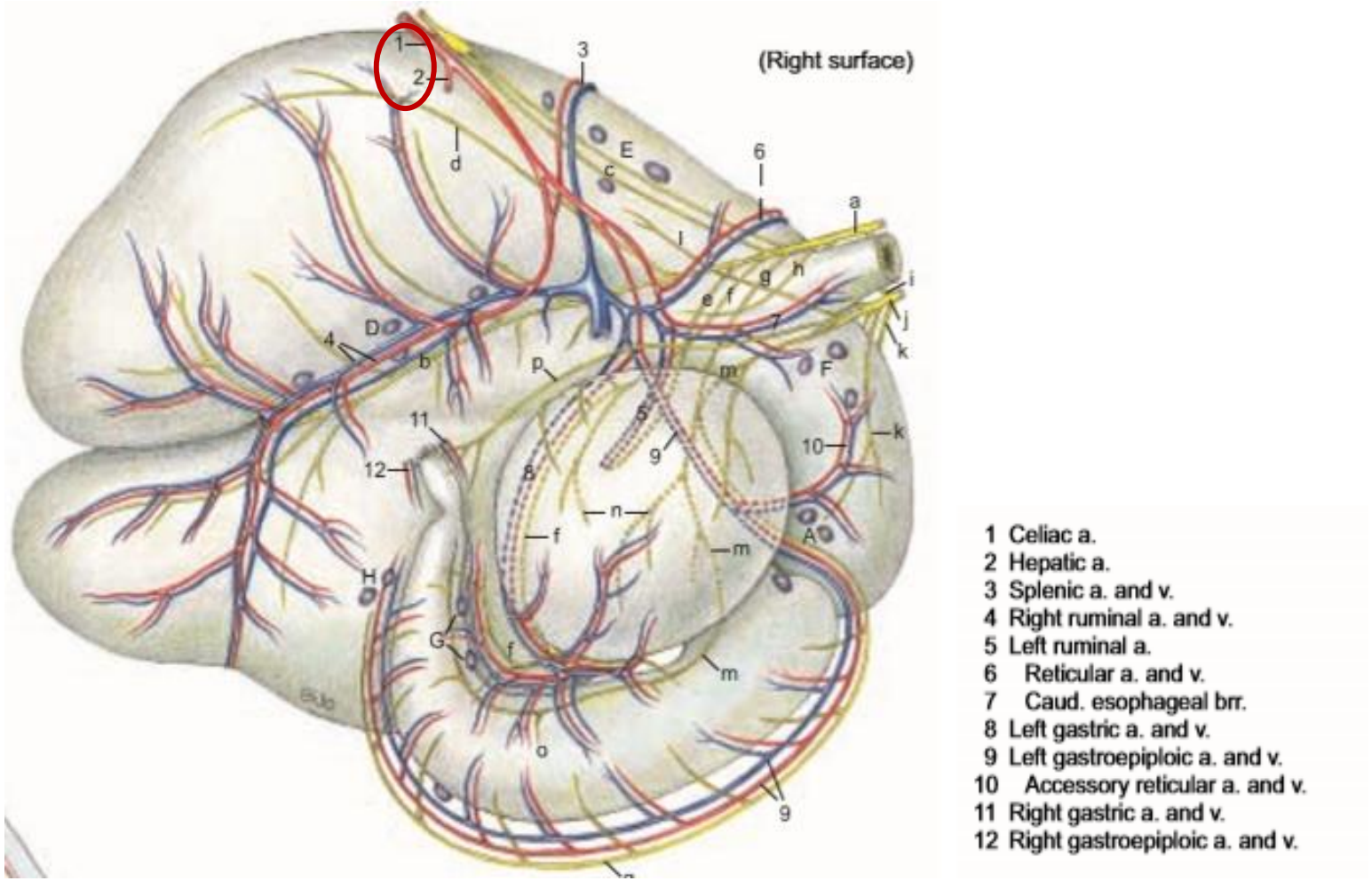
1 Celiac a.
2 Hepatic a.
3 Splenic a. and v.
4 Right ruminal a. and v.
5 Left ruminal a.
6 Reticular a. and v.
7 Caud. esophageal brr.
8 Left gastric a. and v.
9 Left gastroepiploic a. and v.
10 Accessory reticular a. and v.
11 Right gastric a. and v.
12 Right gastroepiploic a. and v.



BLOOD SUPPLY OF THE COMPLEX STOMACH

ABOMASUM supplied by:

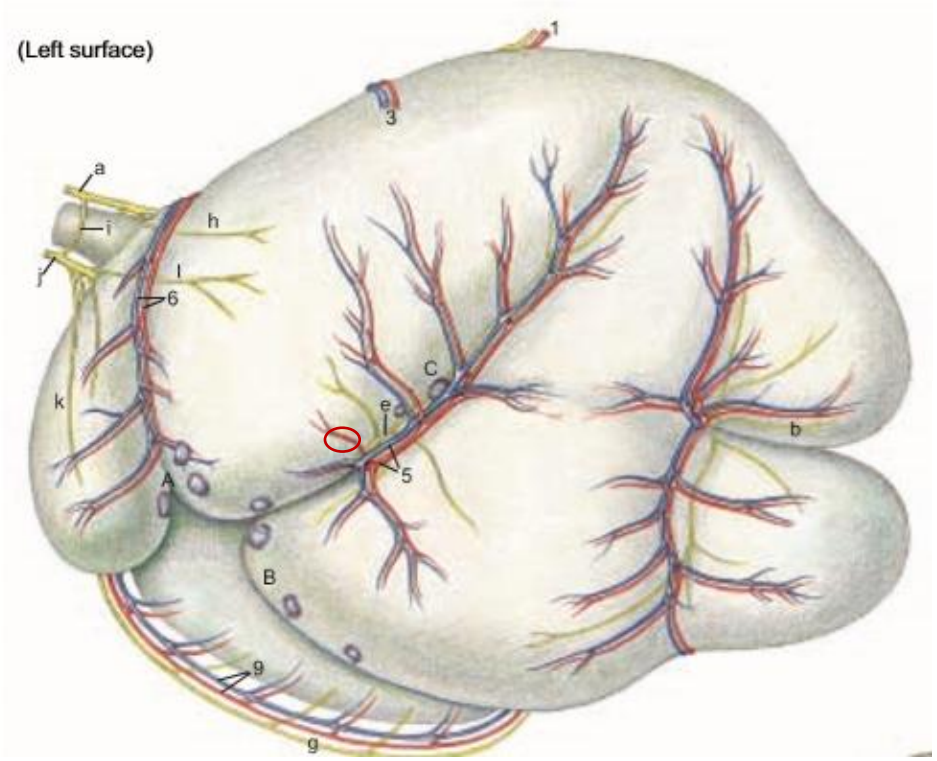
- **double perigastric ring of arteries – direct connection with the A. hepatica and A. gastrica sinistra**



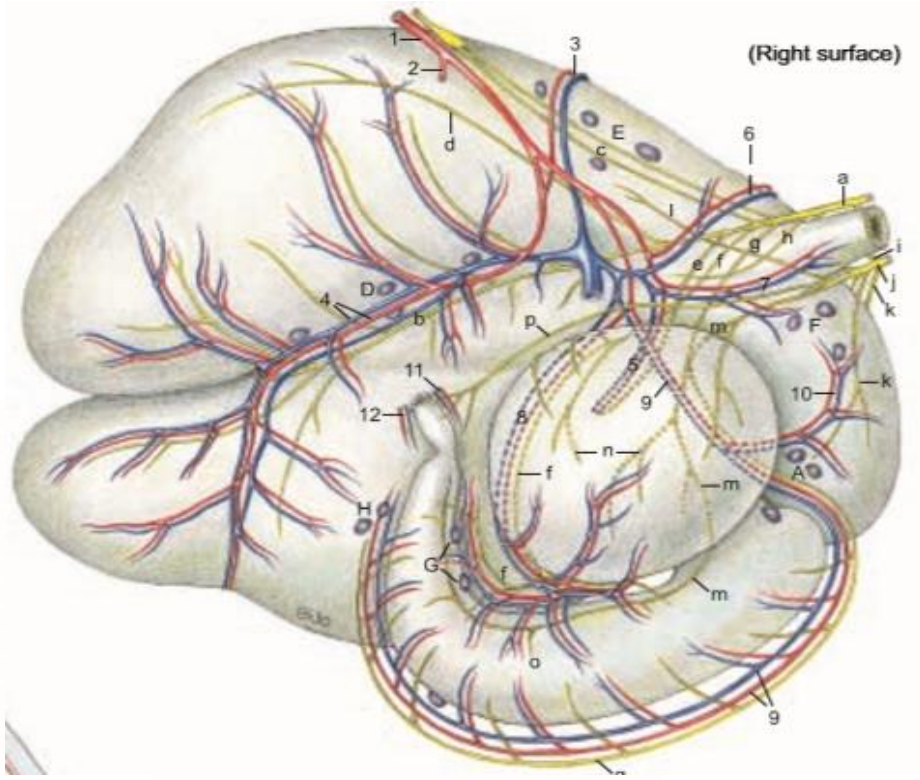
BLOOD SUPPLY OF THE COMPLEX STOMACH

VEINS:

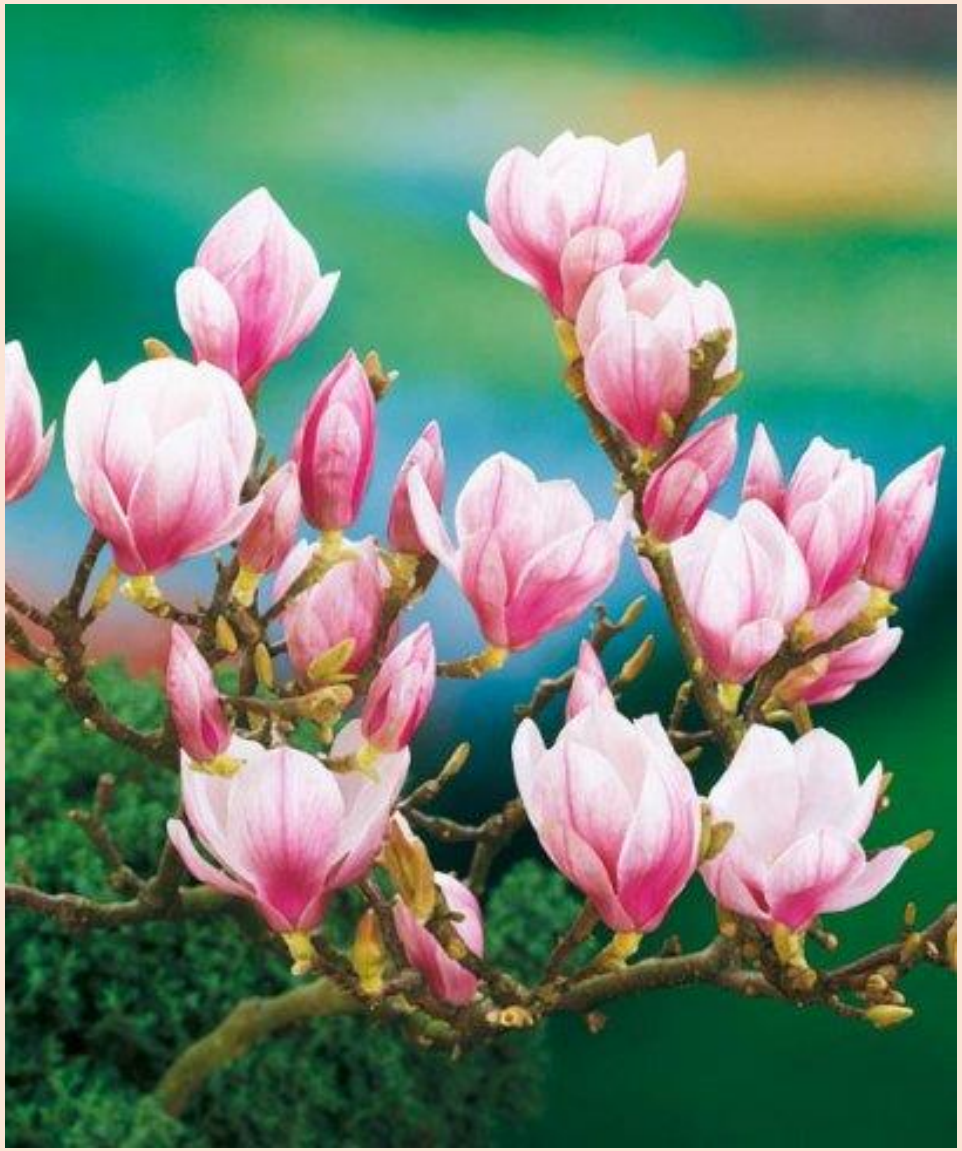
- **run parallel to the arteries**
- **join the vena portae**



1 Celiac a.
2 Hepatic a.
3 Splenic a. and v.
4 Right ruminal a. and v.
5 Left ruminal a.
6 Reticular a. and v.
7 Caud. esophageal brr.
8 Left gastric a. and v.
9 Left gastroepiploic a. and v.
10 Accessory reticular a. and v.
11 Right gastric a. and v.
12 Right gastroepiploic a. and v.



THANK YOU FOR YOUR ATTENTION!



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