



UNIVERZITET U BEOGRADU
FAKULTET VETERINARSKЕ MEDICINE

ANATOMIJA

TOPOGRAFIJA GRUDNE DUPLJE



Viscera – utroba

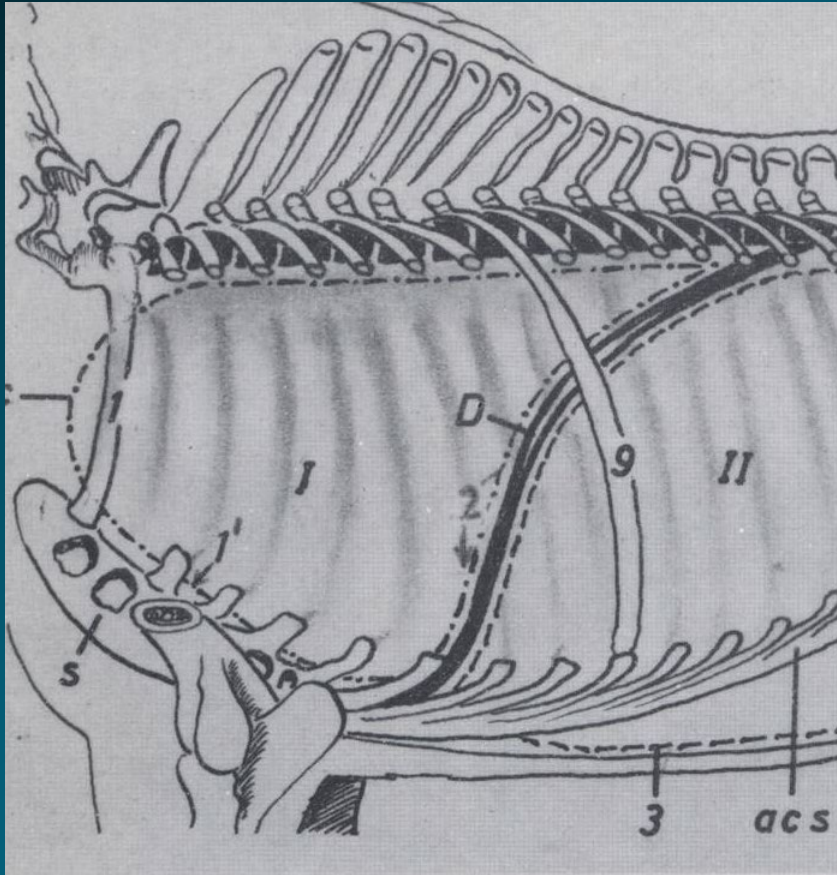
Visceralni organi - organi utrobe

VELIKE TELESNE DUPLJE (ŠUPLJINE):

CAVUM PECTORIS – grudna duplja

CAVUM ABDOMINIS – trbušna duplja

CAVUM PELVIS – karlična duplja



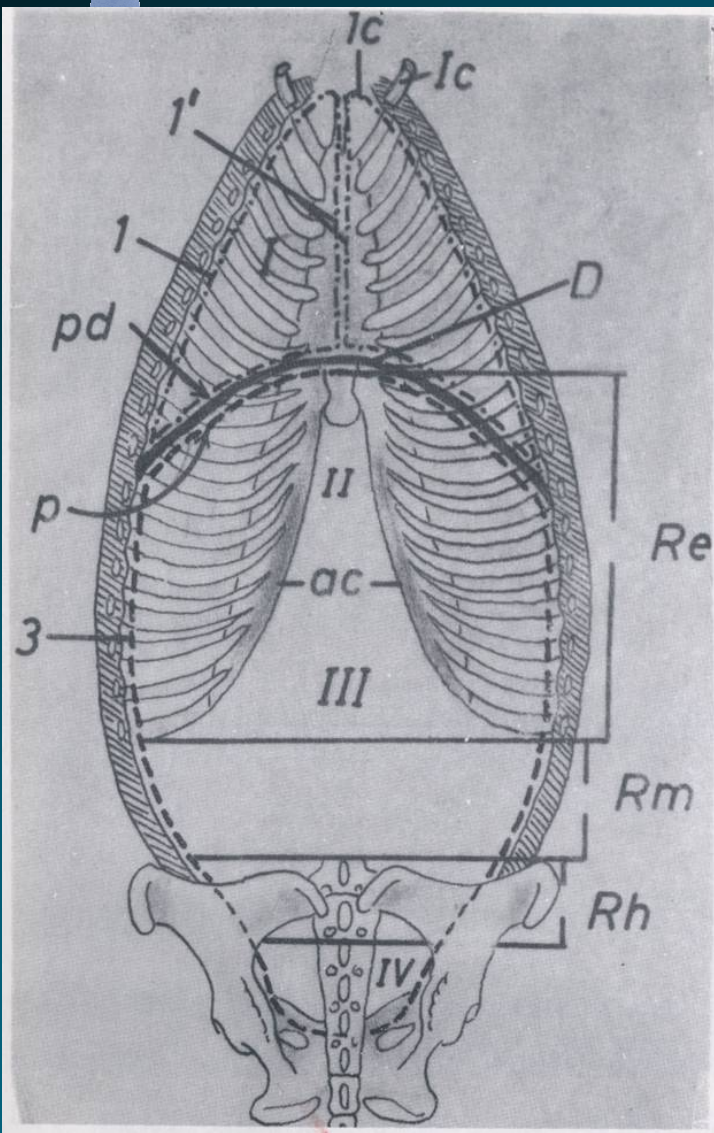
Sve tri telesne duplje **presvučene su serozom** (sem kaudalnog dela karlične duplje)

Pleura (seroza u grudnoj duplji)

Peritoneum (seroza u trbušnoj duplji i kranijalnom delu karlične duplje)



PARIETALNE SEROZE



Paries - zid

Serosis parietalis

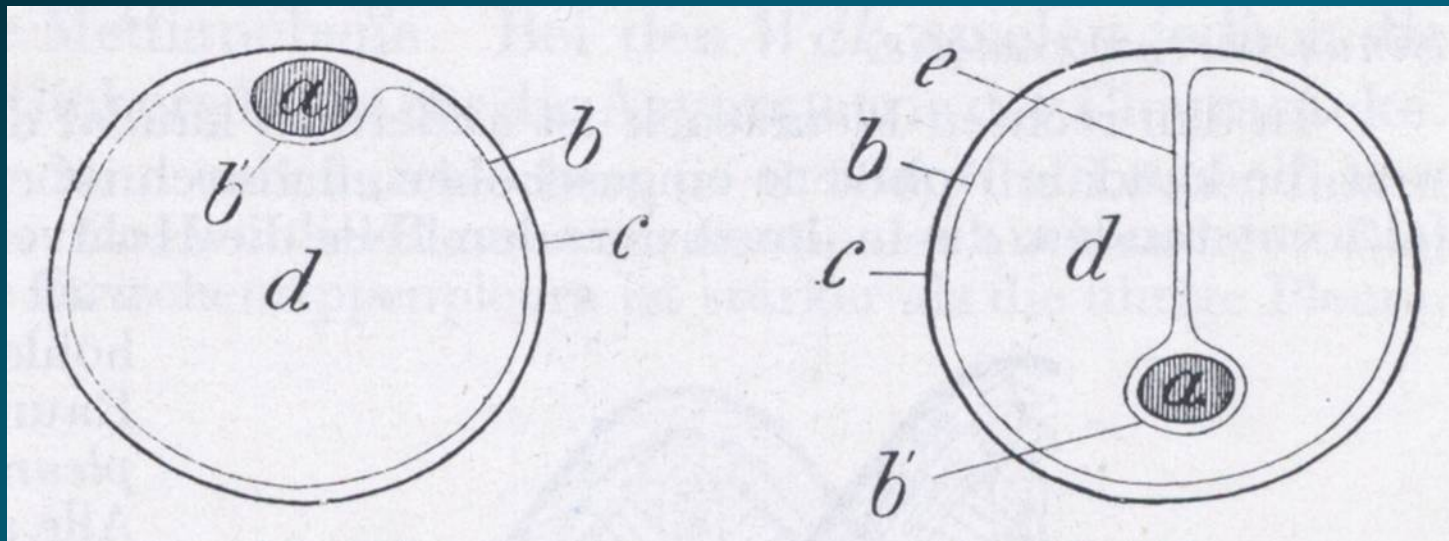
- seroza koja oblaže zidove telesnih duplji
- osetljiva na bol
- formira zatvoren serozni prostor- **Cavum serosum**

Pleura parietalis

- Pleura costalis
- Pleura diaphragmatica
- Cavum pleurae (2)
- Cupula pleurae



VISCERALNE SEROZE



Embrionalni period (prvobitna telesna duplja)

- retroserozni položaj organa
(između telesnog zida i parietalne seroze)

a- zametak organa
b- parietalna seroza
c- telesni zid

Embrionalni period (razvoj organa)

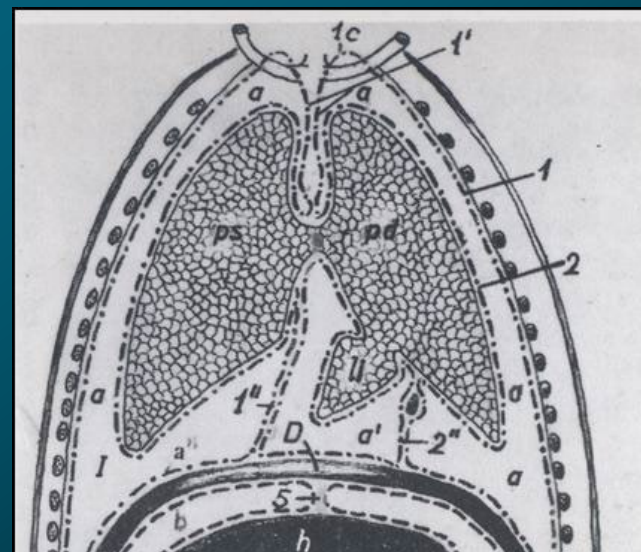
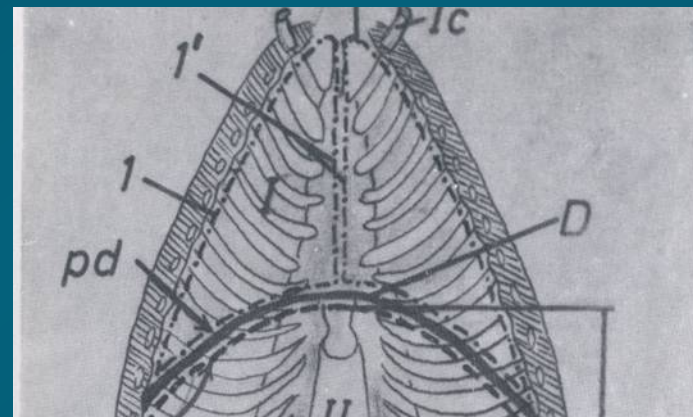
- organ se udaljava od telesnog zida
- gura serozu koja ga obavija
- ostaje u vezi sa telesnim zidom

d- visceralna seroza
e- duplikatura seroze: ligament, plica



GRUDNA DUPLJA

- druga po veličini telesna duplja
- od **Apertura thoracis cranialis** do dijafragme
- na transverzalnom preseku zid grudne duplje:
 - a) koža
 - b) muskulatura sa skeletnim delovima
 - c) **Fascia endothoracica**
 - d) parietalna seroza (**Pleura parietalis**):
P.costalis, P.diaphragmatica
- **Mediastinum**
- **Spatium mediastini**
- dve pleuralne vreće (leva pleuralna vreća manja)
- u Cavum pleure se ne nalaze organi!!!
- *Cupula pleure*
- organi su položeni između obe pleuralne vreće:
u **Spatium mediastini**





VASKULARIZACIJA

Arterije:

Aorta (thoracica)

Aa. coronariae

Aa. intercostales

A. costocervicalis

Aa. phrenicae

A. bronchoesophagea

A. thoracica interna

A. thoracica externa



VASKULARIZACIJA

Vene:

V. cava cranialis

Vv. coronariae cordis

Vv. intercostales

V. costocervicalis

Va. phrenicae

V. bronchoesophagea

V. azygos sinistra

V. azygos dextra

V. thoracica externa



INERVACIJA

Spinalni torakalni nervi

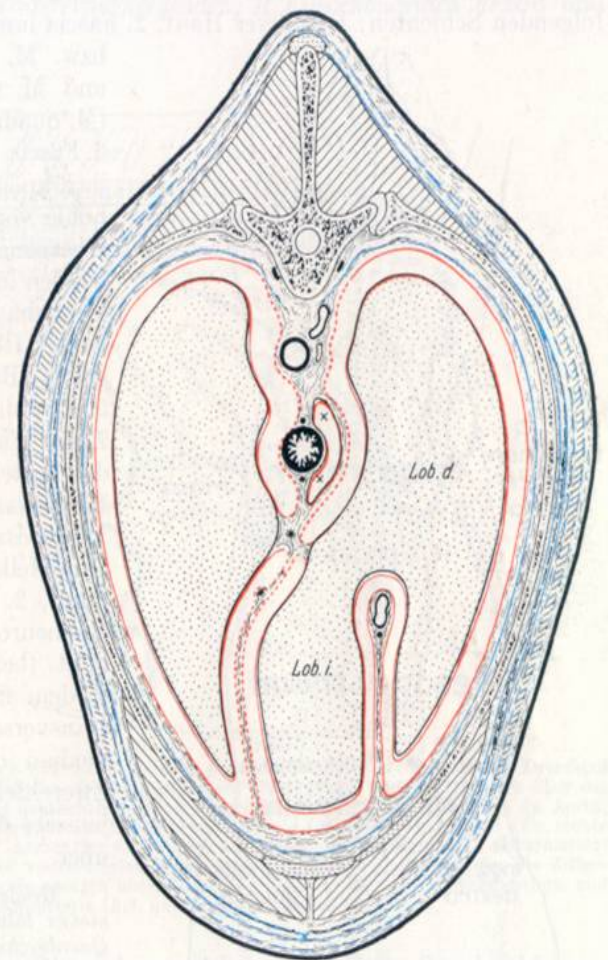
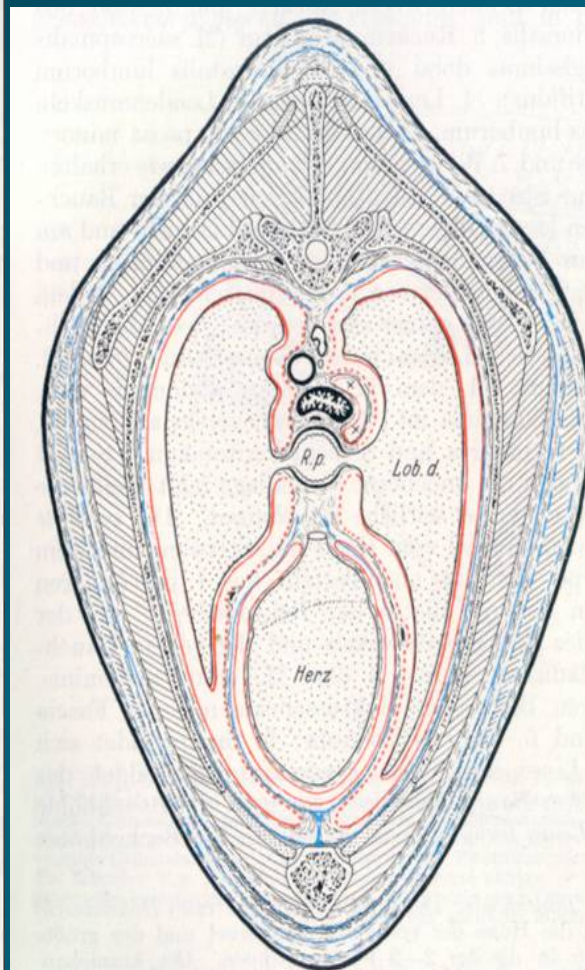
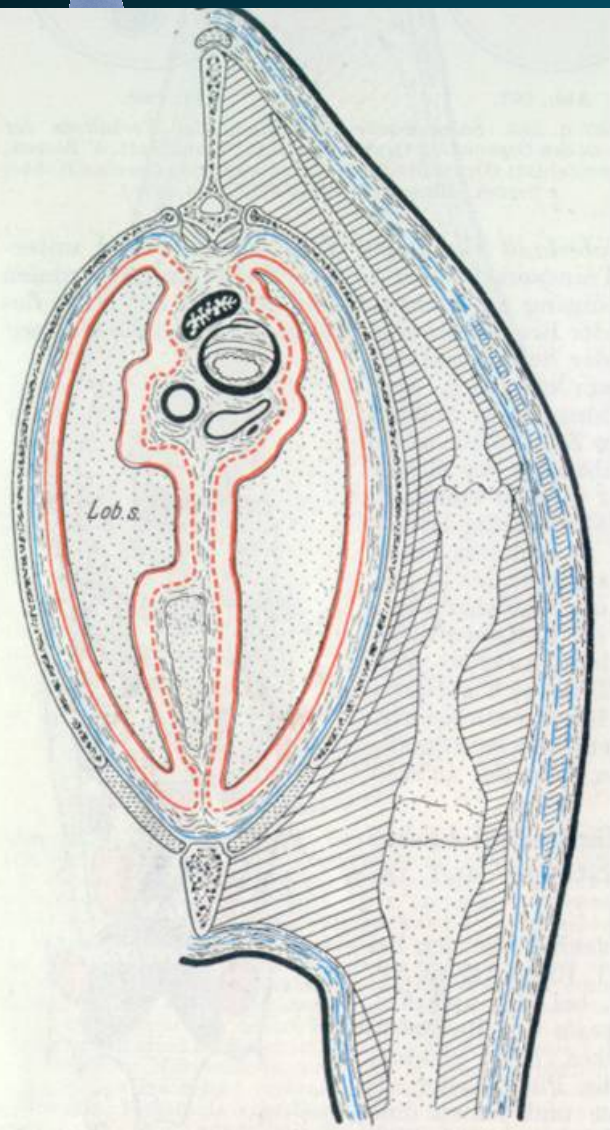
(inervišu poprečno prugastu muskulaturu zidova grudne duplje uključujući dijafragmu), parietalnu pleuru

Nervi autonomnog (vegetativnog n.sistema)

grane vagusa (X) i simpatikusa: inervišu organe i krvne sudove zidova i organa grudne duplje, pulmonalna pleura

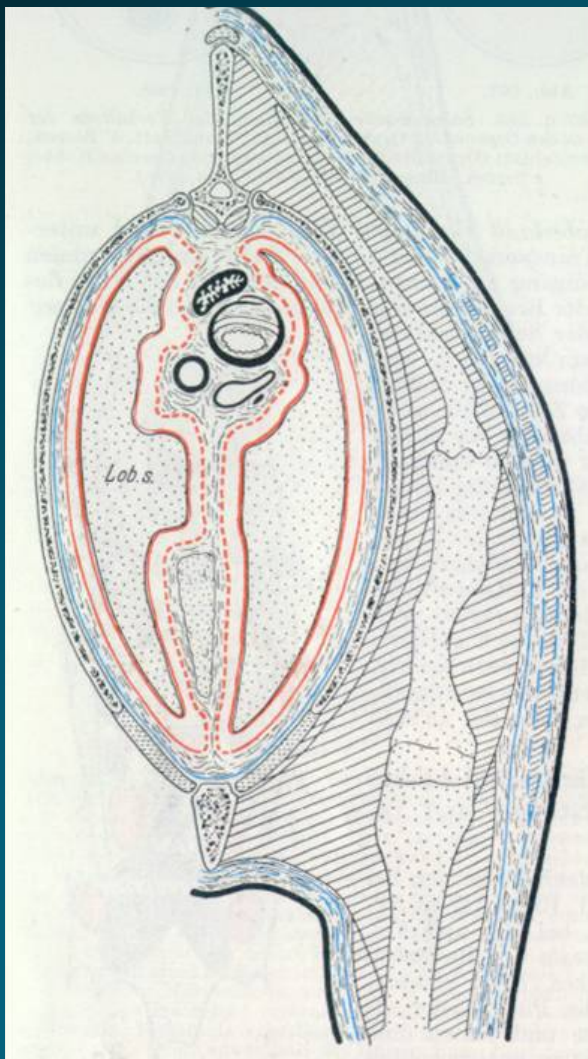


MEDIJASTINALNI PROSTORI





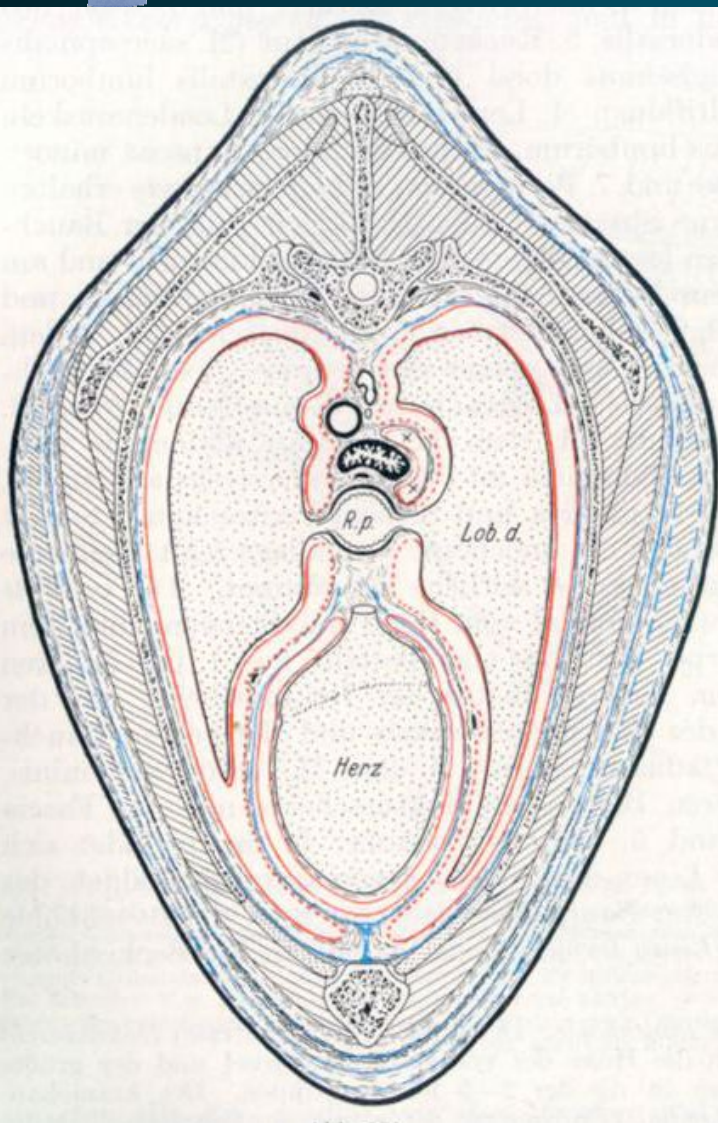
PREKARDIJALNI



- dušnik, jednjak, kranijalni režnjevi pluća
- Truncus brachiocephalicus (*Ru*),
- A. brachiocephalica i A. subclavia sin. (*su*, *car*)
- V. cava cranialis
- Ductus thoracicus
- Lnn. mediastinales cranialis
- Nn.vagi, Nn.phrenici, Nn. recurrentes,
- Trunci sympathici, vertebralne ganglije,
- rami cardiaci, rami pulmonales
- grudni deo timusa



KARDIJALNI



- pluća, srce, perikard, dušnik (završni delovi), jednjak
- A. pulmonalis, Aorta thoracica, Truncus brachiocephalicus
- V. cava cranialis, V. cava caudalis, V. azygos dextra
- V. azygos sinistra (Ru, su)
- Ductus thoracicus, Lnn. mediastinales medii
- Nn. phrenici
- Truncus sympathicus sa vertebralnim ganglijama i postganglionarnim n. vlaknima

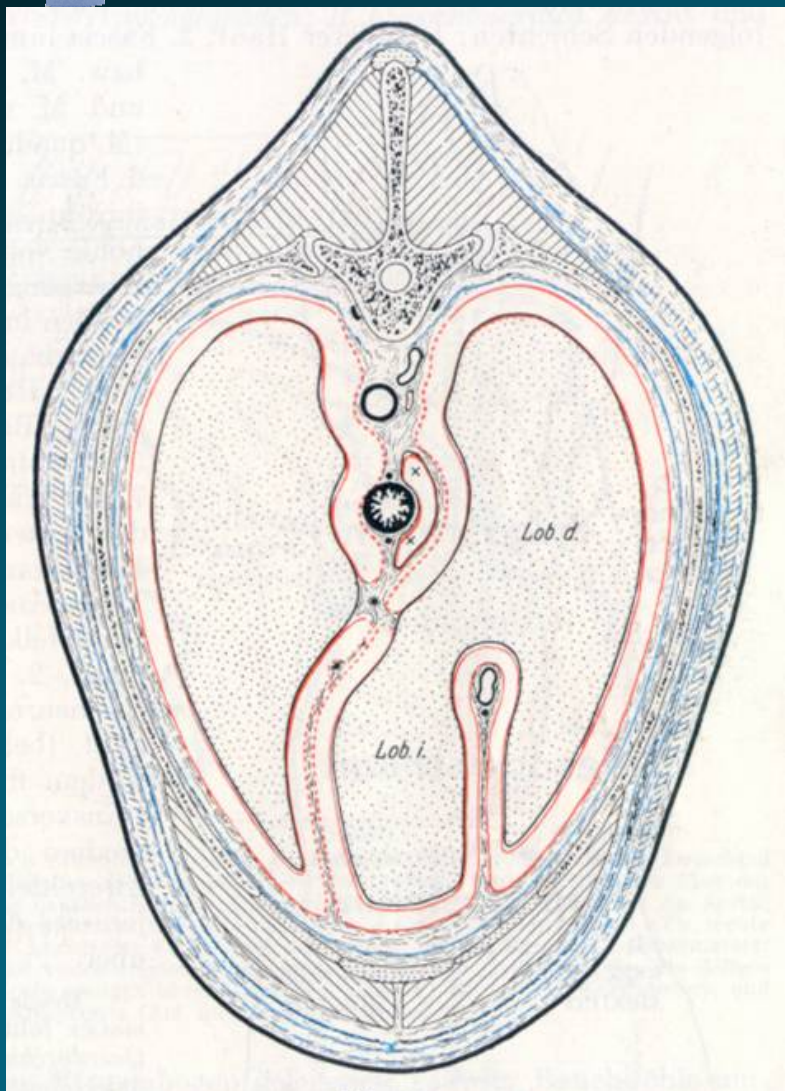
Lig. sternopericardiacum (eq, Ru)

Lig. sternophrenopericardiacum (su)

Lig. phrenopericardiacum (car)



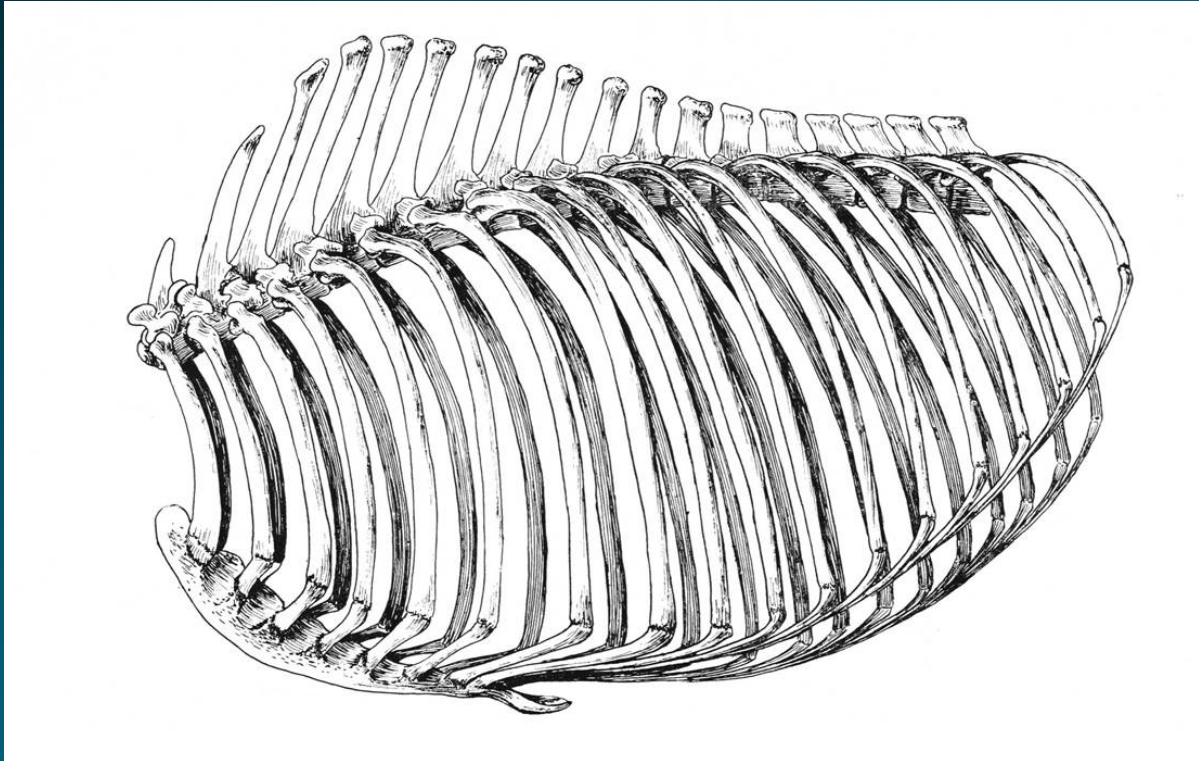
POSTKARDIJALNI



- pluća, jednjak
- Aorta thoracica
- V. cava caudalis, V. azygos dextra
- V. azygos sinistra (Ru, su)
- Ductus thoracicus, Lnn. mediastinales medii
- Truncus sympathicus sa vertebralnim ganglijama i postganglionarnim vlaknima
- N. phrenicus dexter, N. phrenicus sinister



SKELETON THORACIS (THORAX)



Cavum thoracis

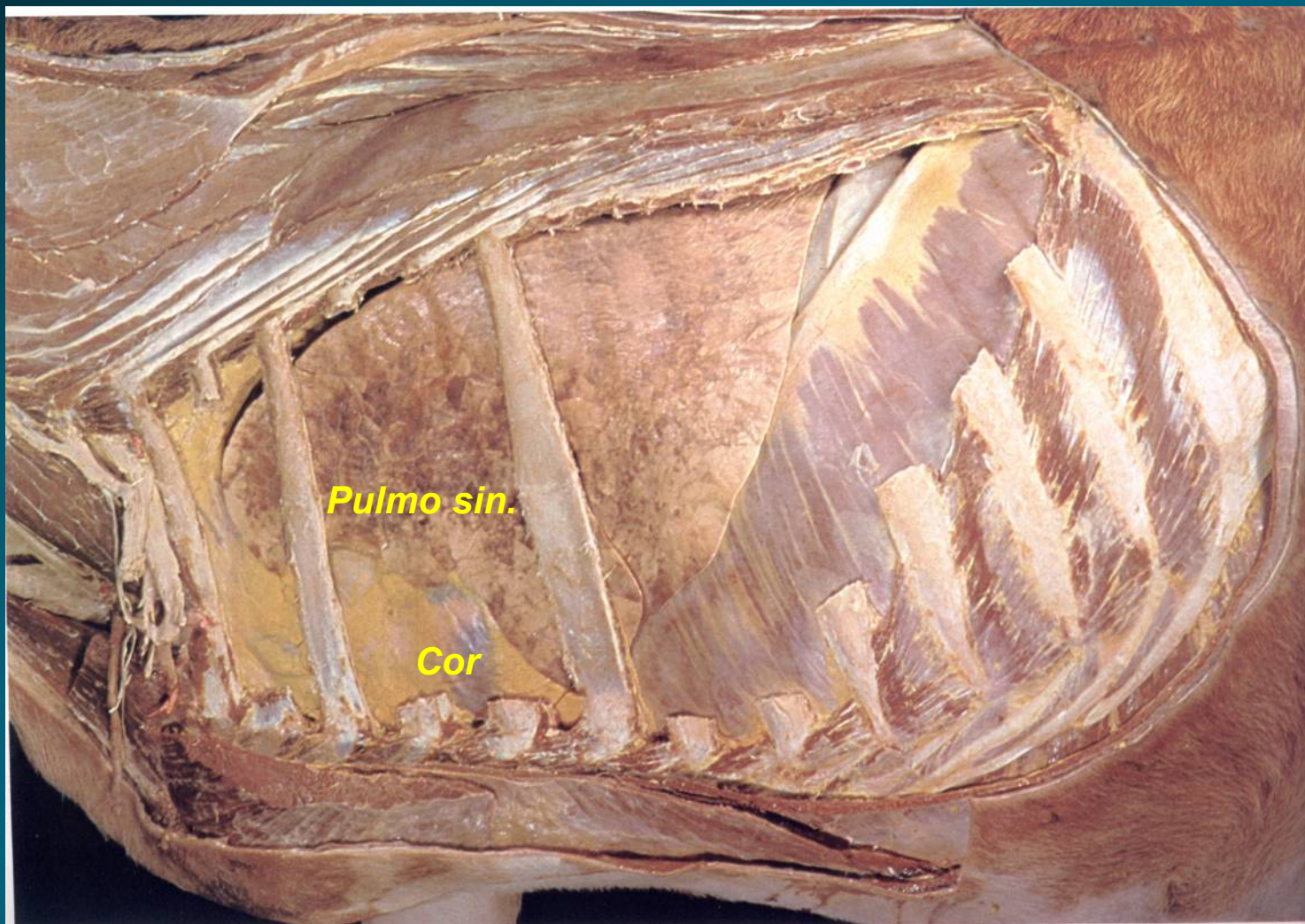
Apertura thoracis cranialis

Apertura thoracis caudalis

Spatium intercostale

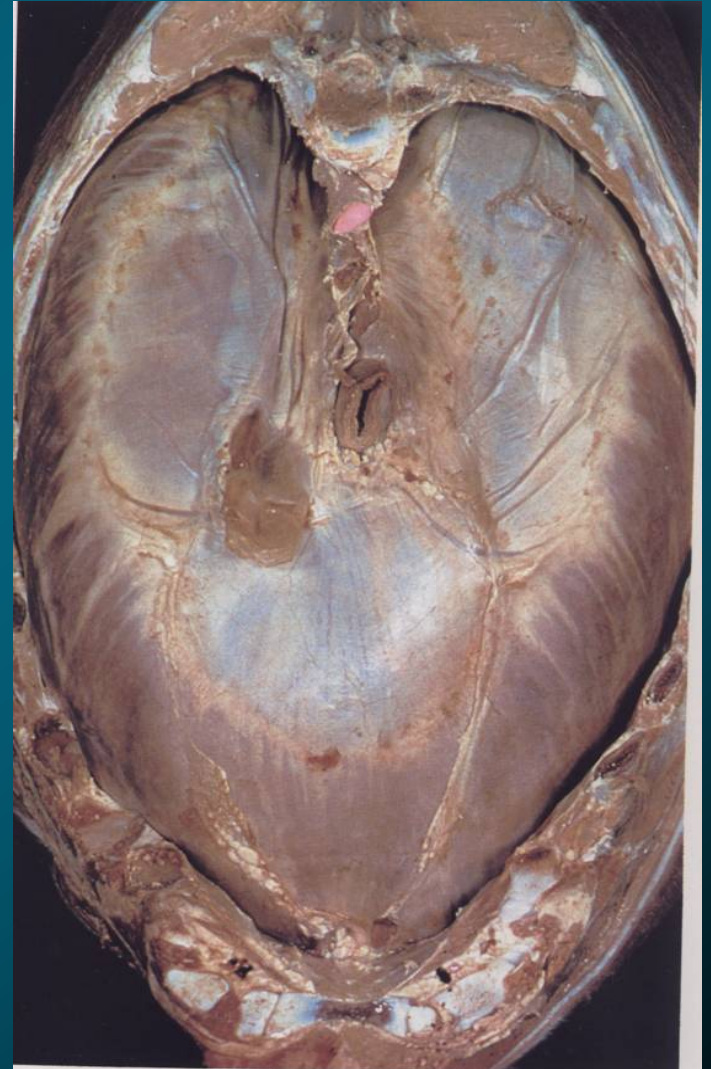
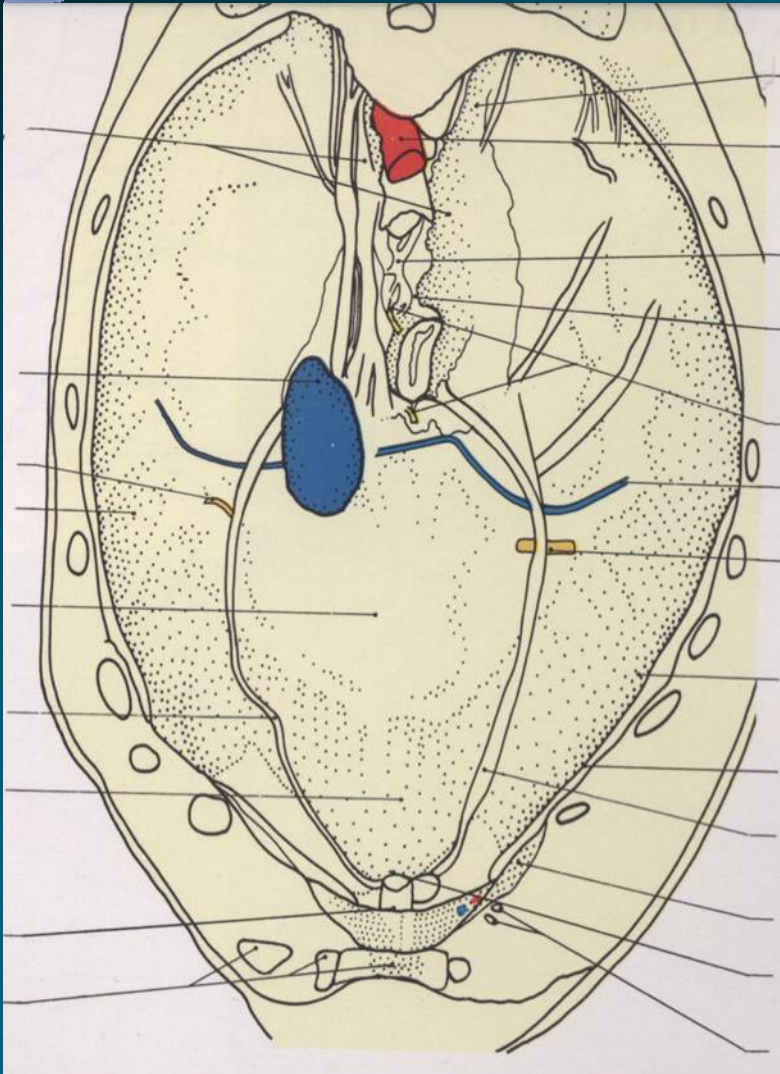
Arcus costalis

Angulus arcuum costalium



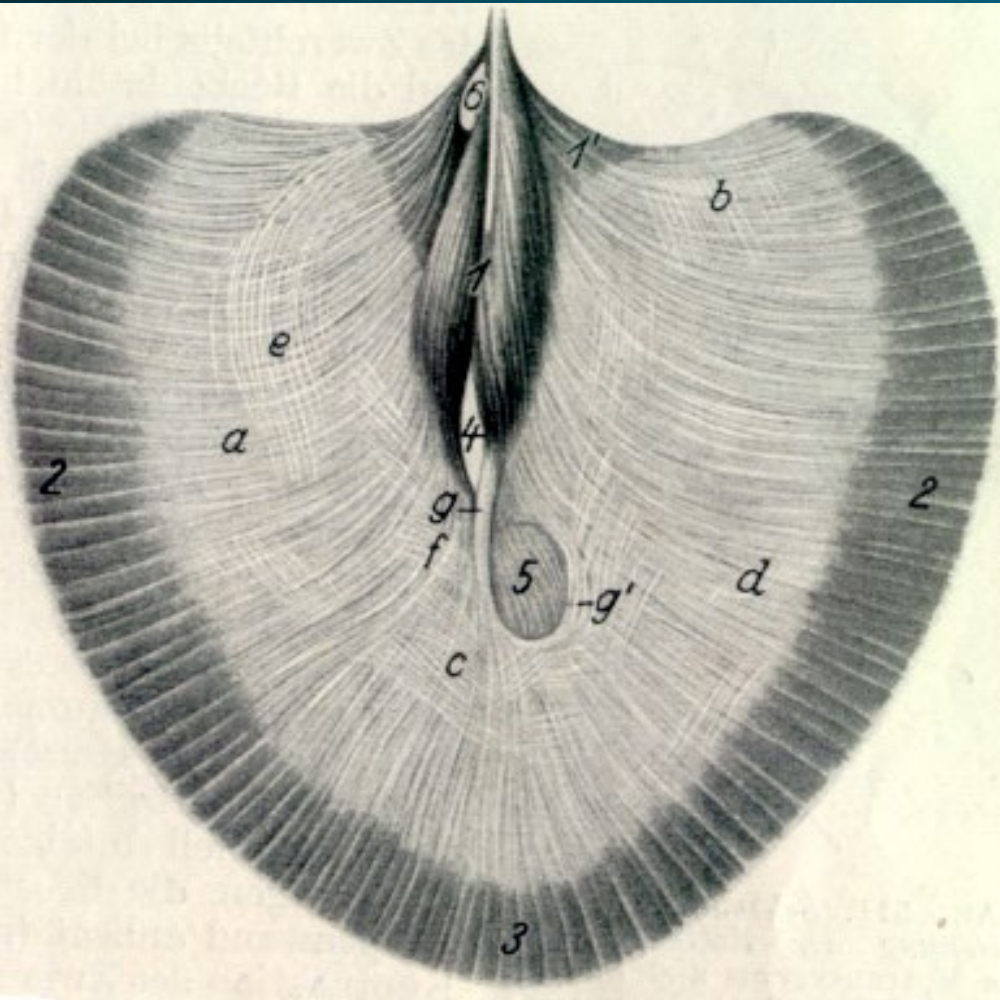


DIAPHRAGMA (PHREN)





DIAPHRAGMA (PHREN)



1- *Crus dextrum*

2- *Pars costalis*

3- *Pars sternalis*

4- *Hiatus oesophageus*

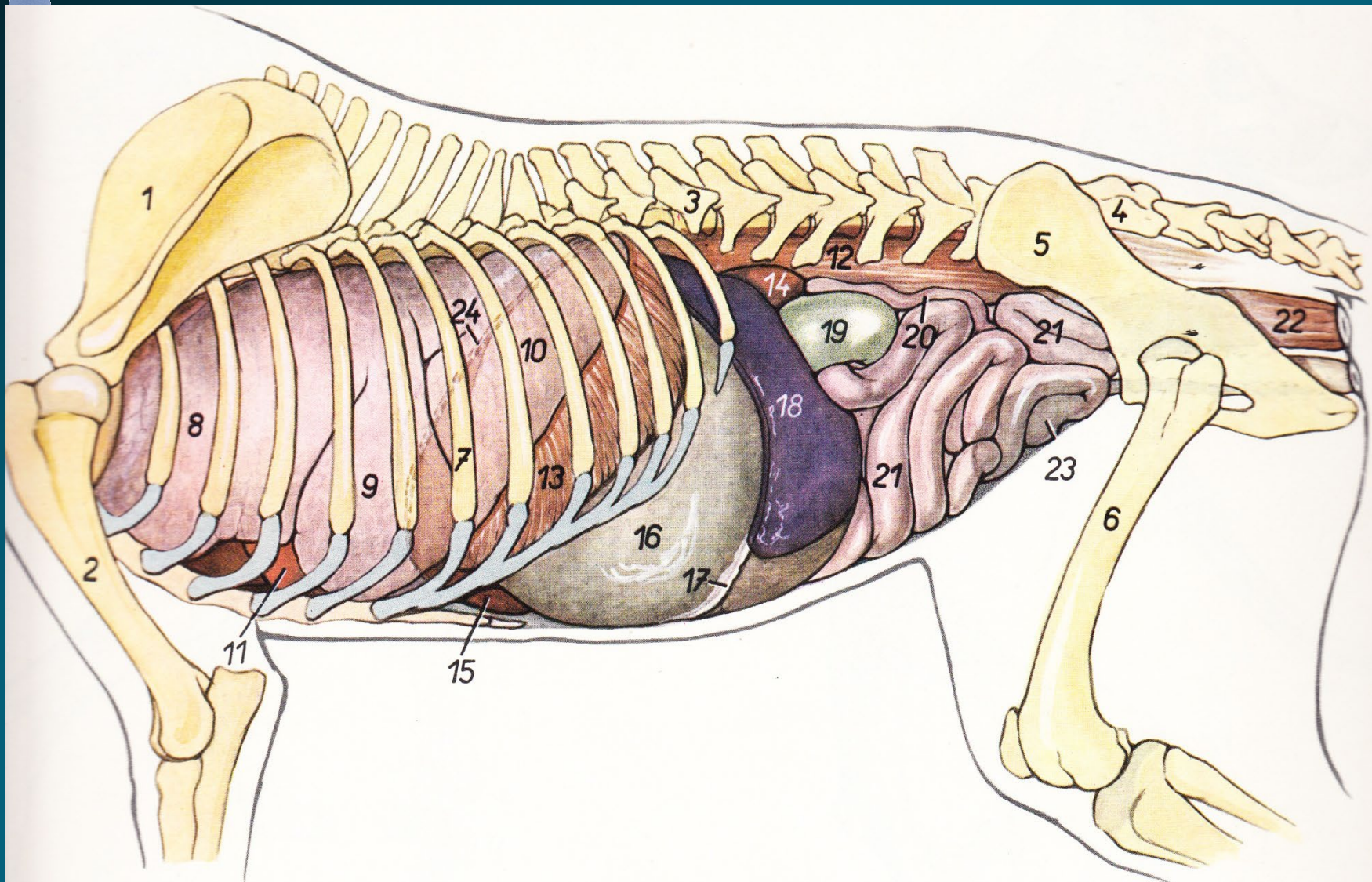
5- *Foramen venae cavae*

6- *Hiatus aorticus*

a,b,c,d,e – *Centrum tendineum*



GRUDNA DUPLJA PSA (leva strana)





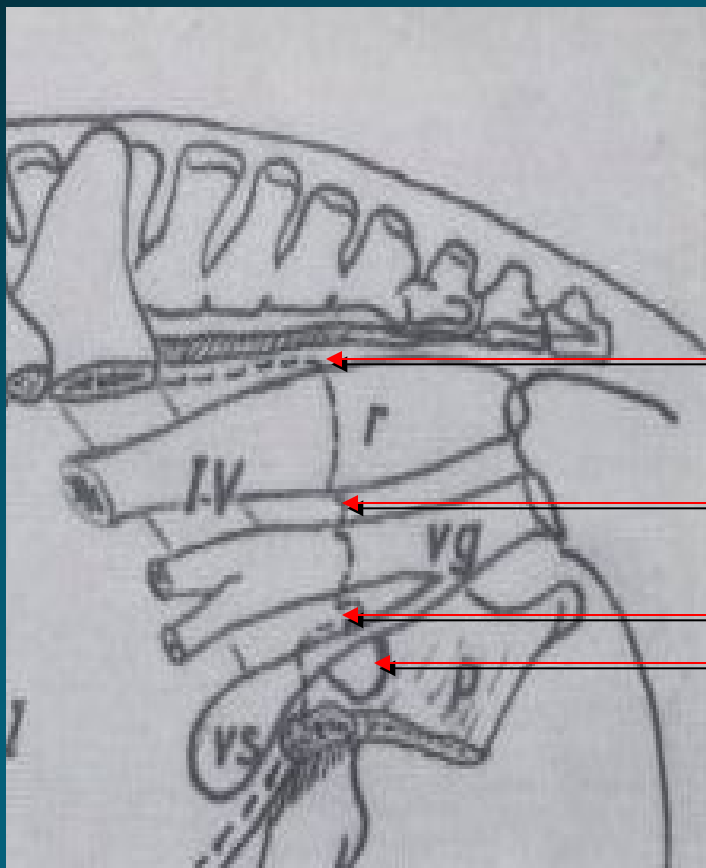
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ANATOMIJA

TOPOGRAFIJA KARLIČNE DUPLJE



Kaudalni peritonealni zid



Exavatio rectodorsalis

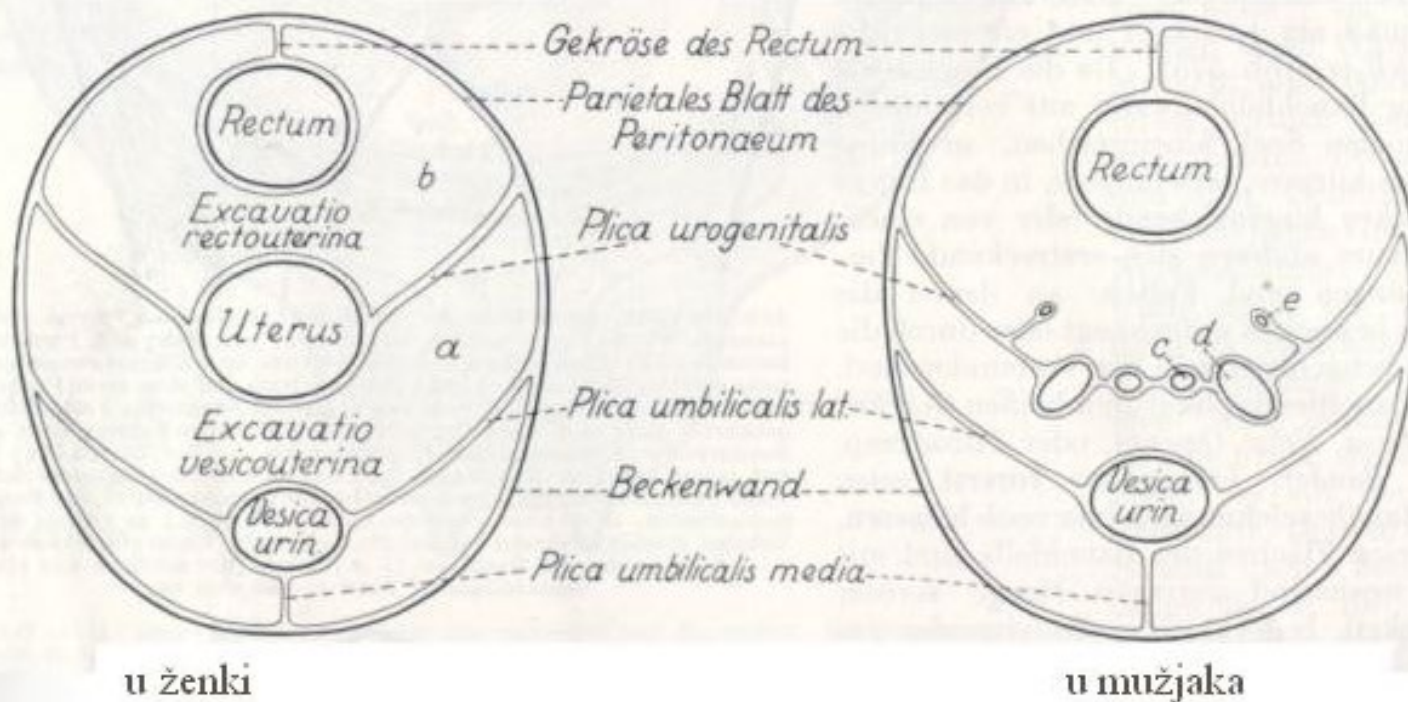
Exavatio rectogenitalis

Exavatio genitovesicalis

***Exavatio vesicalis ventralis
(pubovesicalis)***

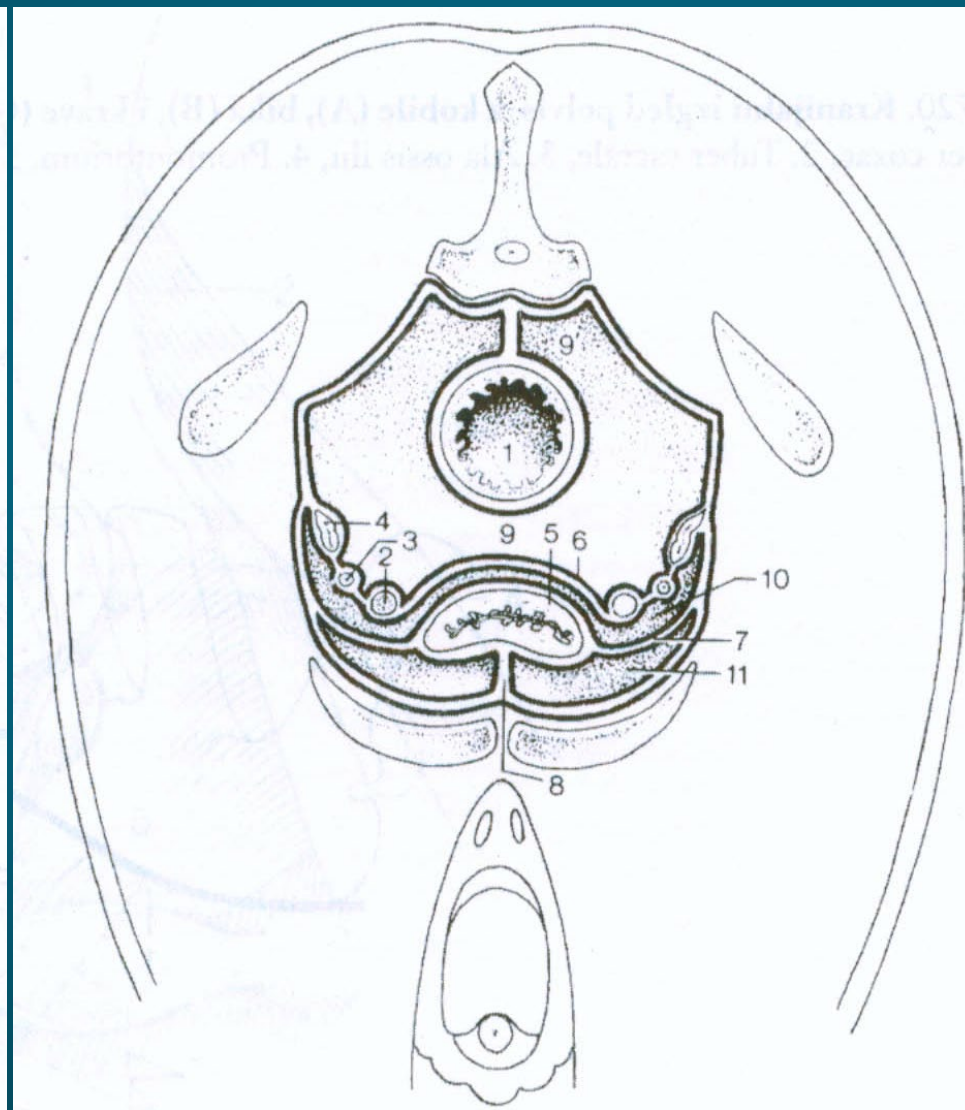
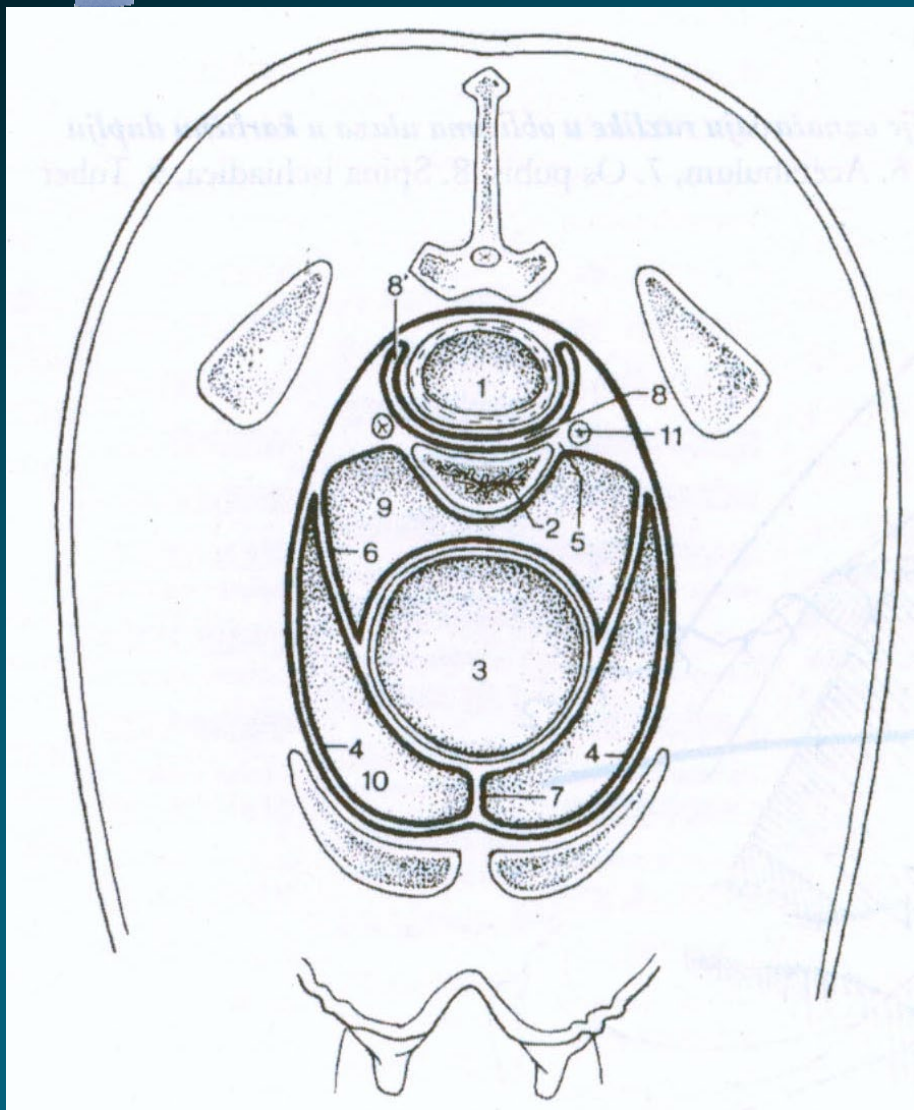


Serozne duplikature karlične duplje





Serozne duplikature karlične duplje





Građa zida karlične duplje

1. Koža (*Integumentum commune*)
2. Skelet (*Pelvis*)
3. Mišići
4. Organi
5. Krvni sudovi, nervi



Skelet karlične duplje (PELVIS)

Karlična kost (***Os coxae***)

Crevna ili bedrena kost (***Os ilium***)

Preponska ili stidna kost (***Os pubis***)

Sedna kost (***Os ischi***)

Krsna kost (***Os sacrum***)

Repni pršljenovi (***Vertebrae caudales seu coccygeae***)



Skelet karlične duplje (PELVIS)

dorzalno - krsna kost i prva tri do četiri repna pršljena

ventralno - preponske i sedne kosti

bočno - bedrene kosti i široki ligamenti karličnih kostiju



Organi karlične duplje

- završni deo digestivnog trakta (*Rectum et Anus*)
- deo reproduktivnih organa
- deo organa mokraćnog pribora (*Vesica urinaria et Urethra*)



Organi karlične duplje ženskih životinja

Završni deo digestivnog trakta
(***Rectum et Anus***)

Deo reproduktivnih organa
(***Corpus et Cervix uteri, Vagina, Vulva, Clitoris***)

Deo mokraćnog pribora
(***Vesica urinaria et Urethra***)



Organi digestivnog trakta u karličnoj duplji

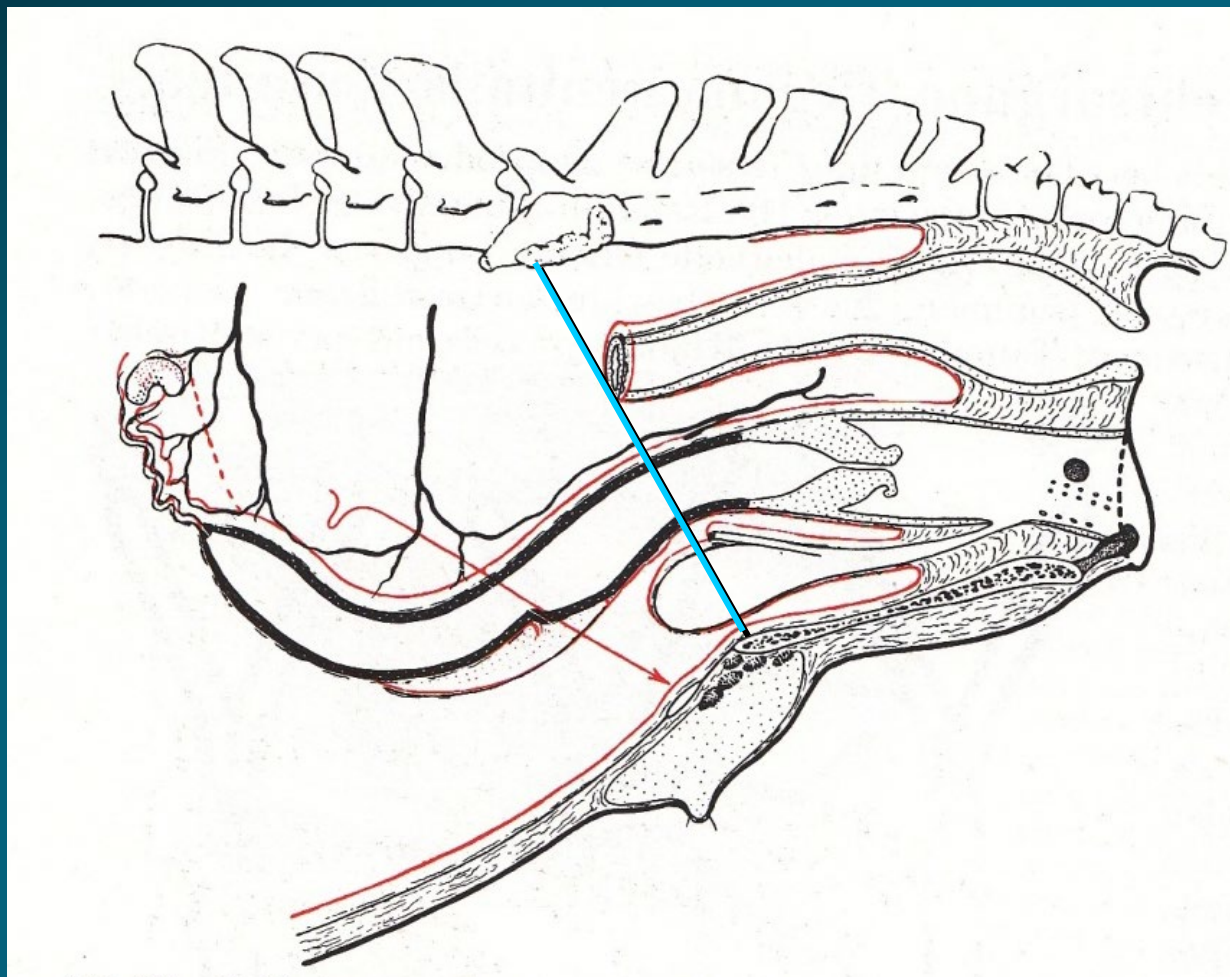
Pravo crevo (***Rectum***)

- dugo je 20 cm, opkoljeno je masnim tkivom
- kranijalni deo visi na kratkom mezenterijumu
- kaudalni leži u retroperitonealanom delu karlične duplje
- ampulasto proširenje (***Ampulla recti***)

Čmar (***Anus***)

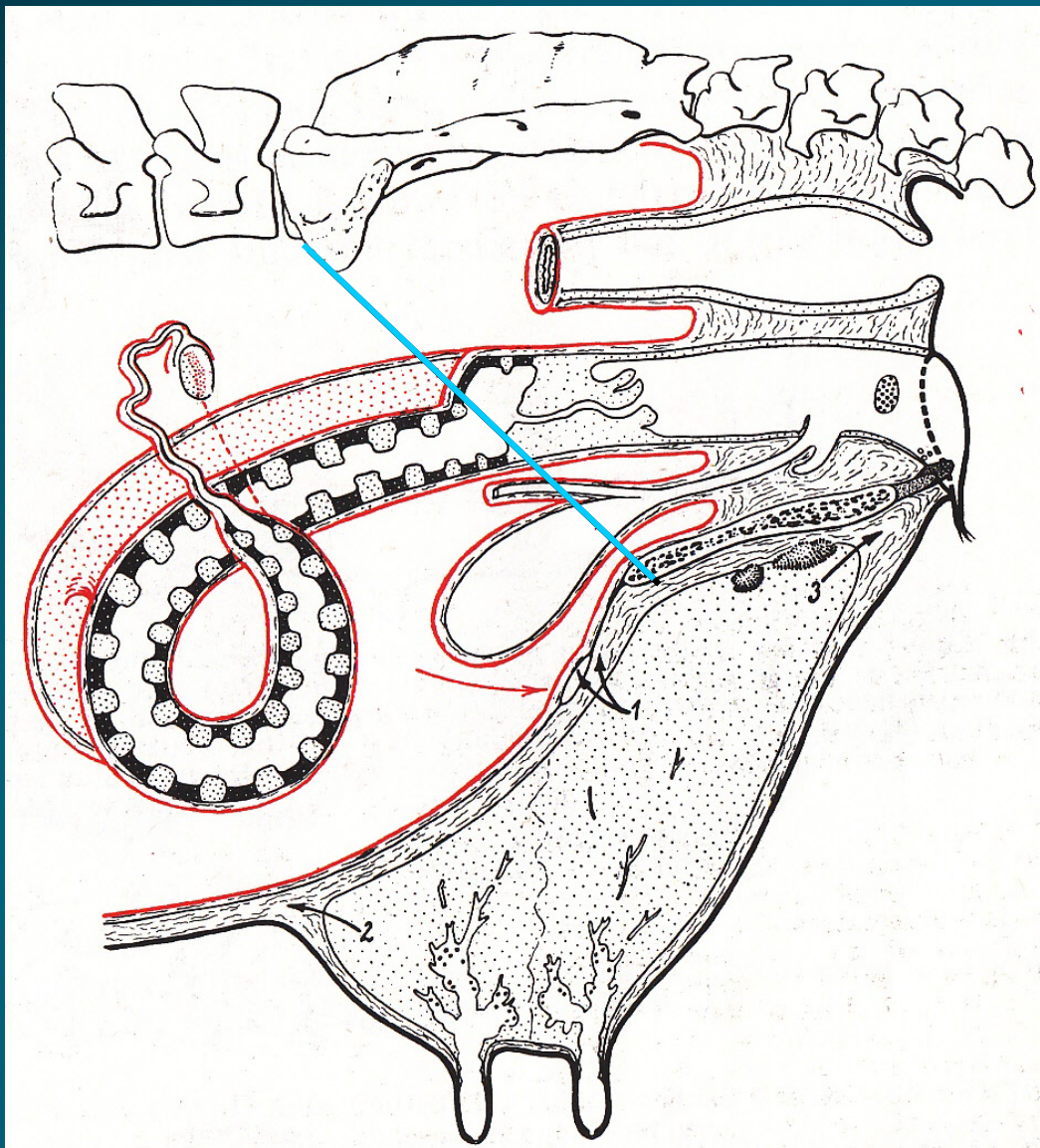


Organi karlične duplje kobile



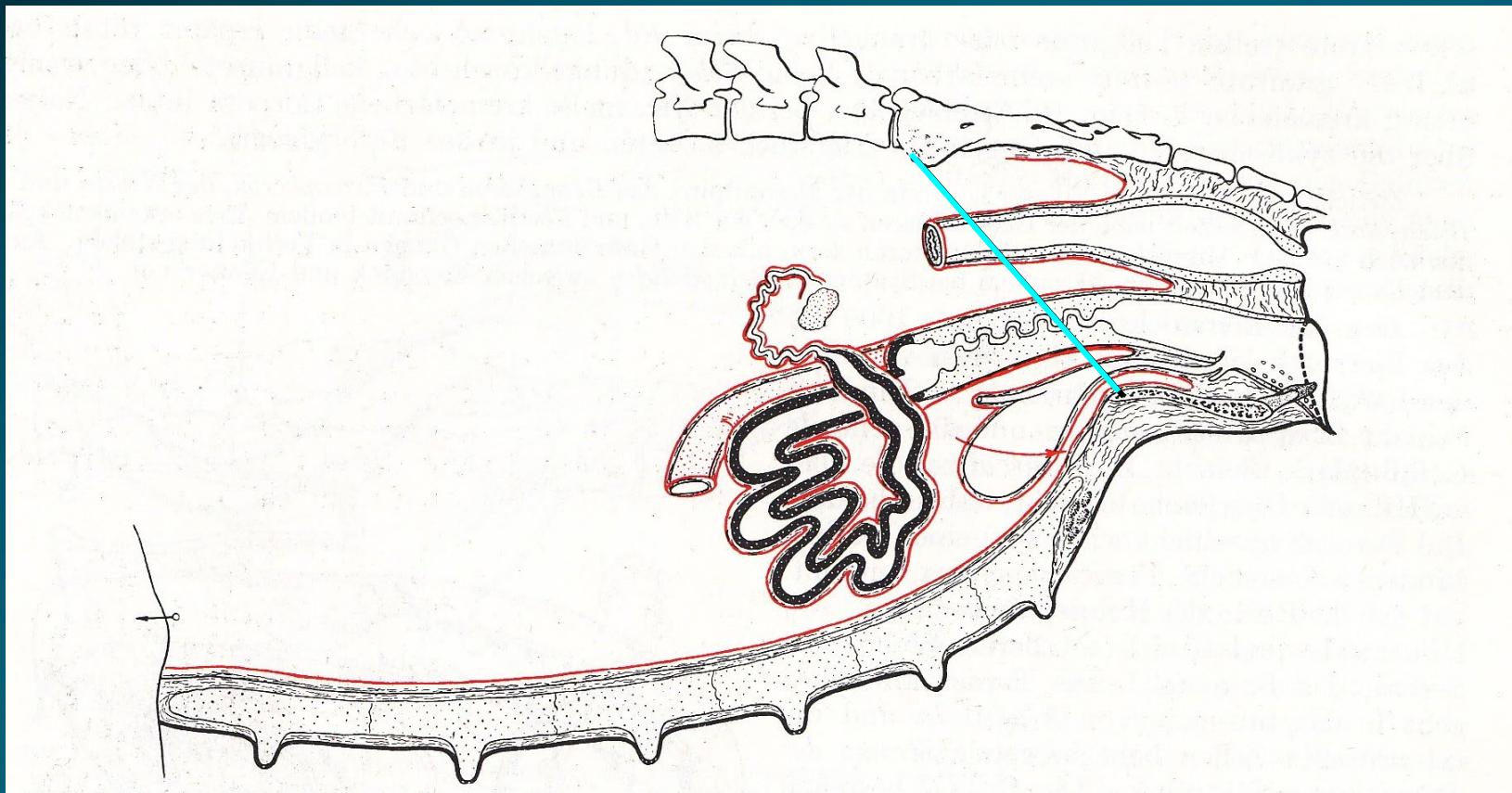


Organi karlične duplje krave



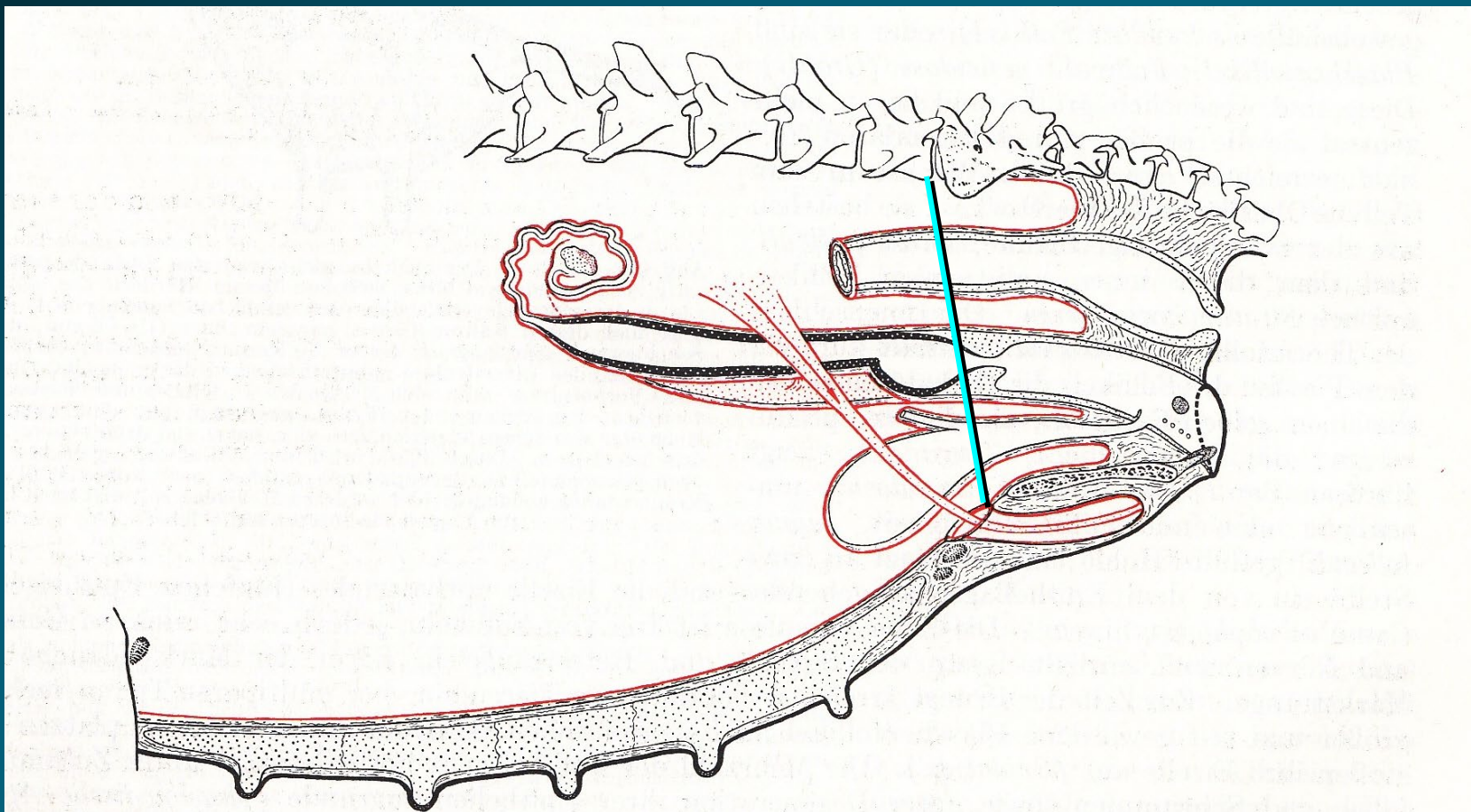


Organi karlične duplje krmače





Organi karlične duplje kuje





Organi karlične duplje muških životinja

Završni deo digestivnog trakta
(***Rectum et Anus***)

Reproduktivni organi

mošnice (***Scrotum***), semenici (***Testes***), pasemenik
(***Epididymis***) kod nerasta i pasa ***u Regio scrotalis***;
kod ostalih (eq, Ru) na ventralnom trbušnom zidu

semenovod (***Ductus deferens***), aksesorne polne žlezde

Deo mokraćnog pribora (***Vesica urinaria, Urethra***)



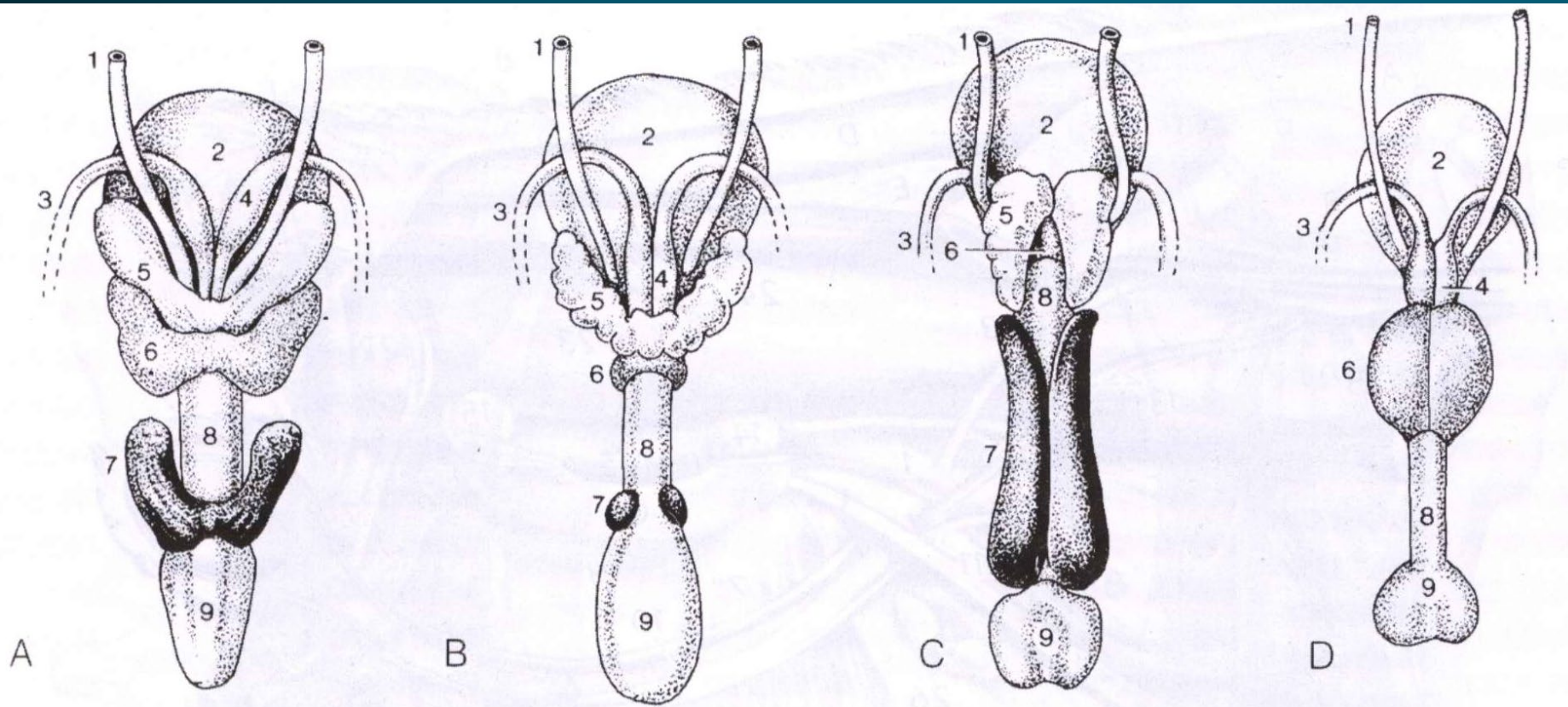
Akcesorne polne žlezde (šematski prikaz)

konj

goveče

svinja

pas



Glandula vesicularis (preživari) - semena kesica kompaktne žlezdane strukture

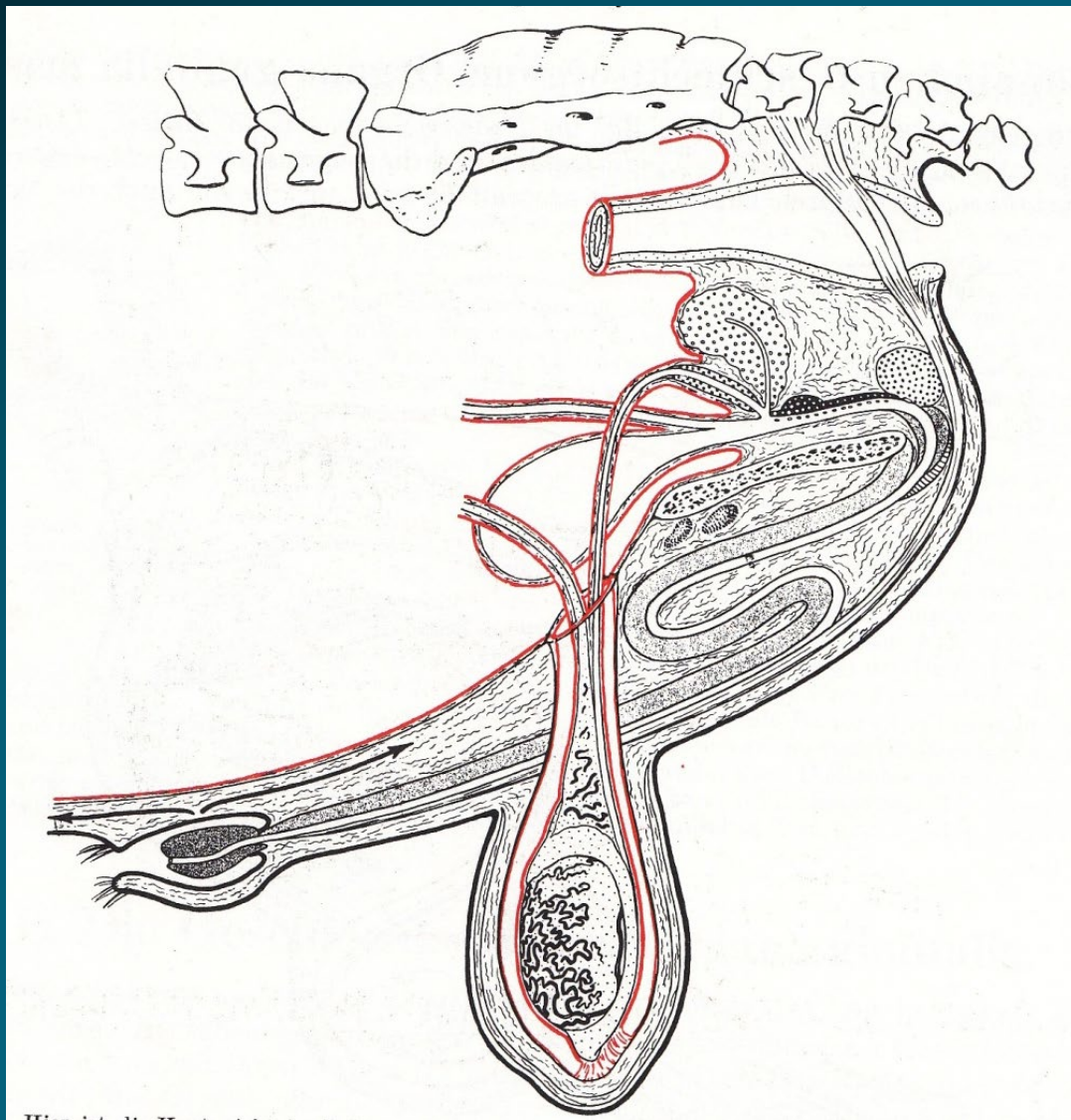
Vesicula seminalis (konj, svinja, čovek) - semena kesica kesaste građe

Prostata

Glandula bulbourethralis

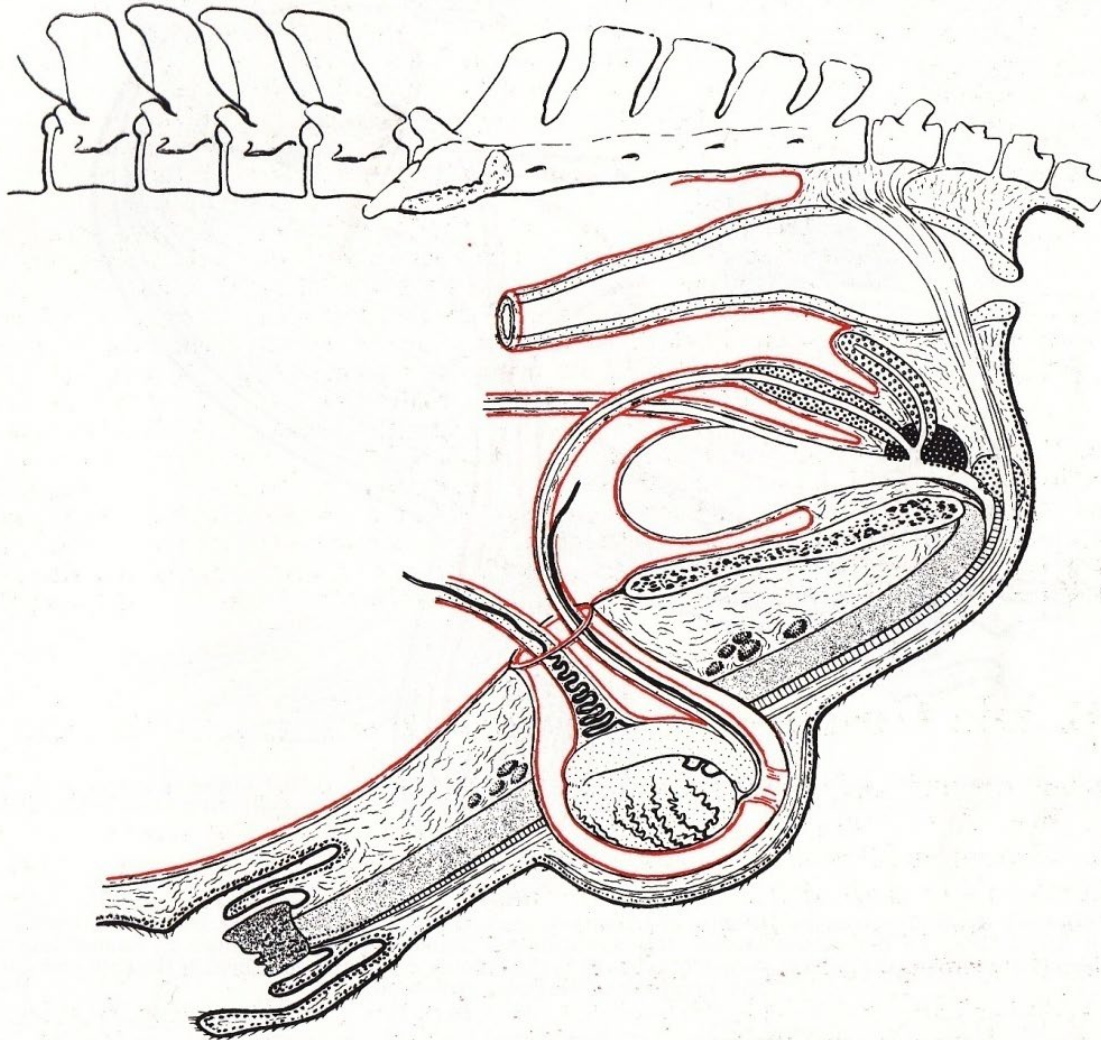


Organi karlične duplje bika



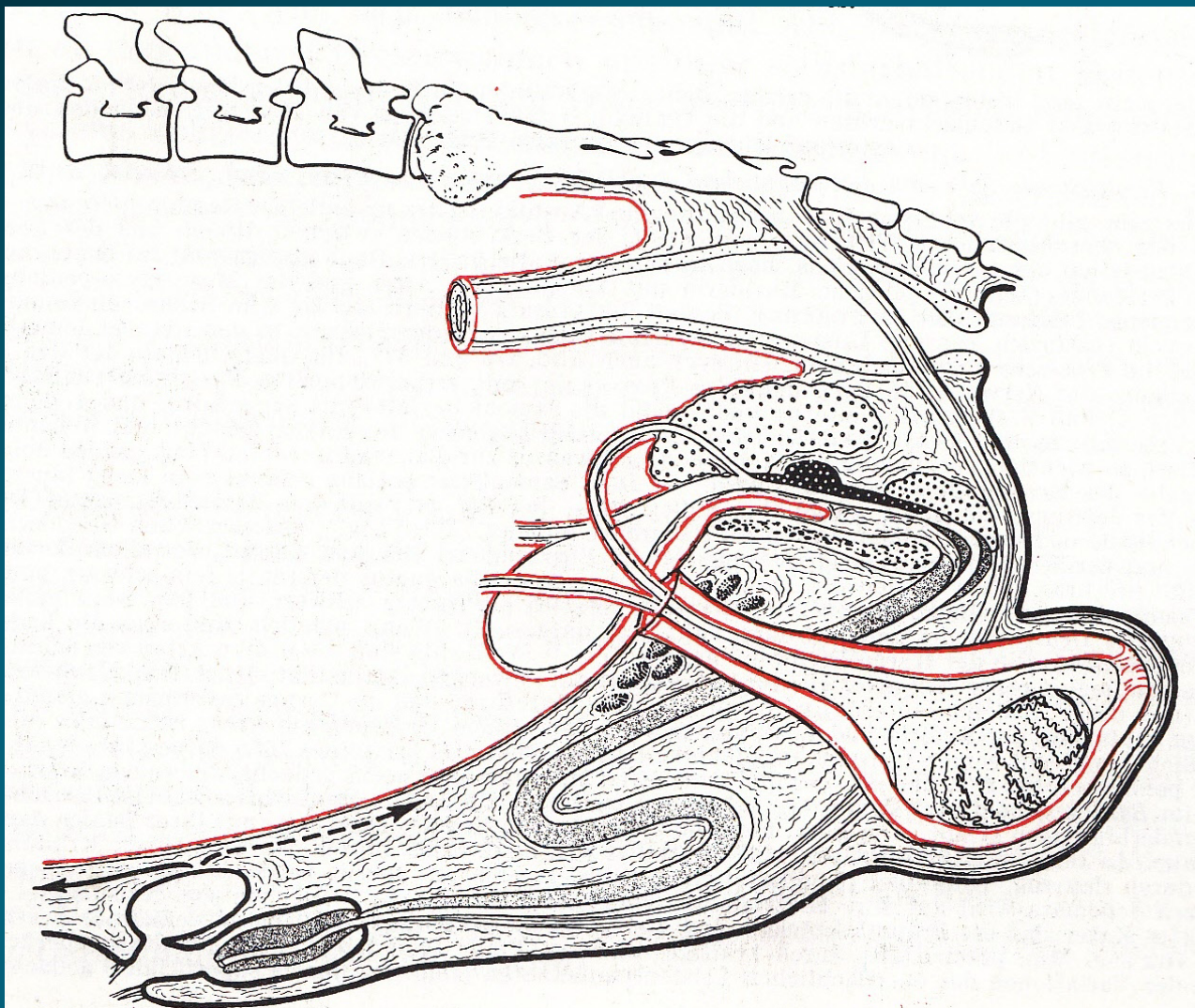


Organi karlične duplje pastuva



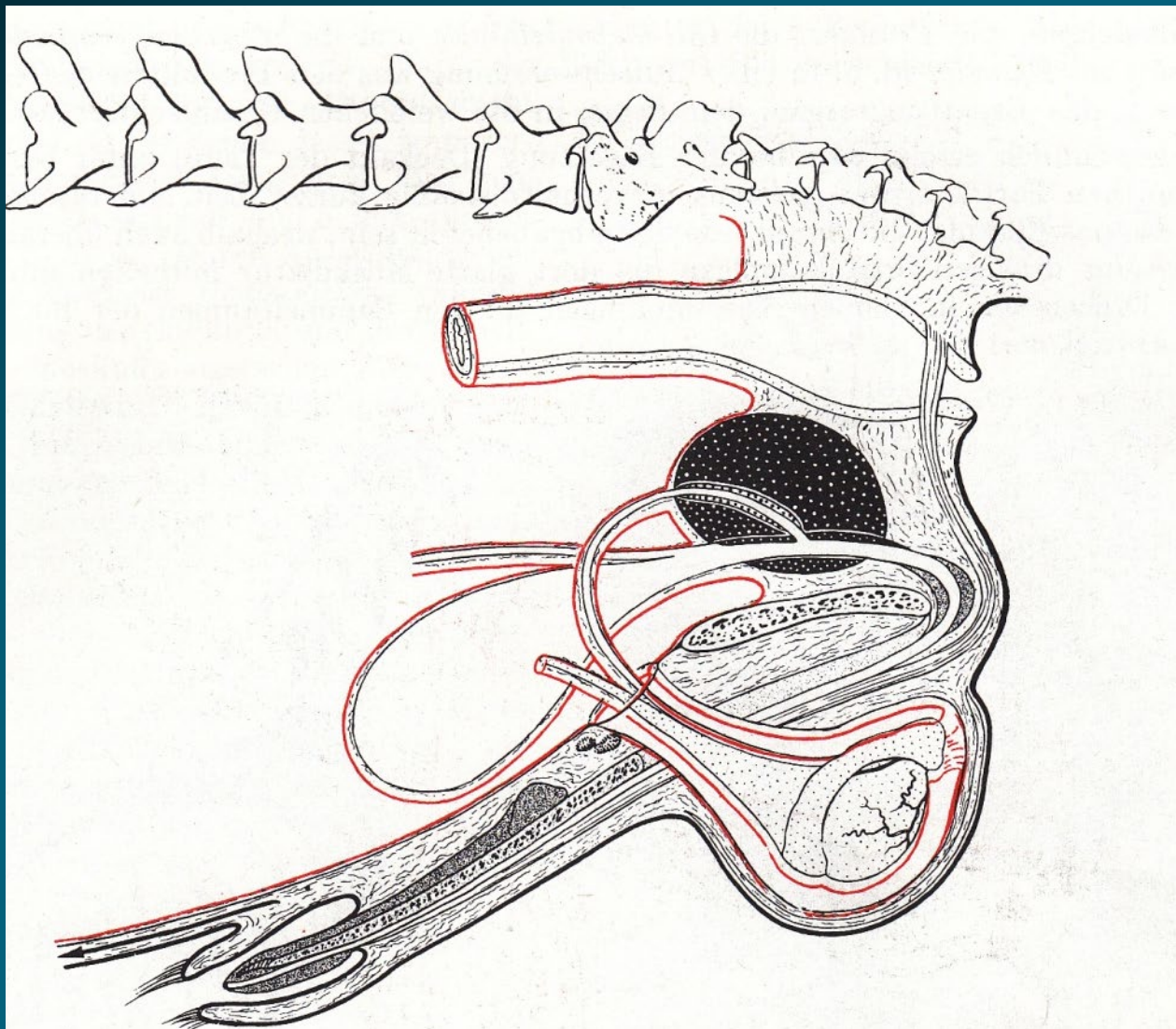


Organi karlične duplje nerasta



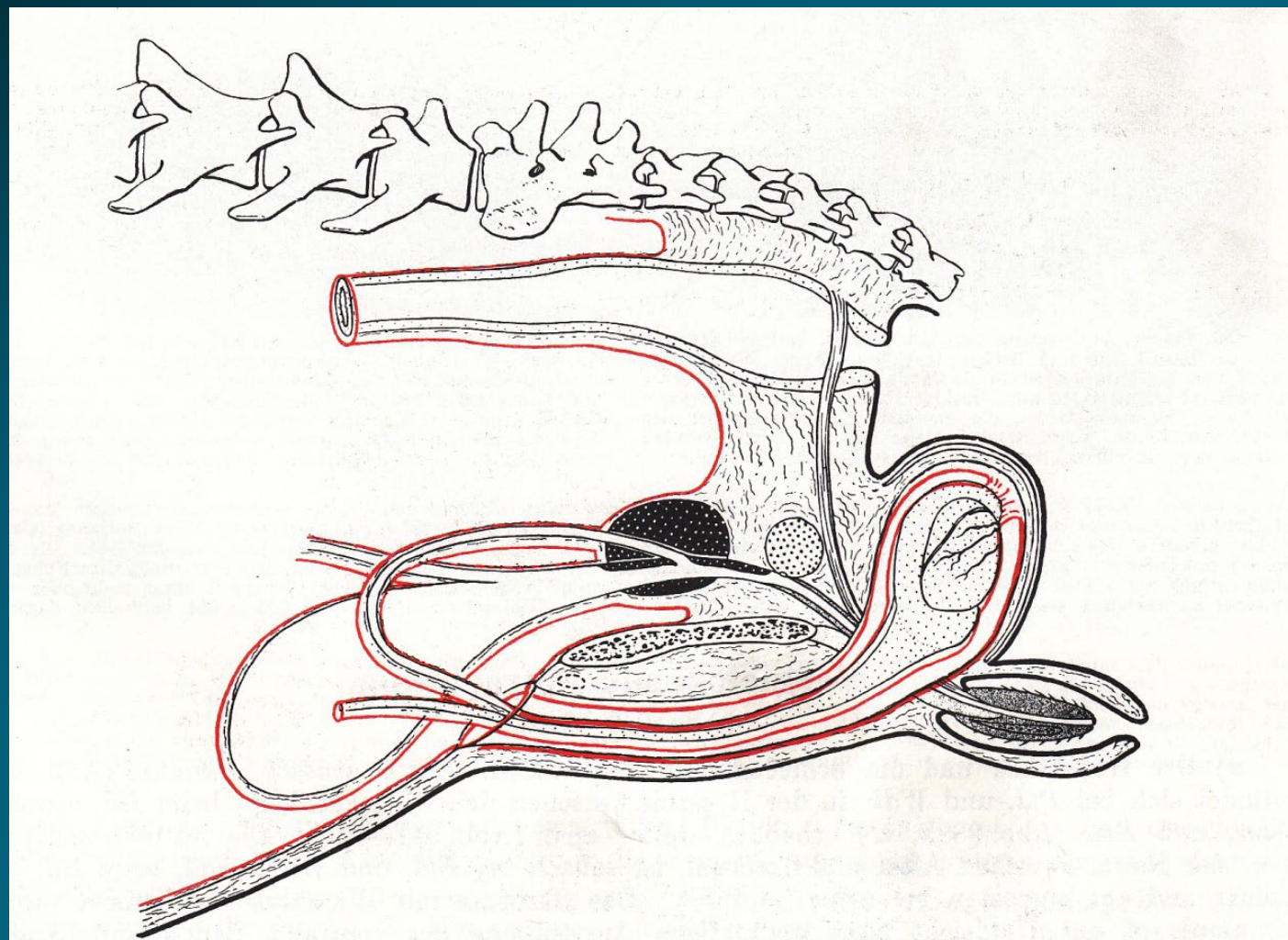


Organi karlične duplje psa





Organi karlične duplje mačka





Vaskularizacija karlične duplje

Arterije:

A. iliaca interna (*eq*) **kratak krvni sud**

A. glutea caudalis (za zid)

A. pudenda interna (za organe) **dug krvni sud**

A. umbilicalis

A. ductus deferentis

Ramus uretericus

A. vesicalis caudalis

A. prostatica (*masc.*)

A. ductus deferentis

A. rectalis media

A. vaginalis (*fem.*)

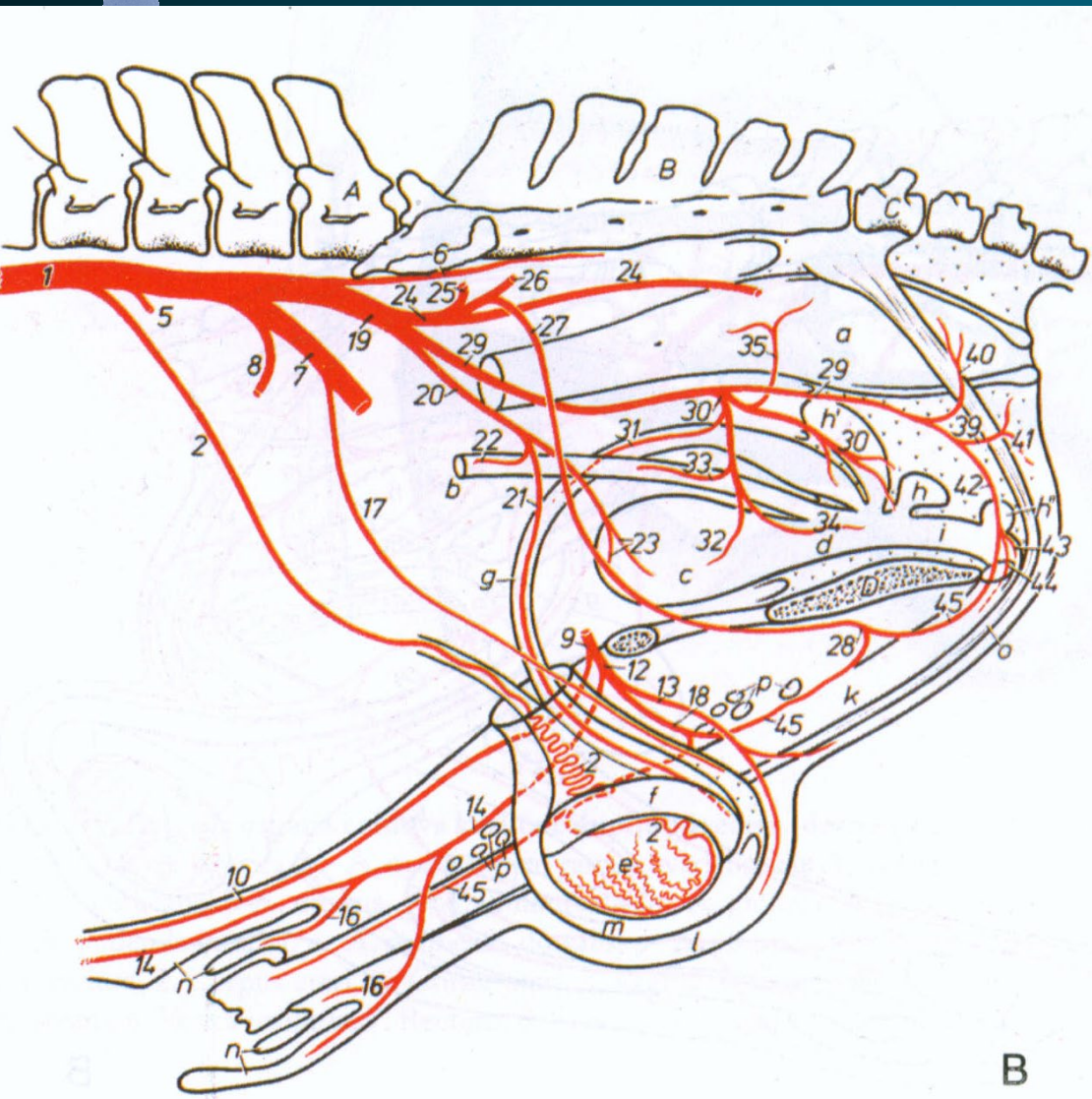
Ramus uterinus

A. rectalis media

A. penis (*masc.*)



A. iliaca interna (eq)



A. glutea caudalis

A. glutea cranialis

A. pudenda interna

A. umbilicalis

A. ductus deferentis

Ramus uretericus

A. vesicalis caudalis

A. prostatica (*masc.*)

A. ductus deferentis

A. rectalis media

A. vaginalis (*fem.*)

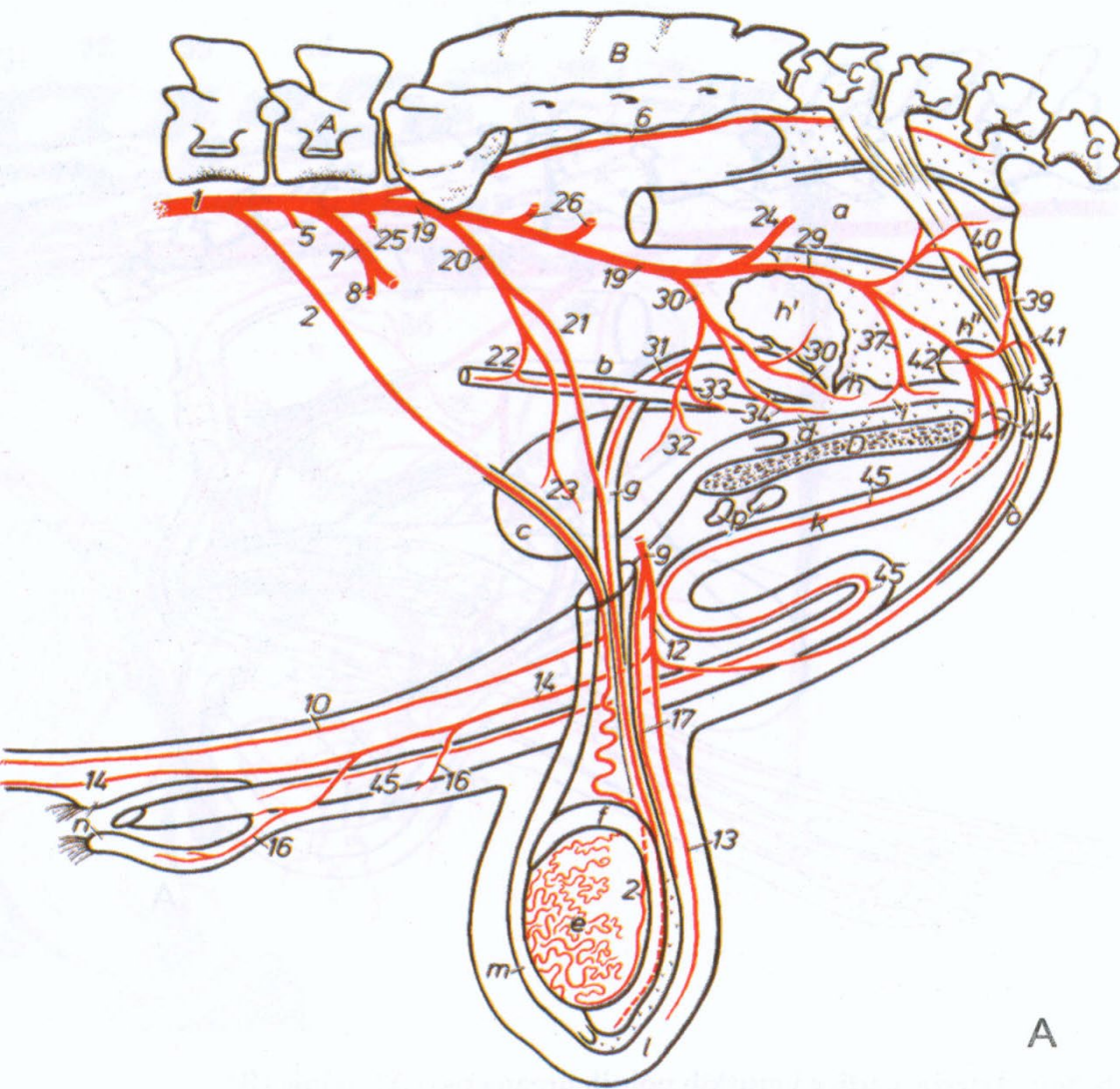
Ramus uterinus

A. rectalis media

A. penis (*masc.*)



A. iliaca interna (Ru)



A. umbilicalis

A. ductus deferentis

Ramus uretericus

A. vesicalis caudalis

A. glutea cranialis

A. prostatica (*masc.*)

A. ductus deferentis

Ramus urethralis

A. glutea caudalis

A. pudenda interna

A. rectalis caudalis

A. penis



Vaskularizacija karlične duplje

Vene:

V. iliaca interna

- V. iliolumbalis (*Ru, su, car*)
- V. glutea cranialis (*Ru, su, car*)
- V. glutea caudalis (*eq, Ru, su, car*)
- V. obturatoria (*Ru, su, car*)
- V. pudenda interna (*eq, Ru, su, car*)



Inervacija karlične duplje

Spinalni nervi: ***Plexus lumbosacralis***-a

(za kožu, mišiće zidova karlične duplje):

N. spermaticus externus

N. cutaneus femoris

N. femoralis

N. obturatorius

N. gluteus cranialis

N. gluteus caudalis

N. tibialis

Nervi autonomnog nervnog sistema (za organe)



Limfni sistem

Lc. iliosacrale:

Lnn. iliaci mediales

Lnn. Iliaci laterales

Lnn. sacrales

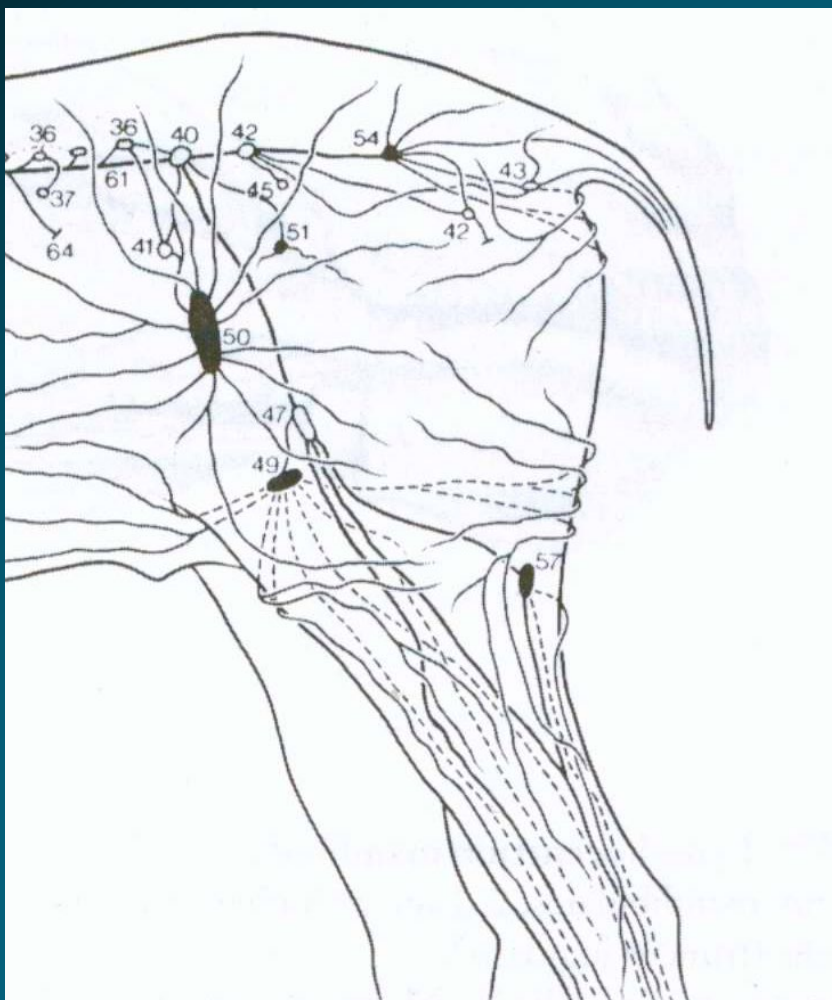
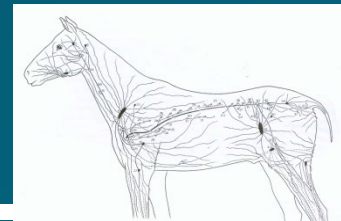
Lnn. anorectales

Lc. ischiadicum:

Ln. gluteus

Lnn. Ischiadici

Ln. tuberalis



Lc. iliosacrale

Lnn. iliaci mediales

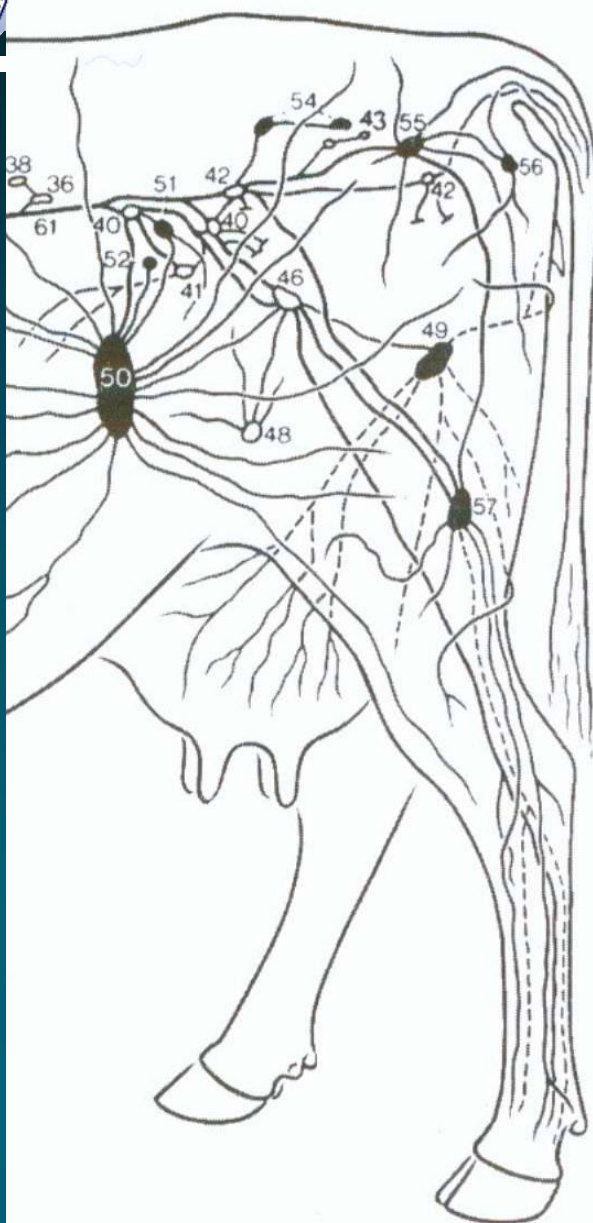
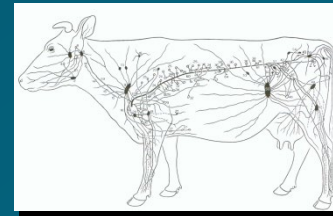
Lnn. iliaci laterales

Lnn. sacrales

Lnn. anorectales

Lc. Ischiadicum

Lnn. ischiadici



Lc. iliosacrale

Lnn. iliaci mediales

Lnn. iliaci laterales

Lnn. sacrales

Lnn. anorectales

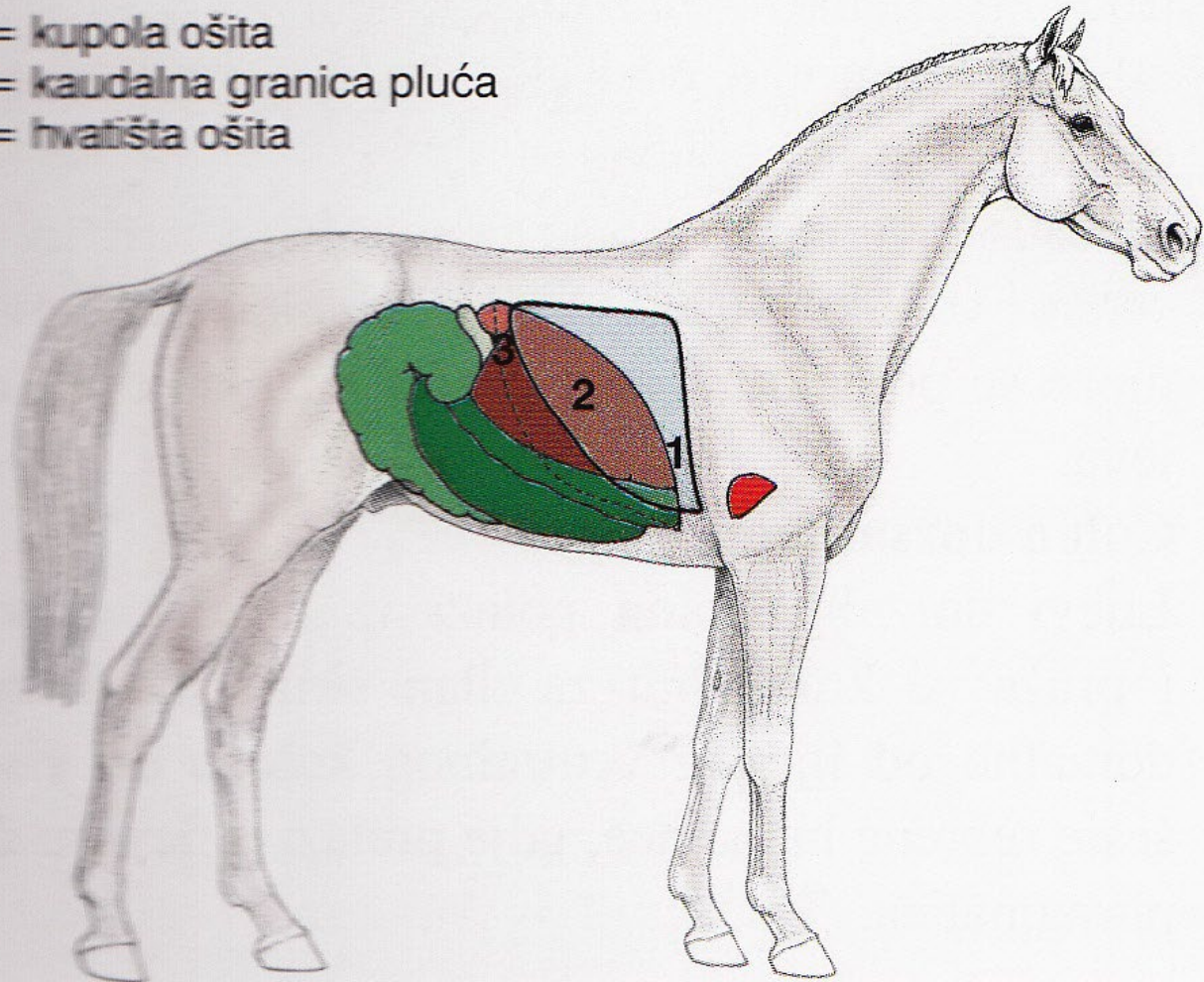
Lc. ischiadicum

Lnn. ischiadici

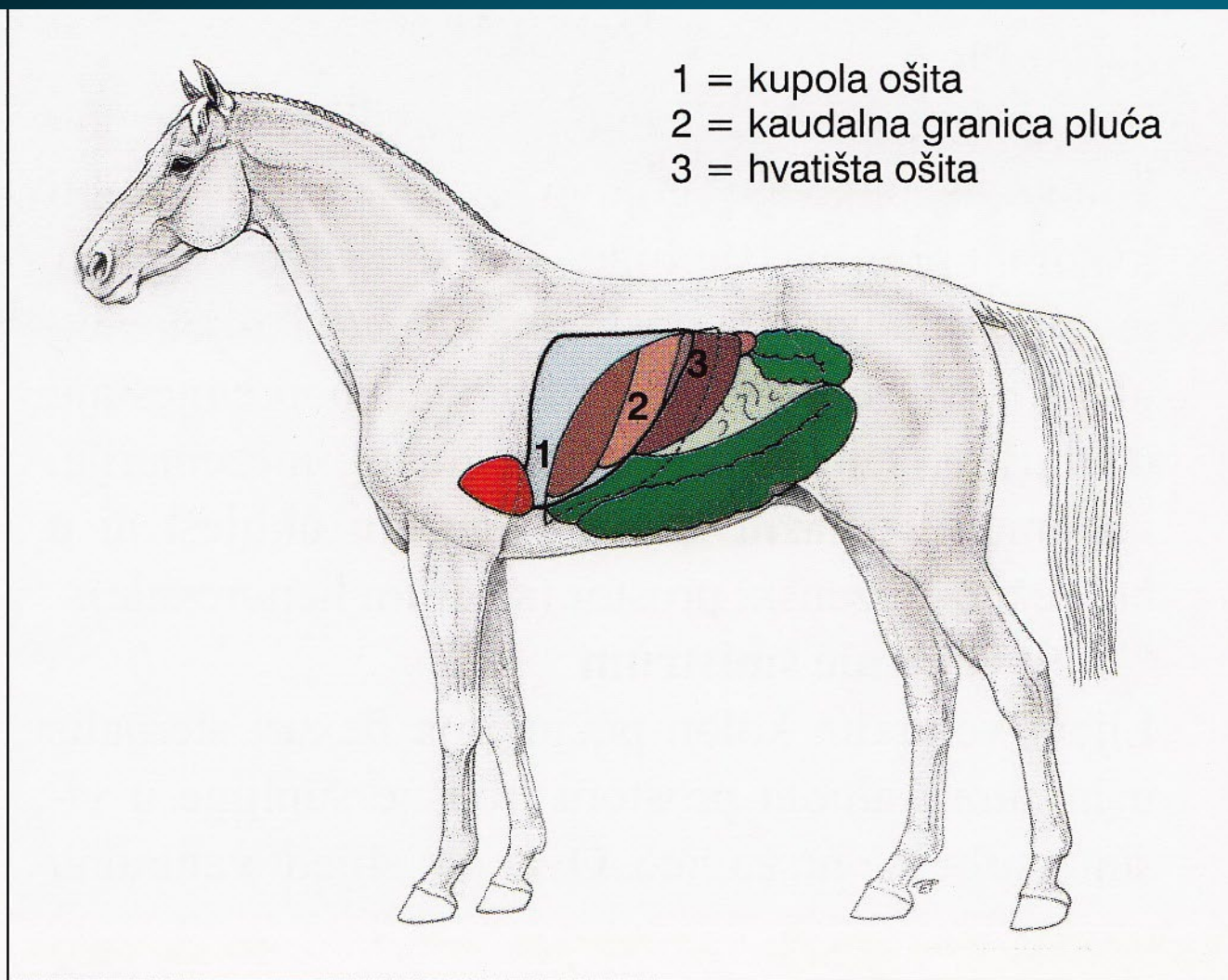
Ln. gluteus

Ln. tuberalis

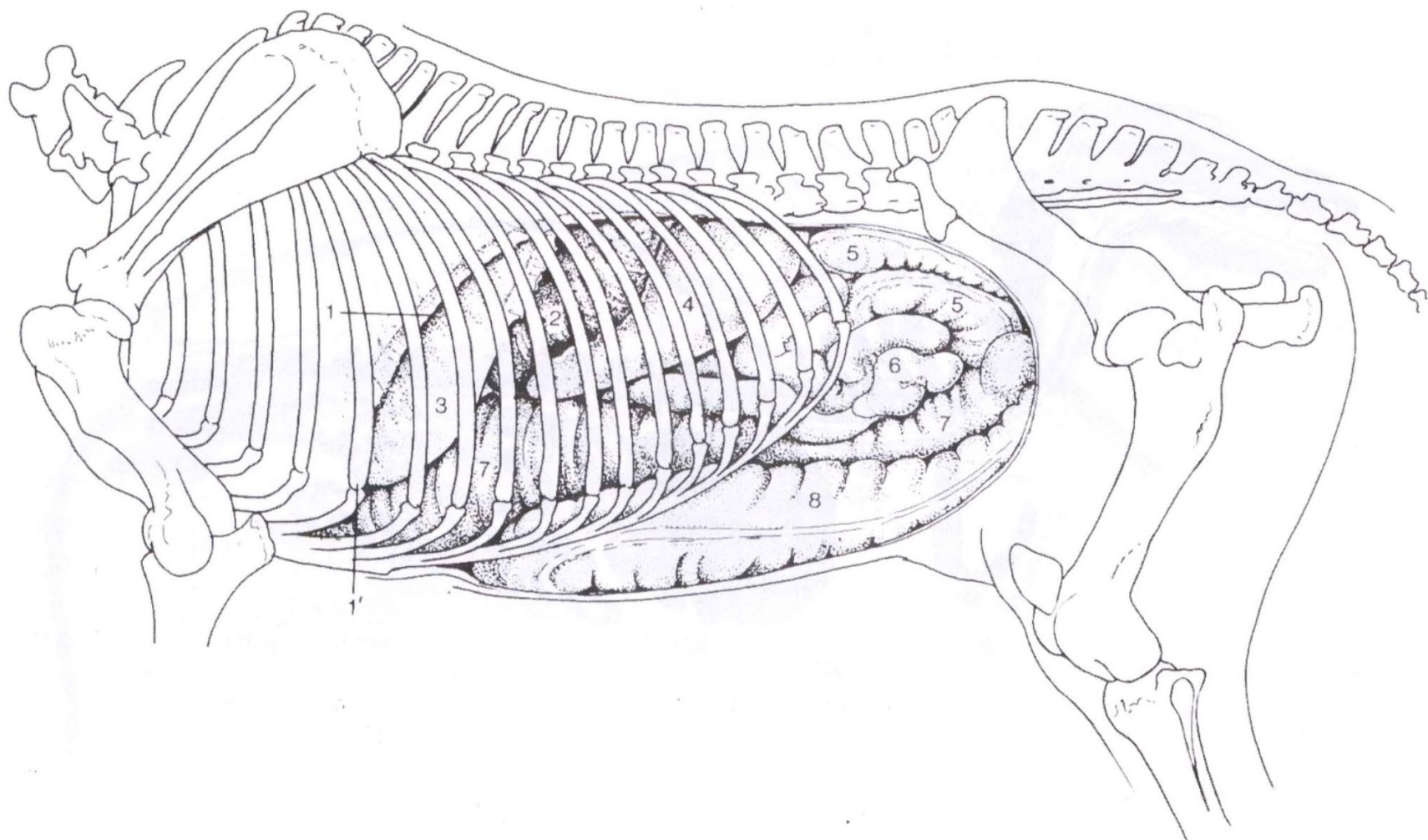
- 1 = kupola ošita
- 2 = kaudalna granica pluća
- 3 = hvatišta ošita



Slika 19-85. Projekcija prsnih i trbušnih organa konja na lateralnu tielesnu stijenk (desna strana).

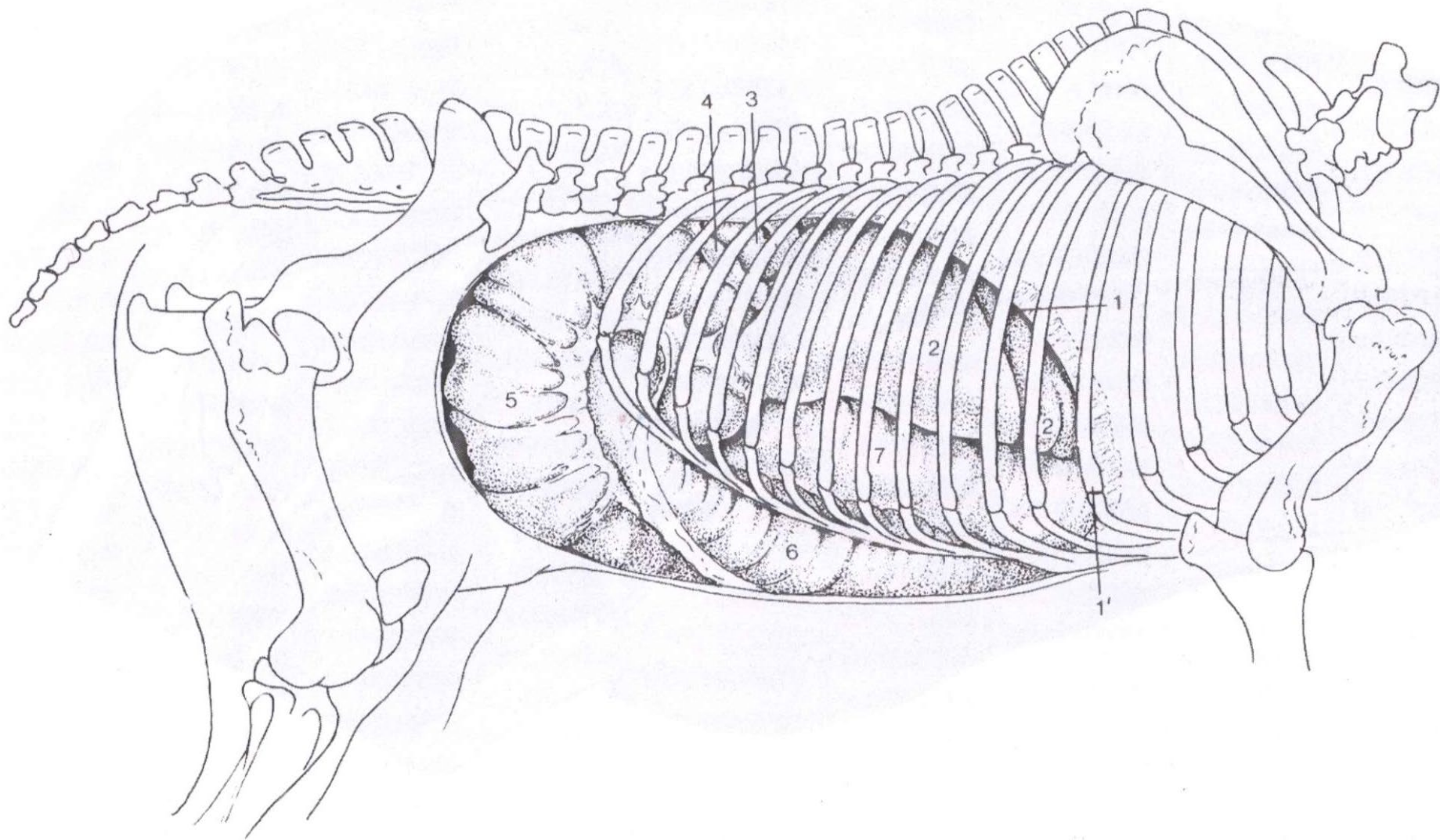


Slika 19-86. Projekcija prsnih i trbušnih organa konja na lateralnu tjelesnu stijenku (lijeva strana).



Slika 274. Visceralna projekcija levog abdominalnog zida konja (uključujući i dijafragmu)

1. Diaphragma, 1'. Costa VI, 2. Ventriculus seu gaster, 3. Hepar, 4. Lien seu splen, 5. Colon tenue, 6. Jejunum, 7. Colon dorsale sinistrum, 8. Colon ventrale sinistrum





DORZALNO

Jejunum

Colon tenue

Caput ceci

levo

Colon dorsale sinistrum

Colon ventrale sinistrum

Colon dorsale dextrum

Colon ventrale dextrum

desno

VENTRALNO