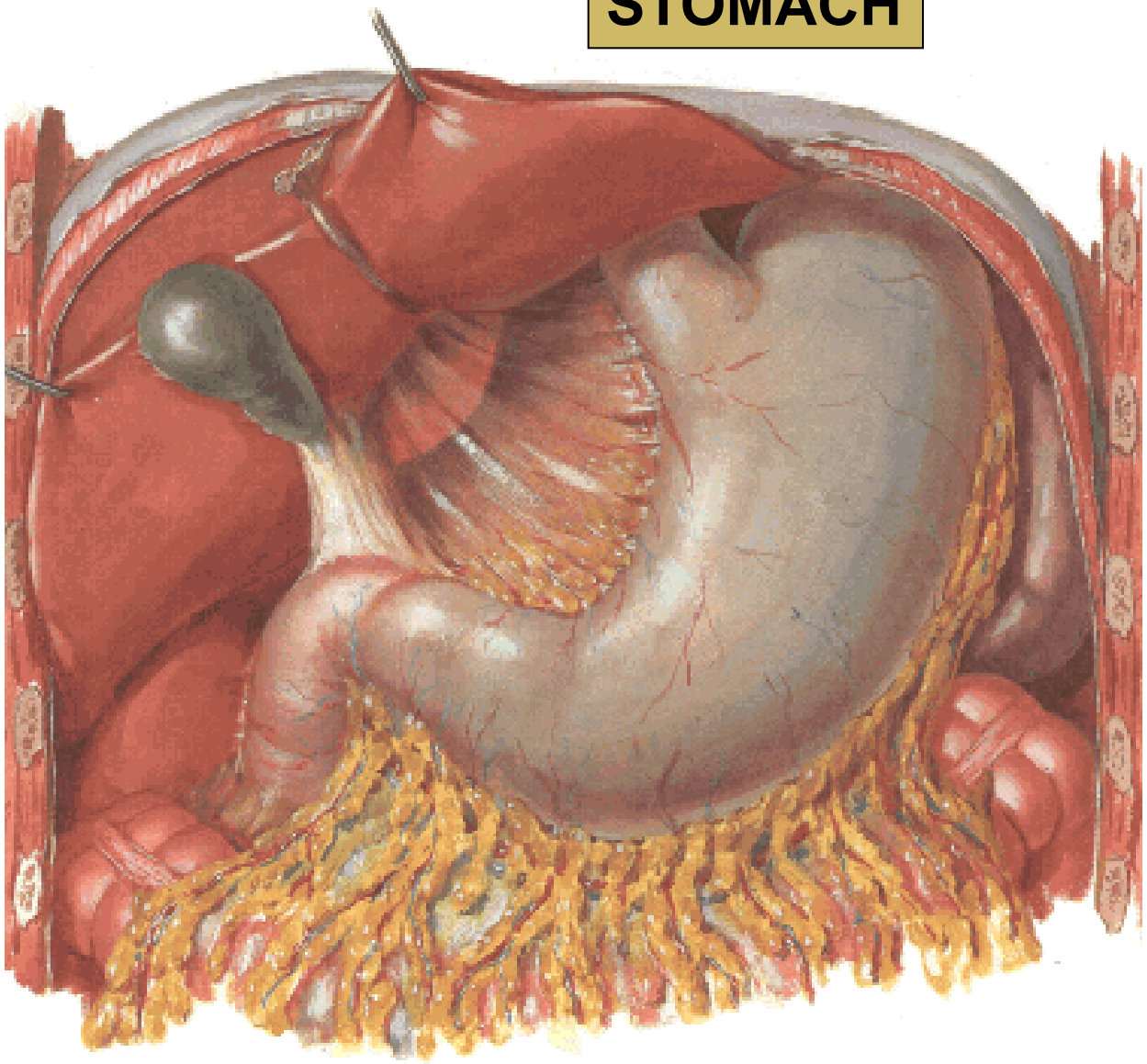
DIGESTIVE SYSTEM II.

STOMACH



Cardia

Fundus (fornix)

Corpus ventriculi

Pars pylorica

Pylorus

Paries anterior

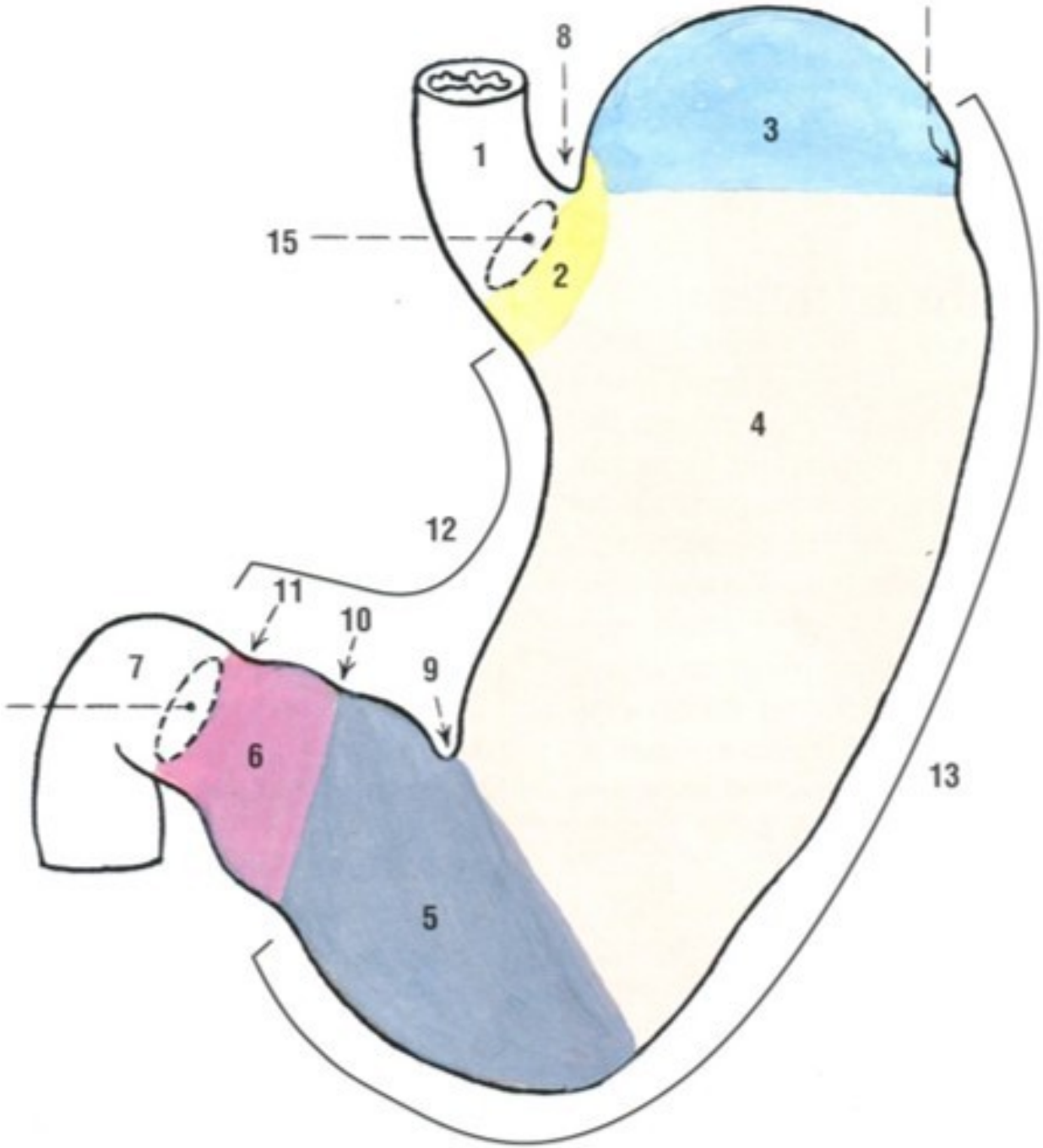
Paries posterior

Curvatura major

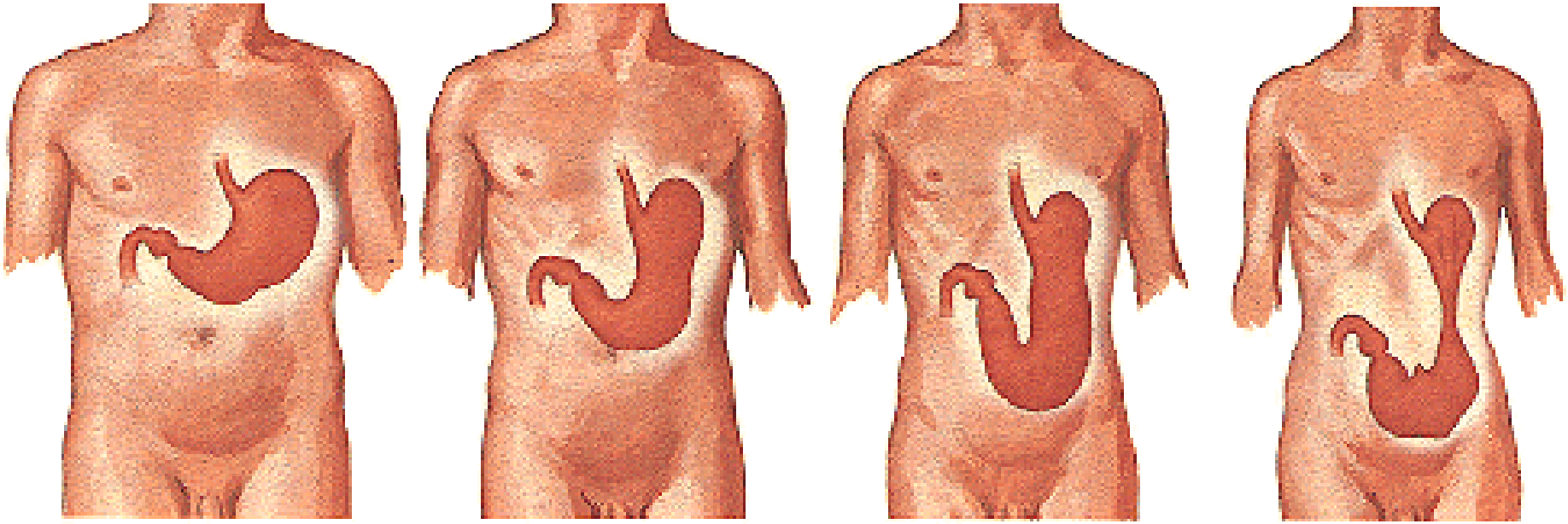
Curvatura minor

Incisura cardiaca

Incisura angularis

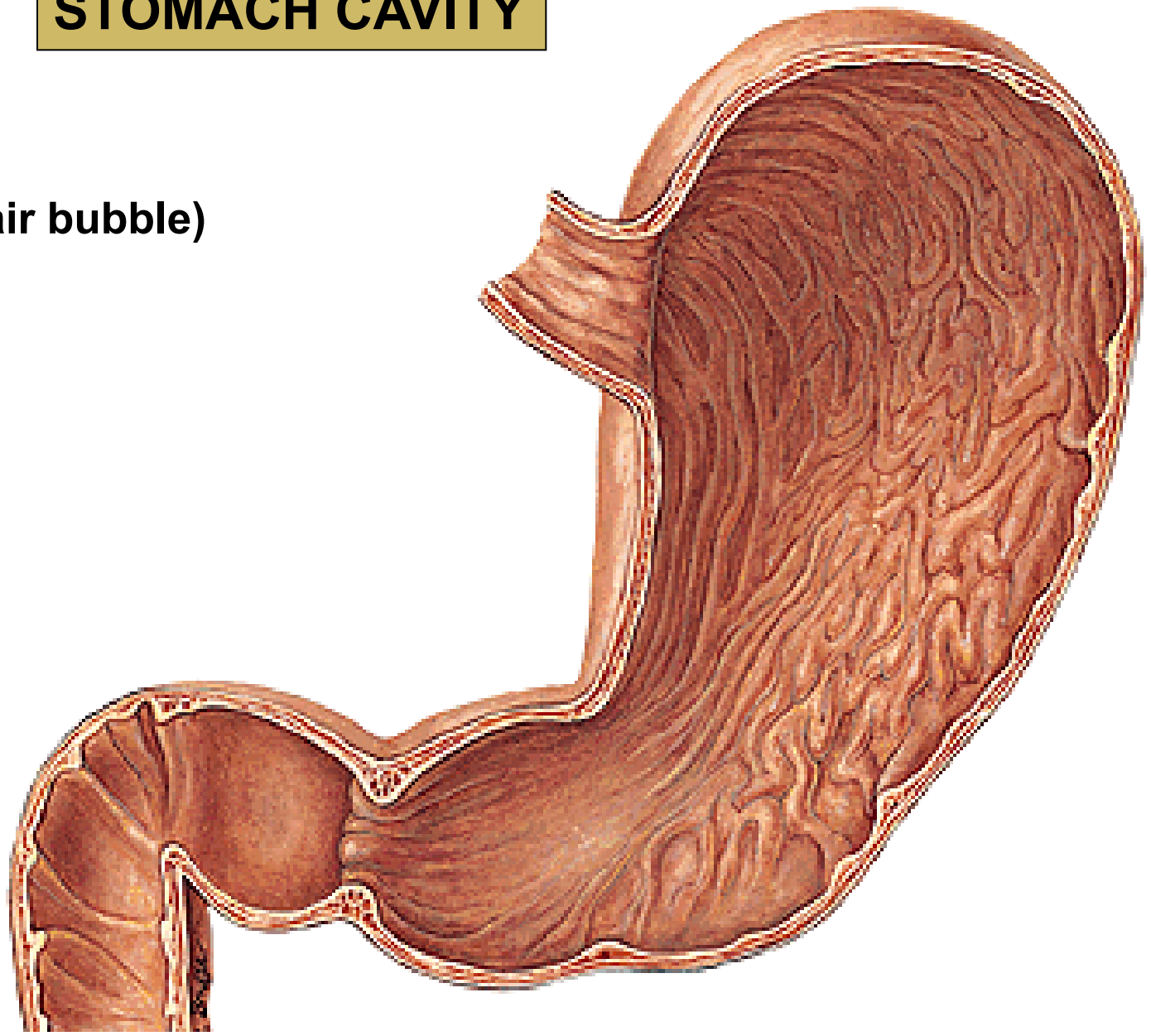

8
1
3
15
2
4
12
11
10
7
9
6
13
5

SHAPE OF THE STOMACH



STOMACH CAVITY

- Ostium cardiacum
- Fornix ventriculi (air bubble)
- Pars cardiaca
- Canalis gastricus
- Pars pylorica
- Ostium pyloricum



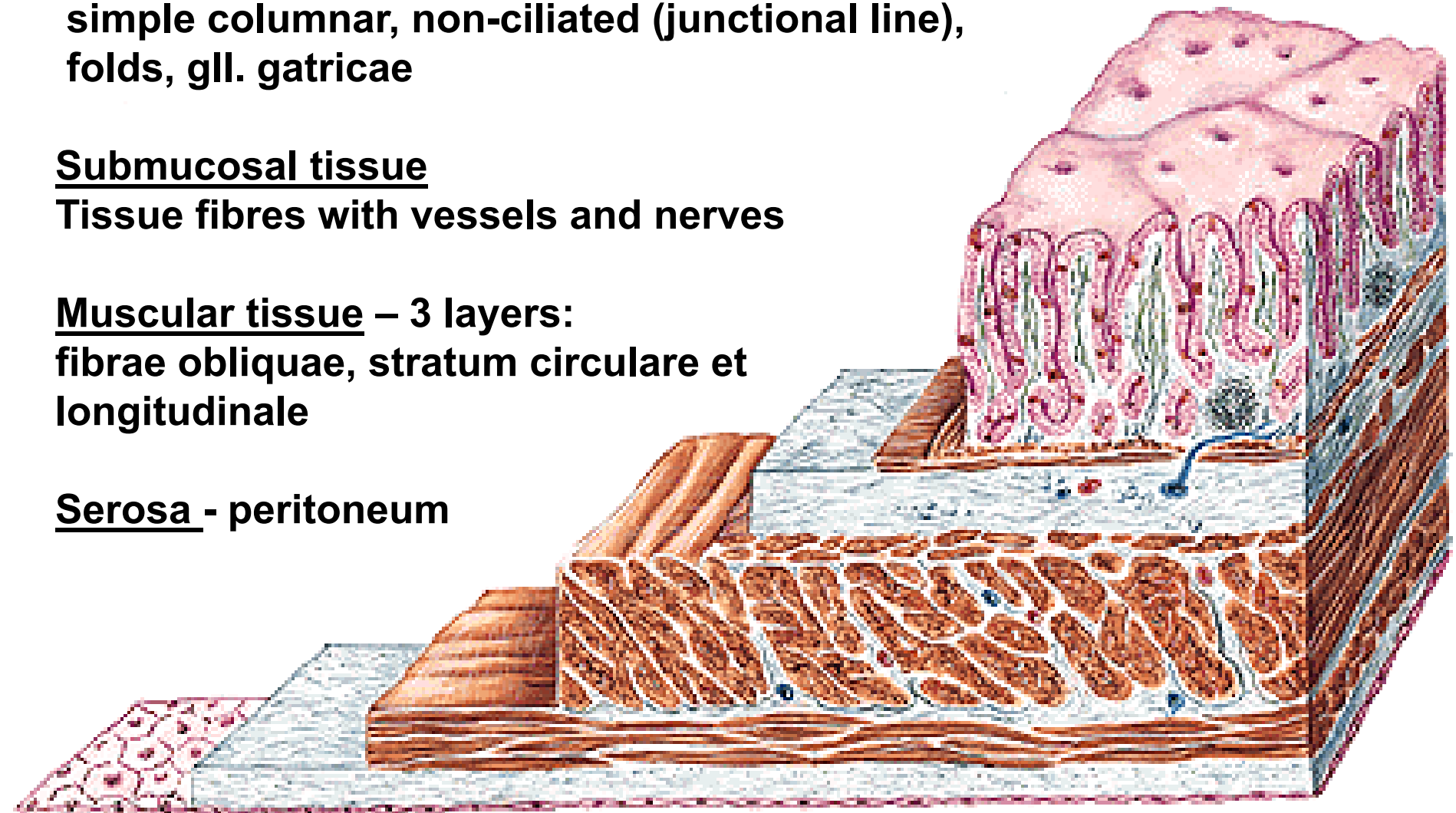
STRUCTURE OF THE WALL

Mucous membrane
simple columnar, non-ciliated (junctional line), folds, gll. gatricae

Submucosal tissue
Tissue fibres with vessels and nerves

Muscular tissue – 3 layers:
fibrae obliquae, stratum circulare et longitudinale

Serosa - peritoneum



TUNICA MUCOSA VENTRICULI

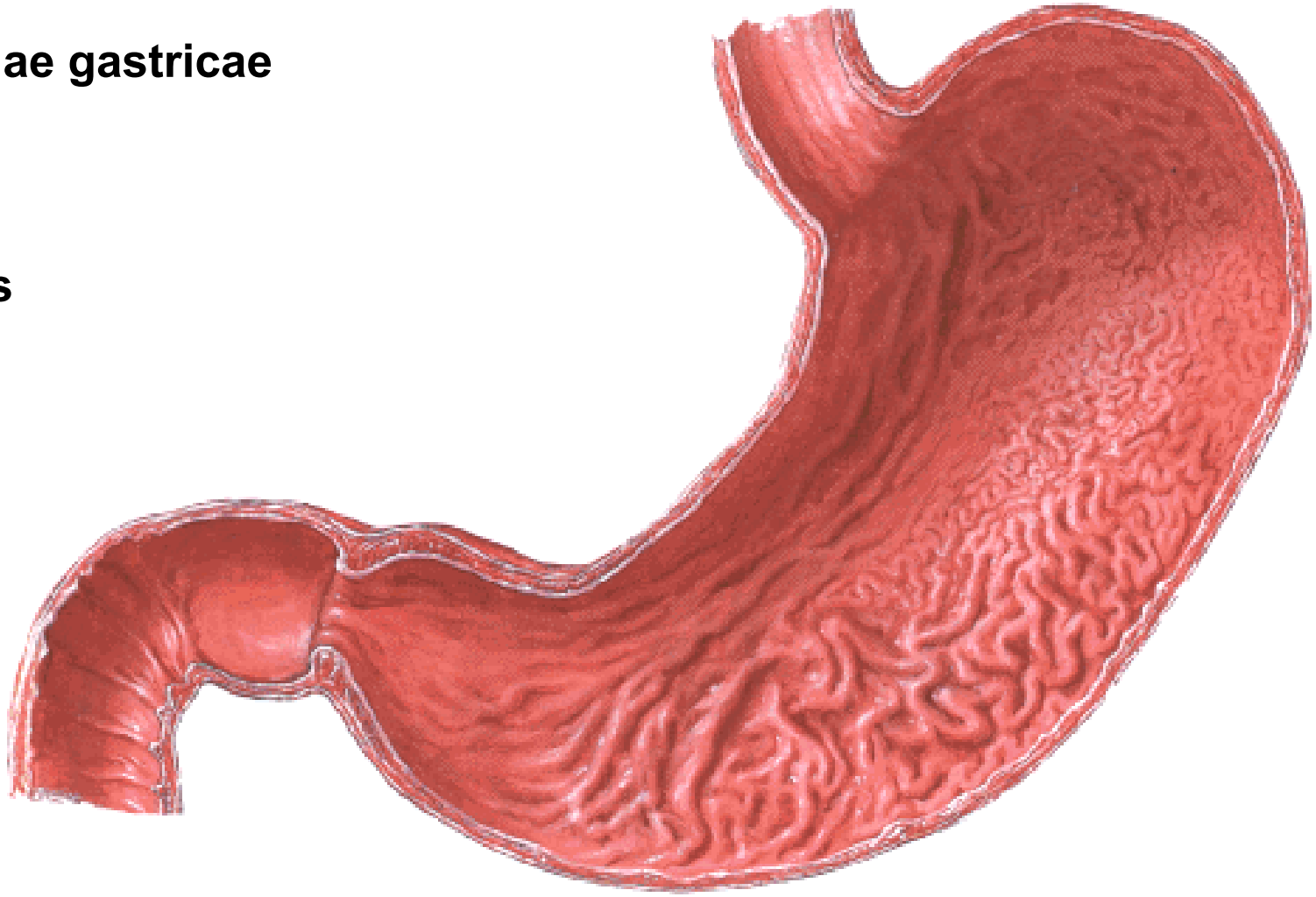
Plicae gastricae

Sulcus salivarius

Glandulae gastricae

Gastrin

Chymus

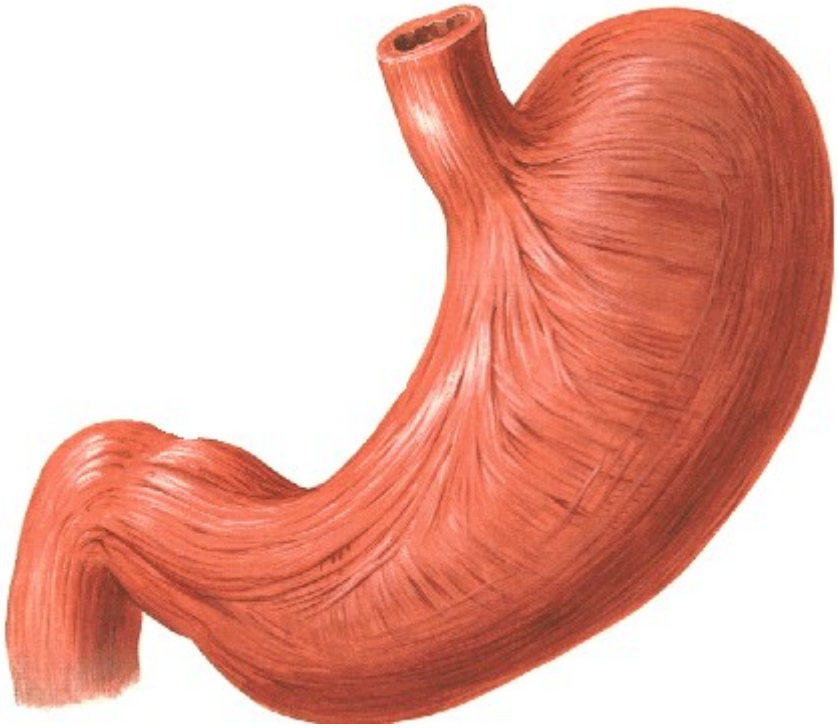


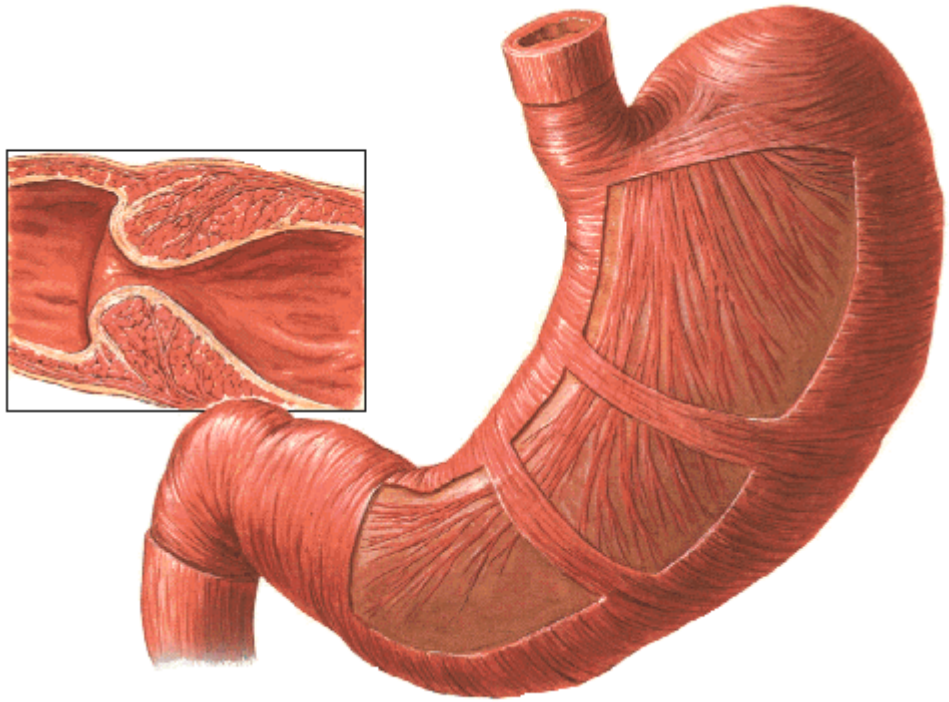
TUNICA MUSCULARIS VENTRICULI

1. Fibrae obliquae

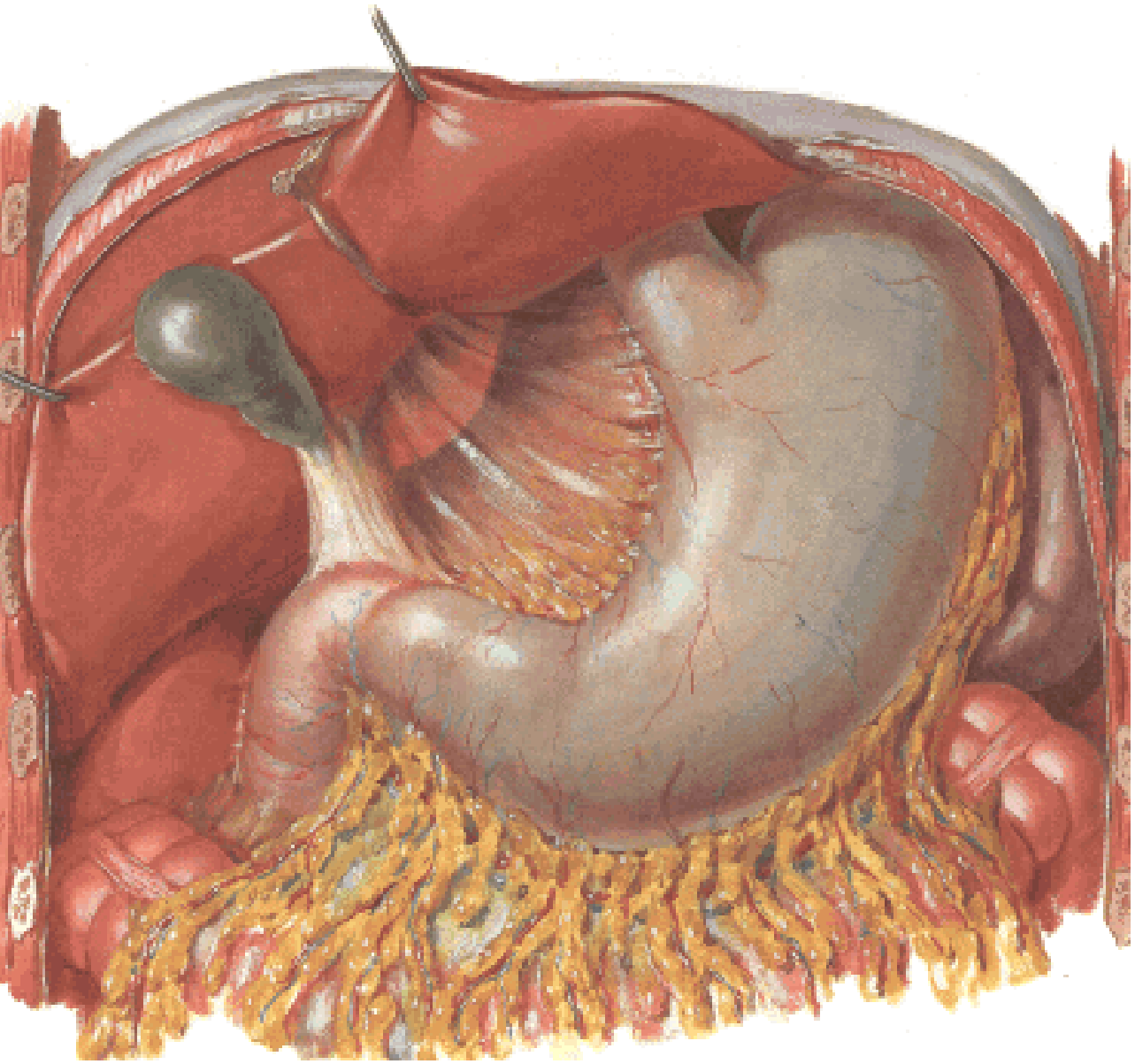
2. Stratum circulare (m. sphincter pylori)

3. Stratum longitudinale (taenia curvaturae majoris et minoris)





TUNICA EXTERNA VENTRICULI (visceral peritoneum)

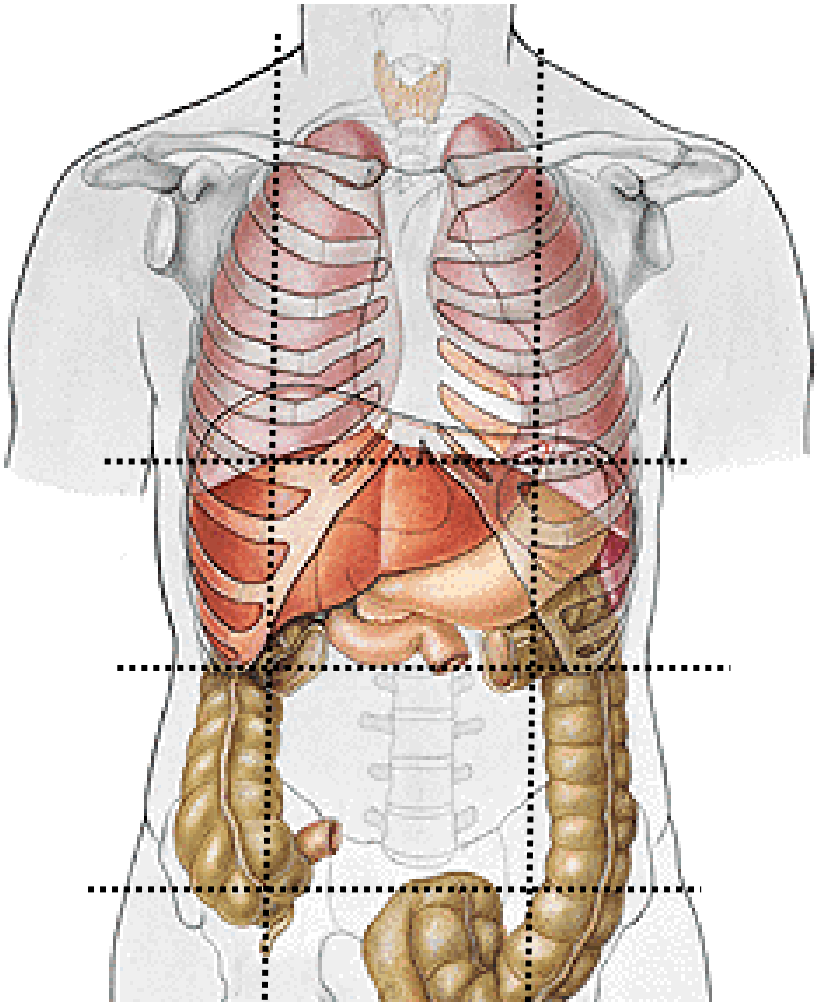


Omentum minus

- lig. hepatoduodenale
- lig. hepatogastricum

Omentum majus

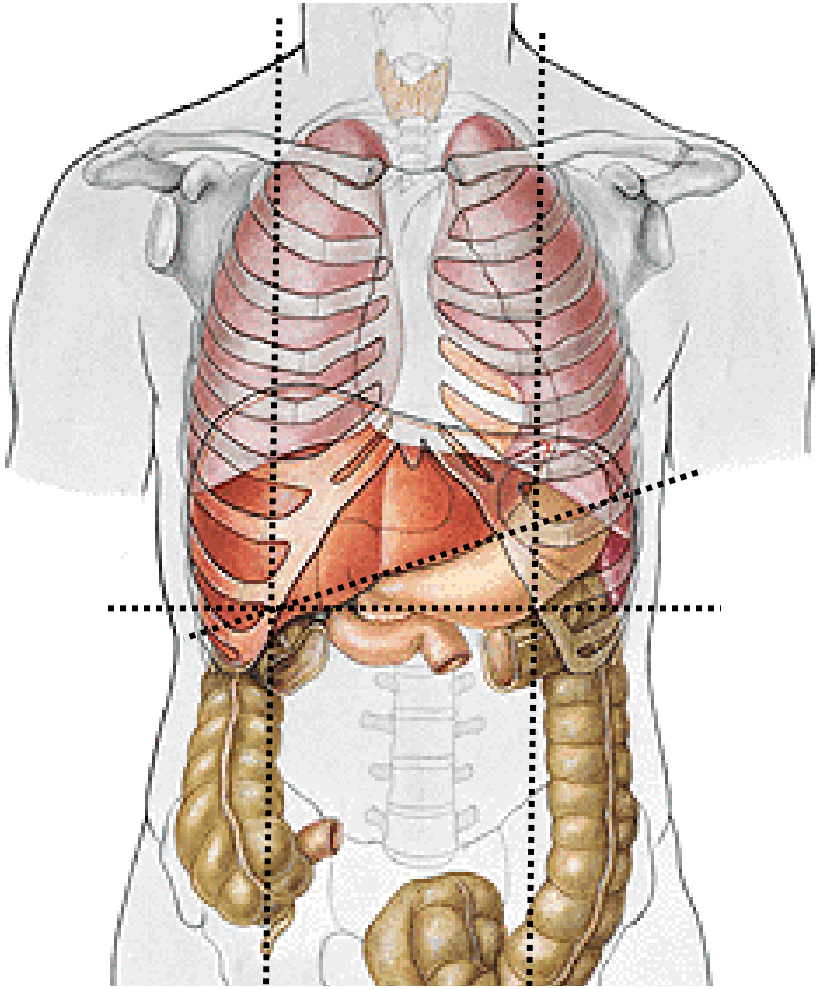
- lig. gastrocolicum
- lig. gastrolienale



regio hypochondriaca sin.

cardia – left from Th_{11-12}

pylorus – right from L_{1-2}



Labbe´s triangle

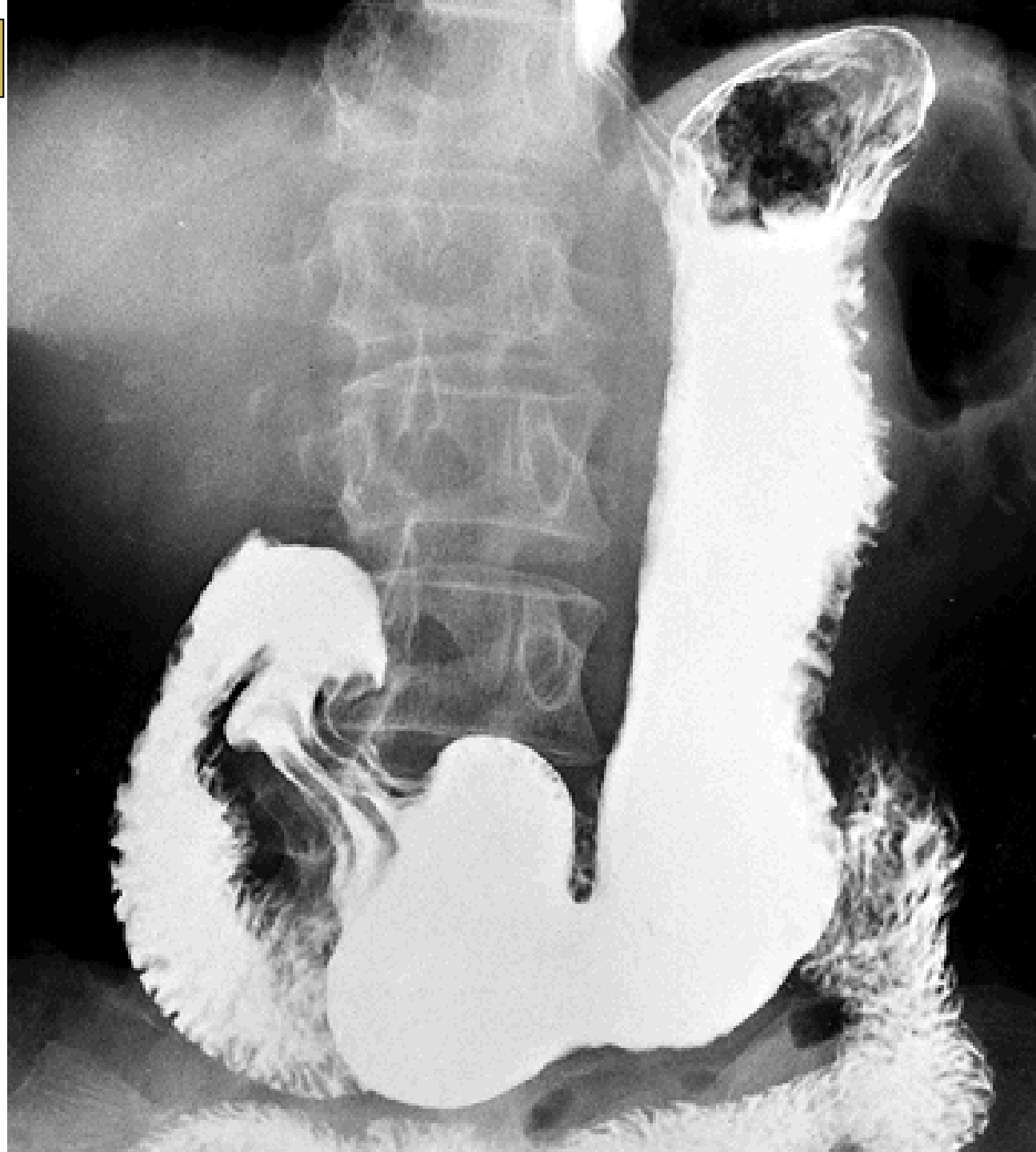
Traube´s semilunar space

GASTROGRAPHY

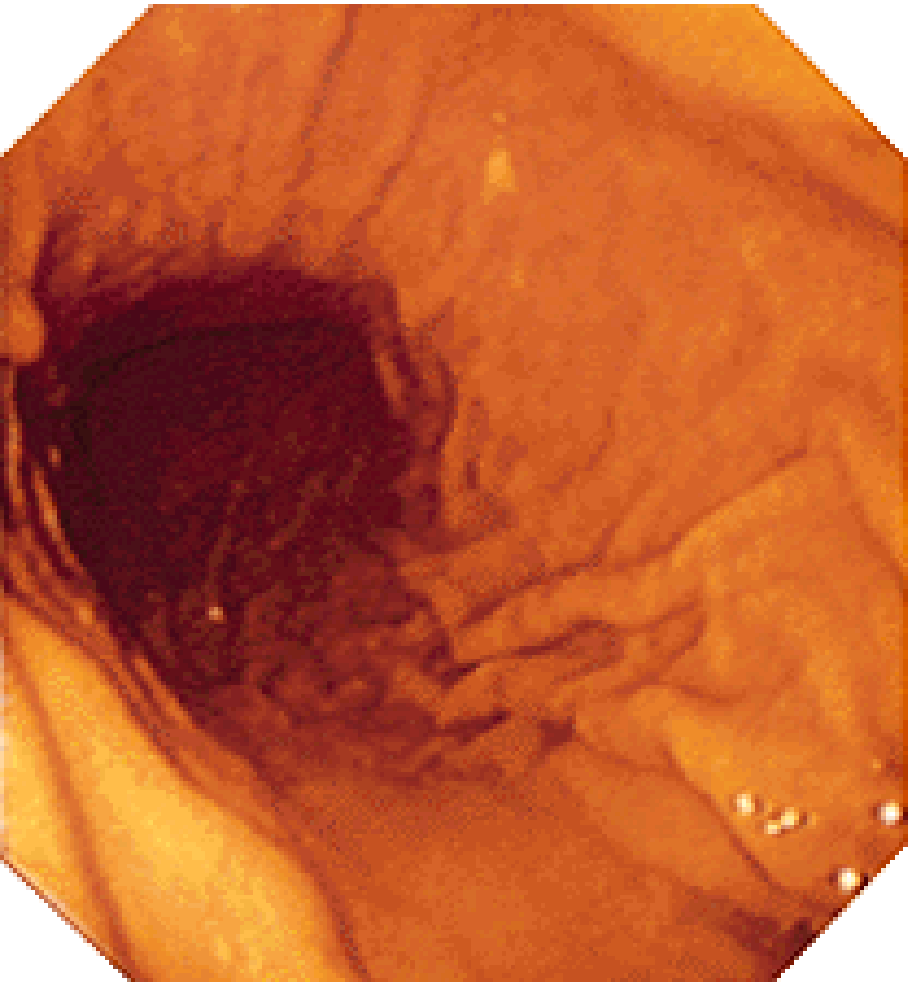
Pars digestoria

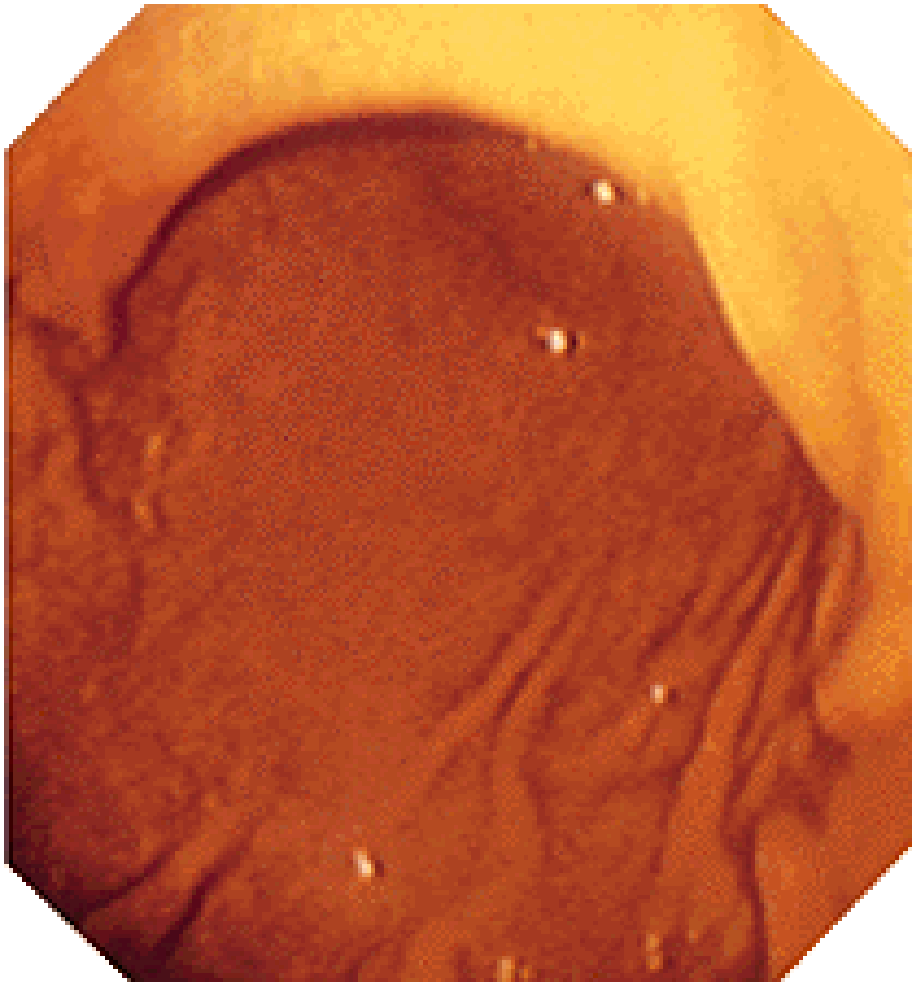
(incisura angularis)

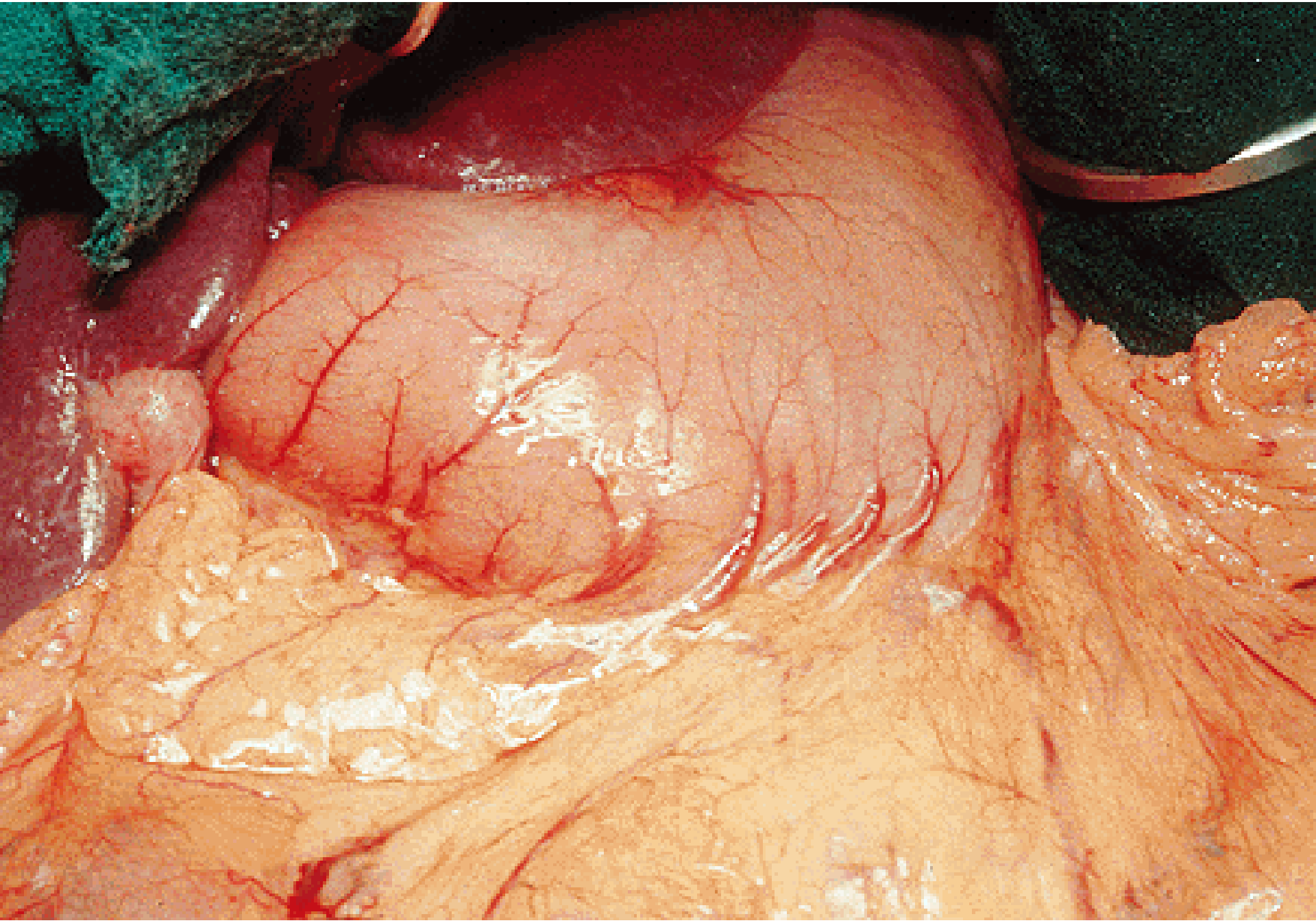
Pars egestoria



GASTROSCOPY







INTESTINE (SMALL, LARGE)

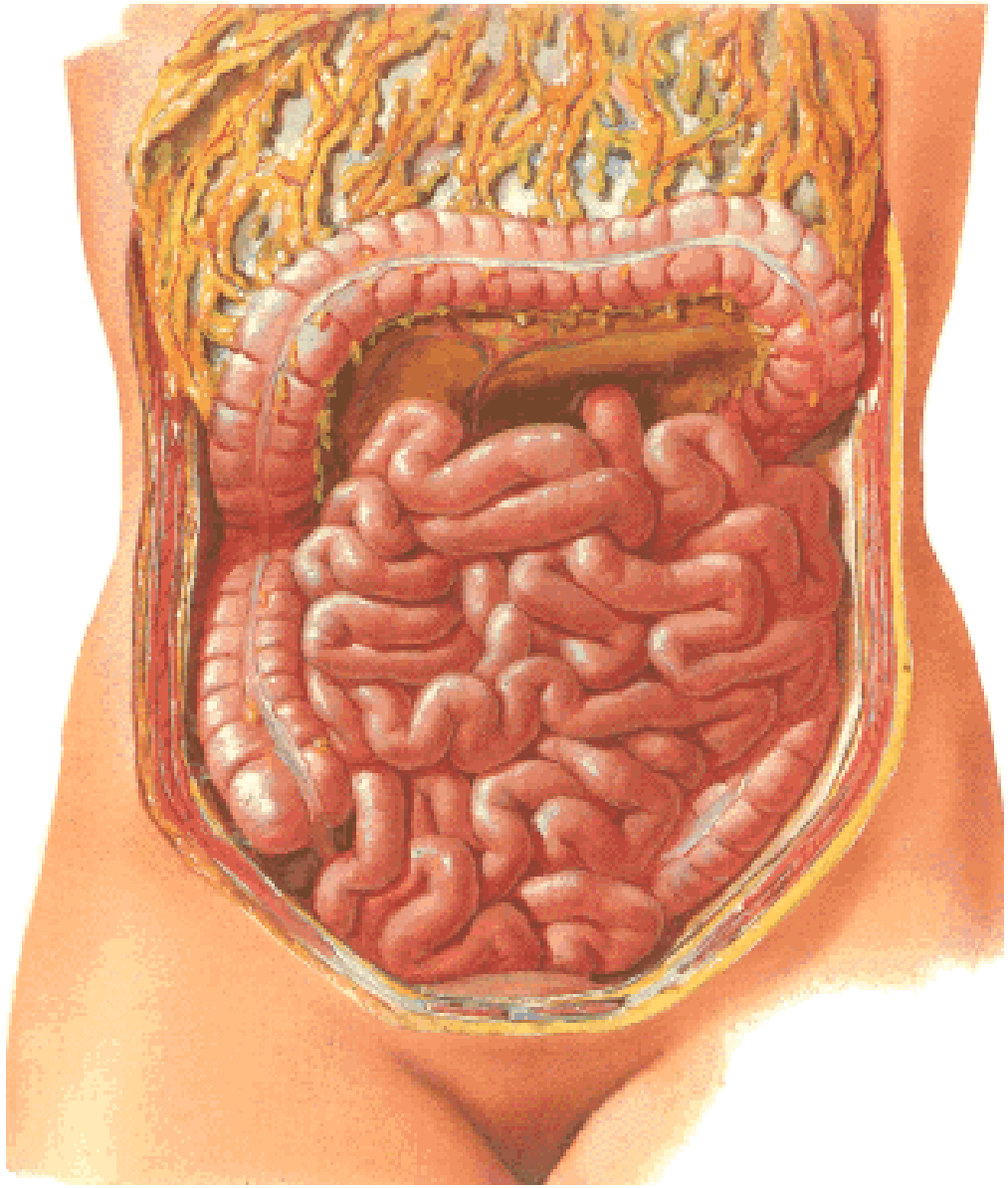
SMALL INTESTINE

3–5 m, intestinal loops

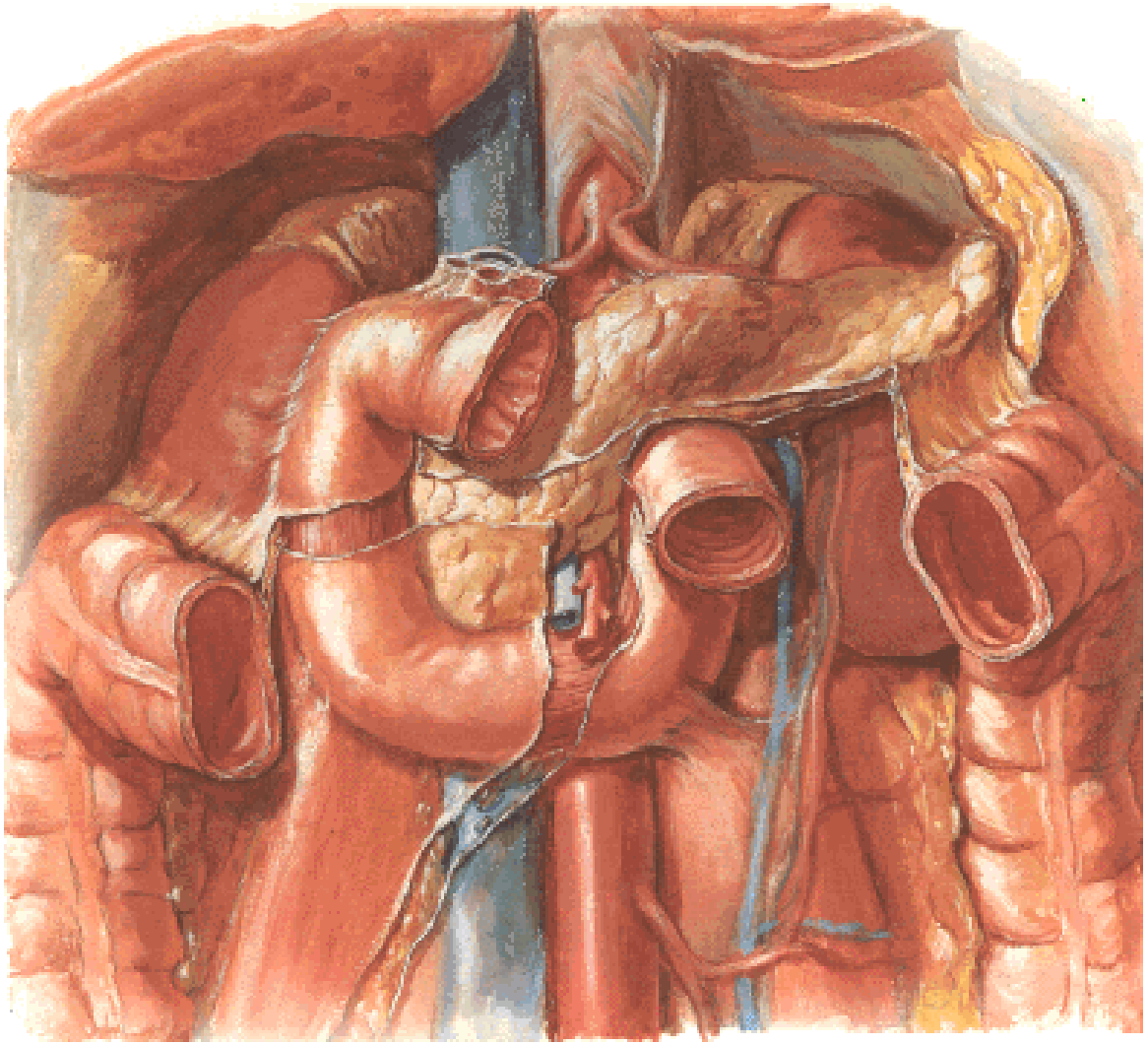
DUODENUM

JEJUNUM

ILEUM



DUODENUM



Pars superior
(ampulla, bulbus duodeni)

Flexura duodeni sup.

Pars descendens

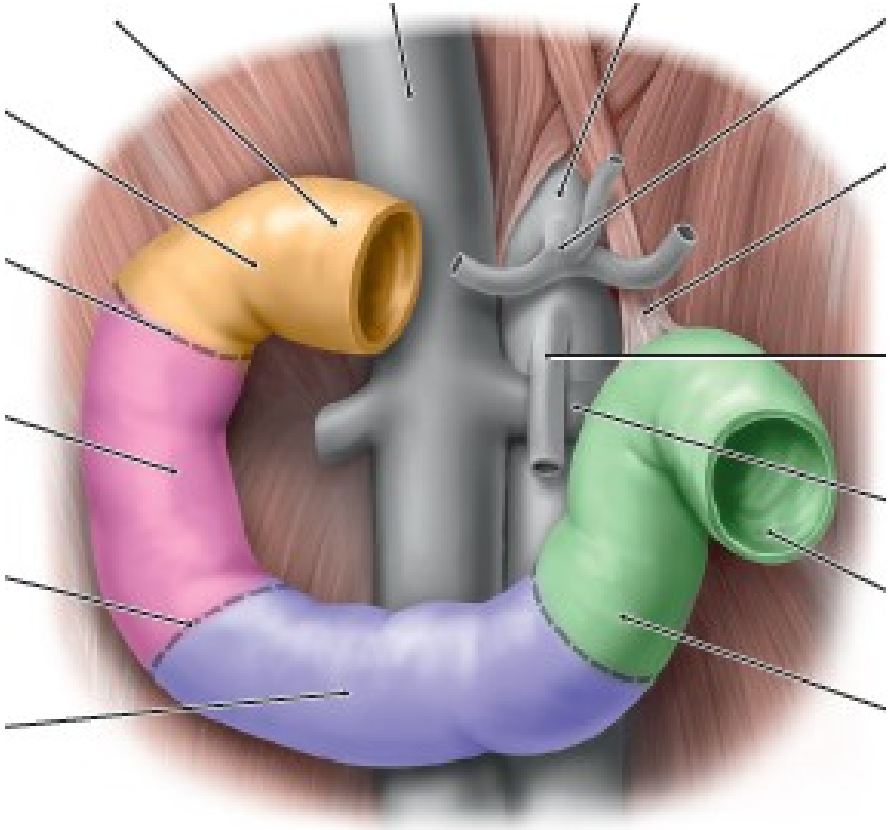
Flexura duodeni inf.

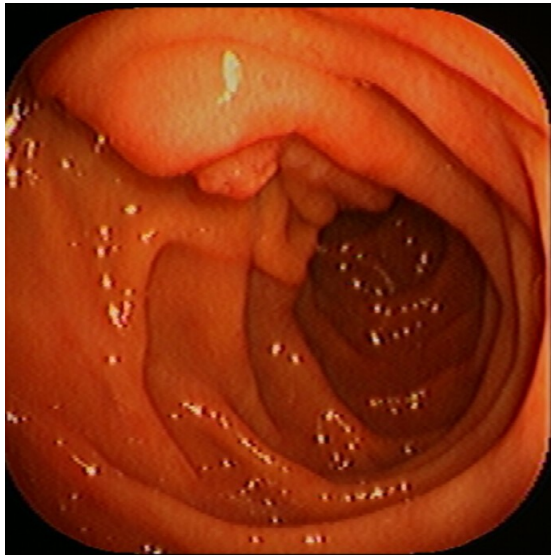
Pars horizontalis

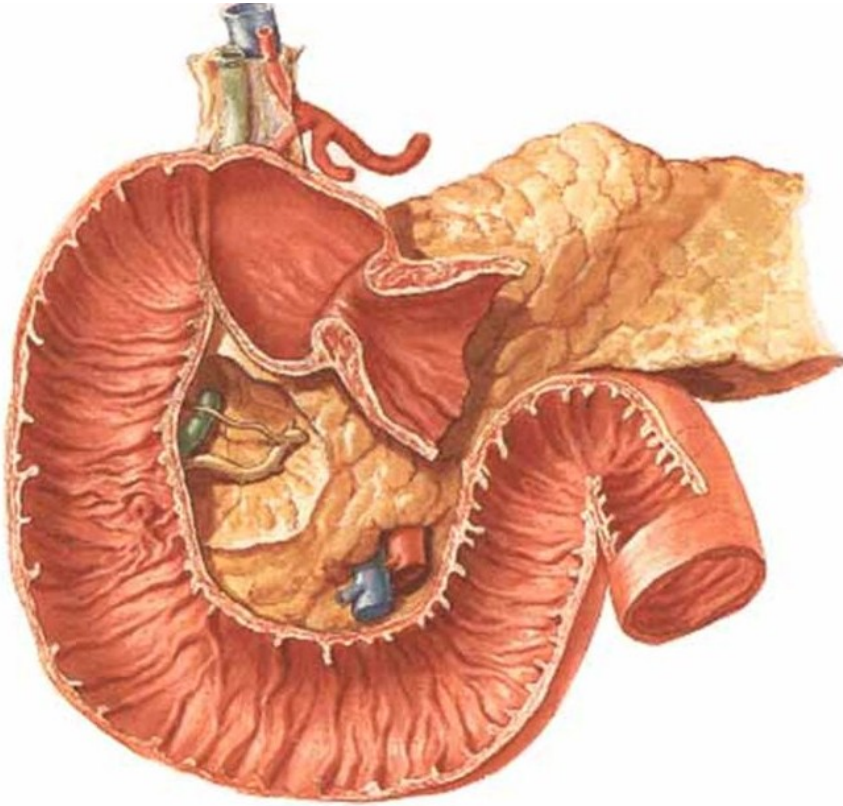
Pars ascendens

Flexura duodenojejunalis

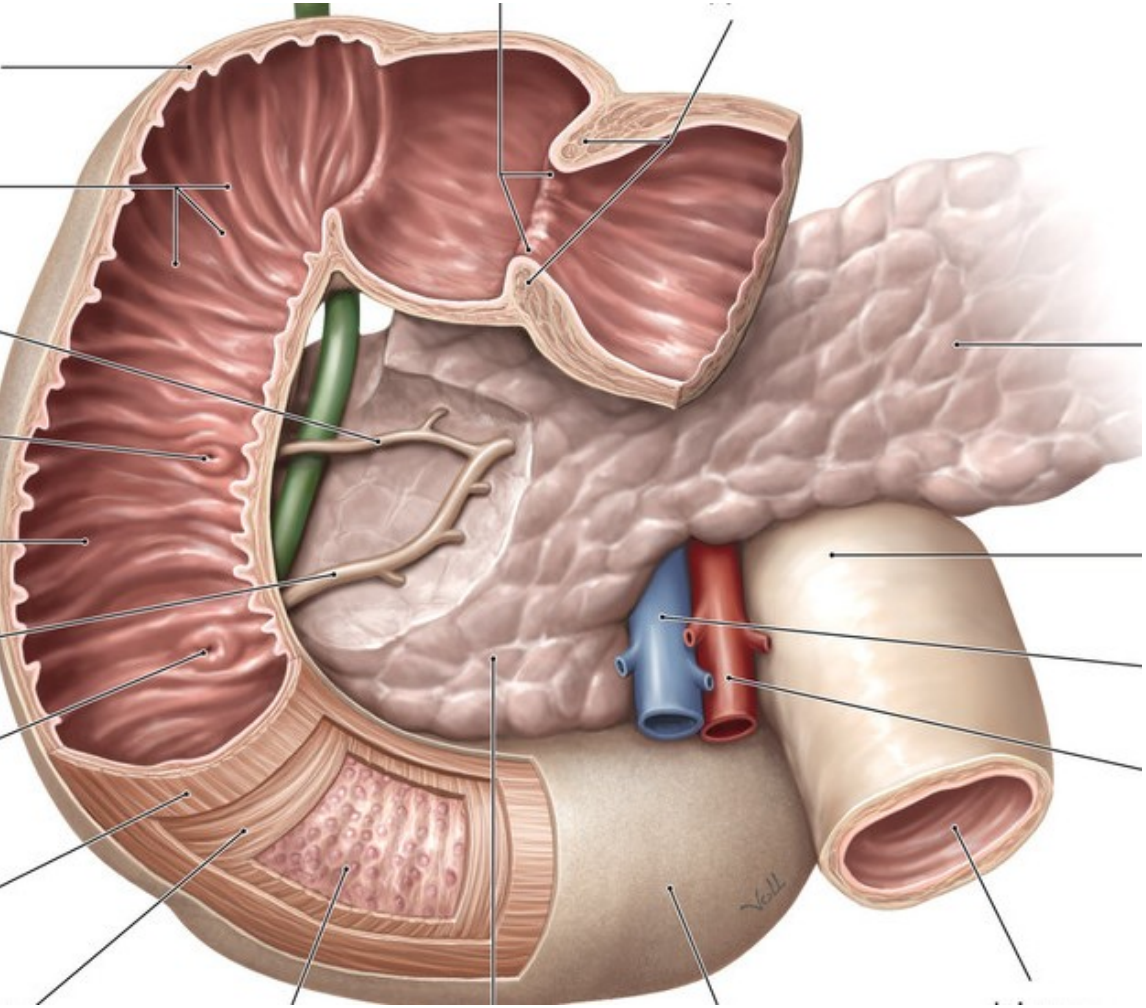
12 inches (25-30 cm),
makes the loop around L2, around the head of the pancreas
(horseshoe shaped)







STRUCTURE OF THE WALL



Tunica musosa

plicae circulares

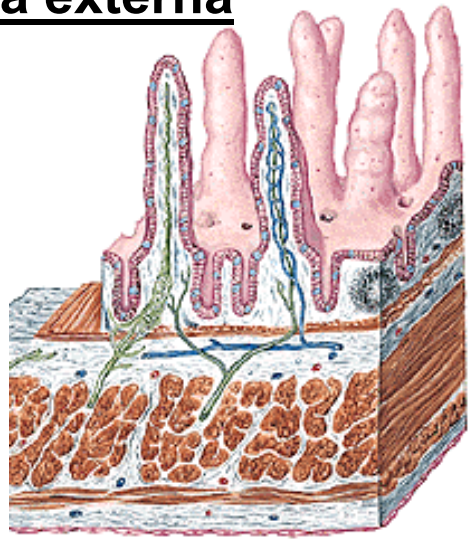
villi intestinales

glandulae duodenales

Tunica submucosa

Tunica muscularis

Tunica externa



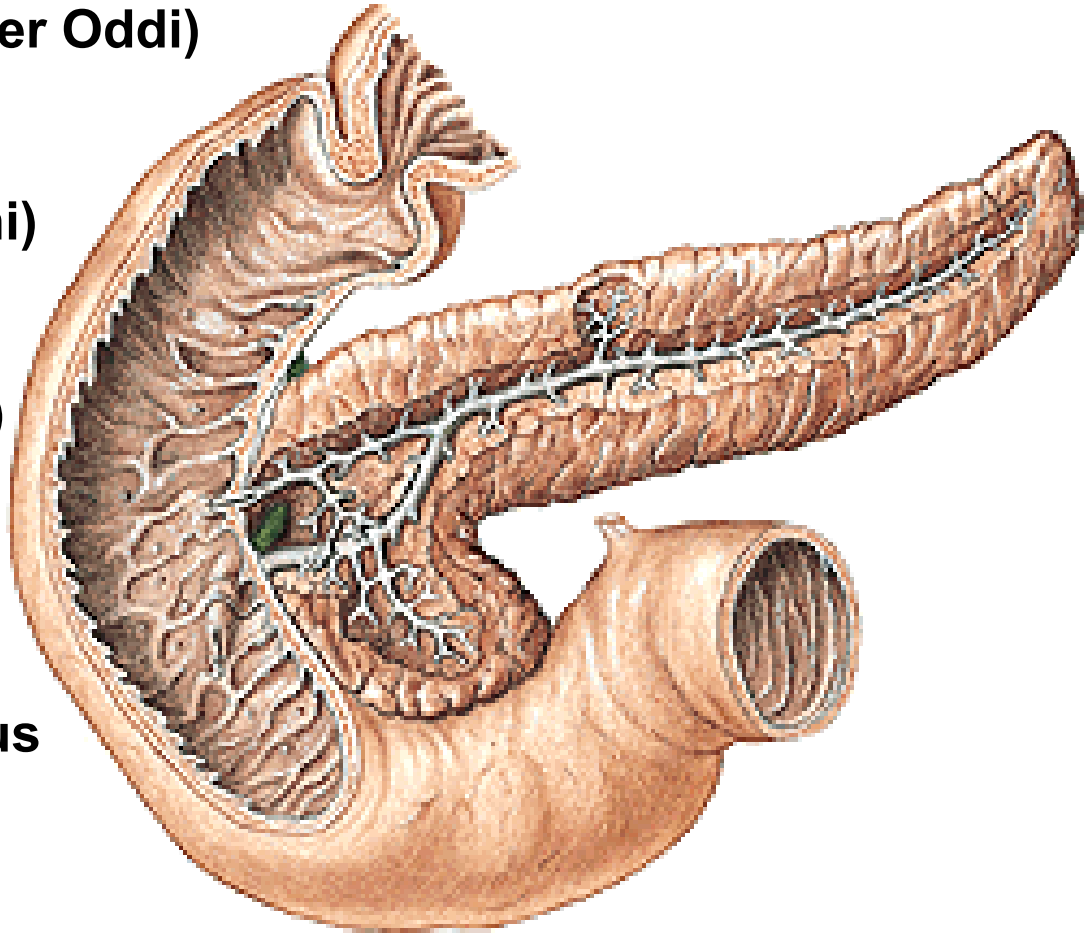
Plica longitudinalis duodeni

Papilla duodeni major (Vateri)

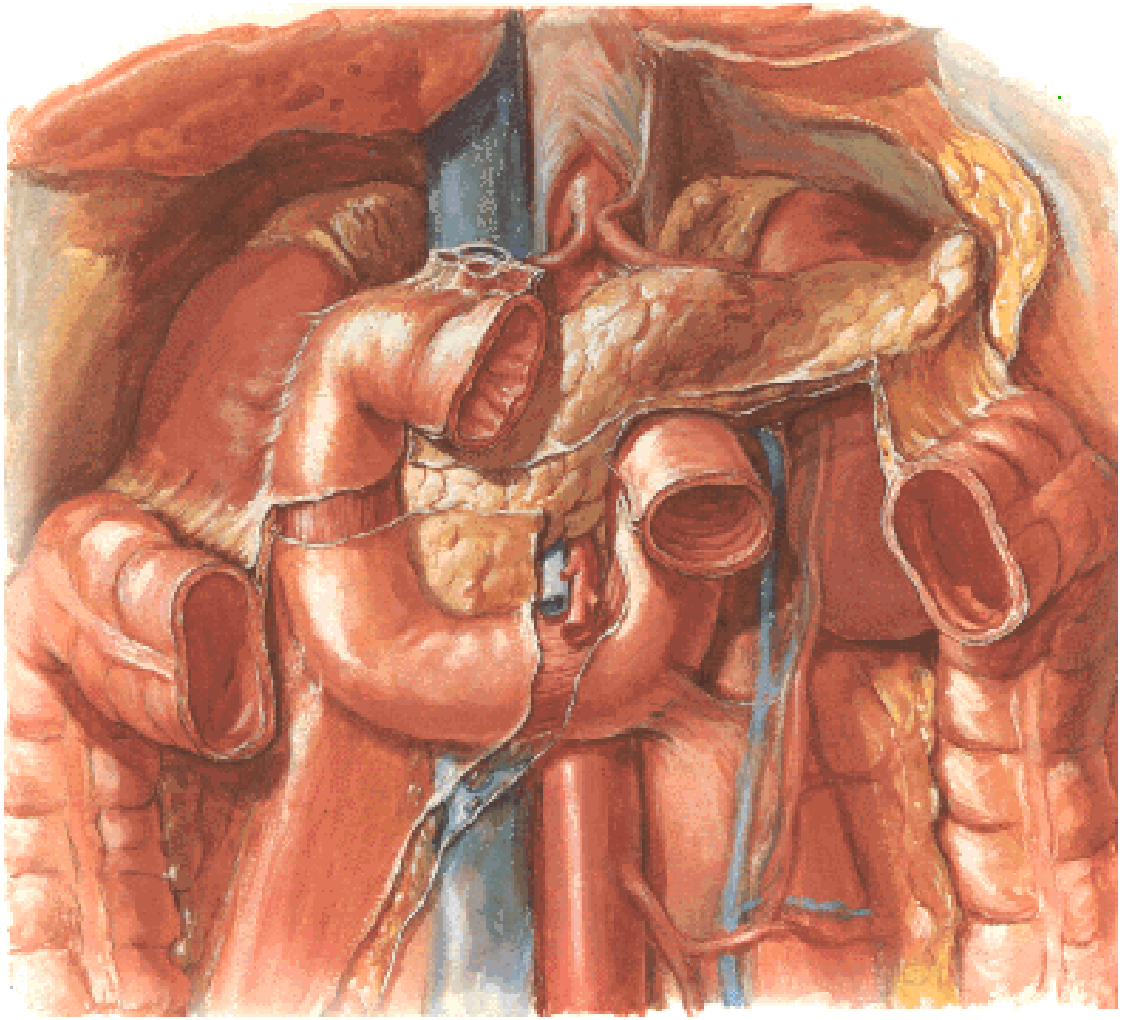
ampulla hepatopancreatica
(m. sphincter papillae
hepatopancreaticae, m. sphincter Oddi)

ductus choledochus
(m. sphincter ductus choledochi)

ductus pancreaticus major
(m. sphicter ductus pancreatici)



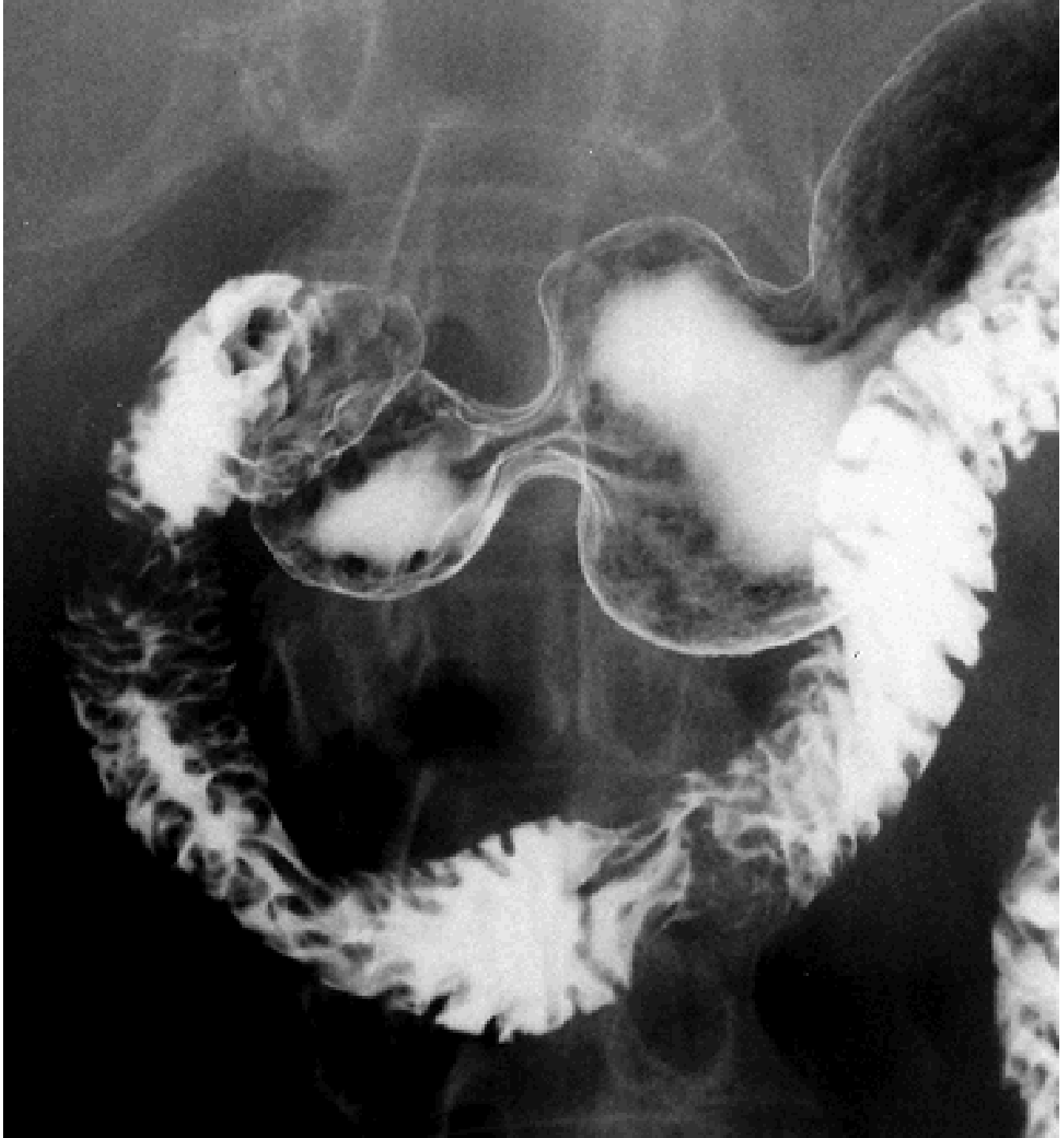
Papilla duodeni minor
ductus pancreaticus accessorius



Pars sup. duodeni
- intraperitoneally

(lig. hepatoduonenale)

Other parts - secundary
In retroperitoneum



JEJUNOILEUM

Ansae intestinales

Intraperitoneal organs

Mesenterium

Radix mesenterii (12-15 cm)

Flexura duodenojejunalis

Ostium ileocaecale

STRUCTURE OF THE WALL

Mucous membrane:

Plicae circulares

Villi intestinales

GII. Intestinales

Folliculi lymphatici

Submucosal tissue

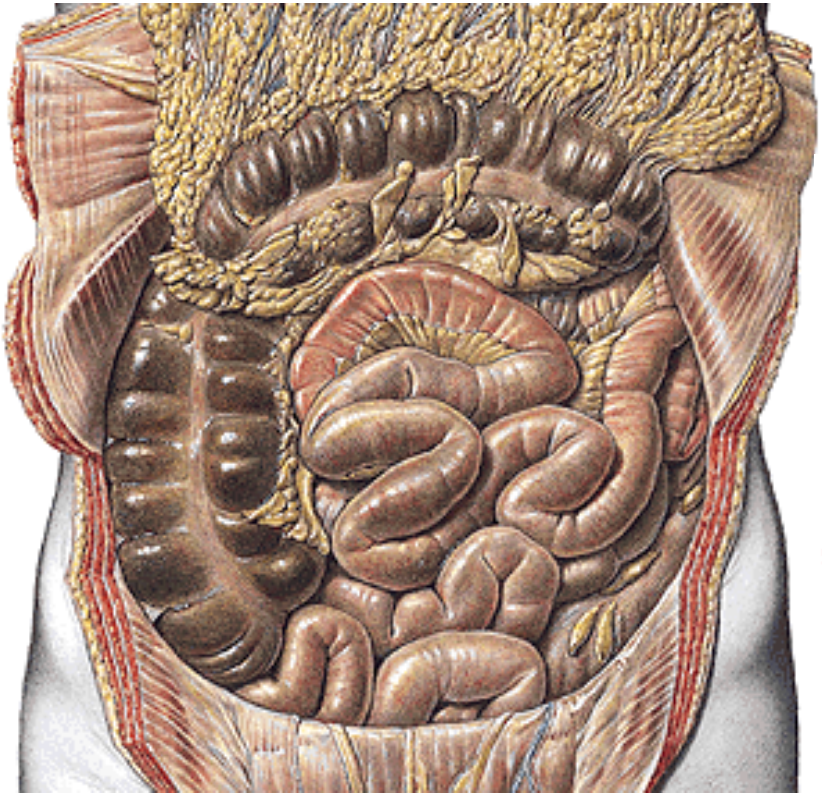
Tissue fibres, neurovascular Bundle

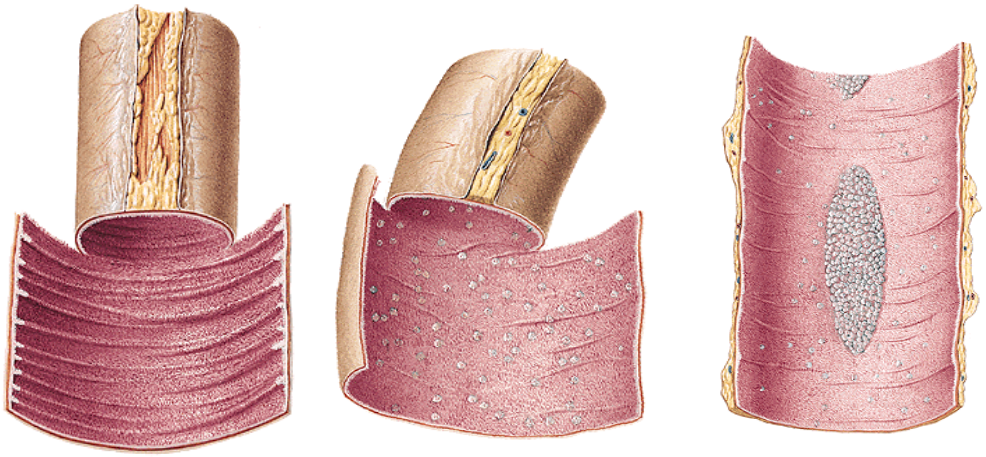
Muscular layer

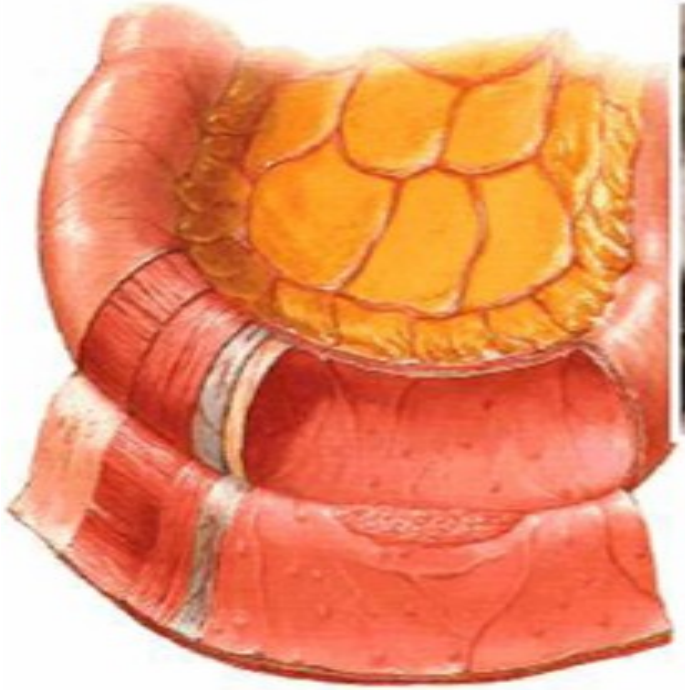
Str. longitudinale, circulare

Serosa (intraperitoneally)

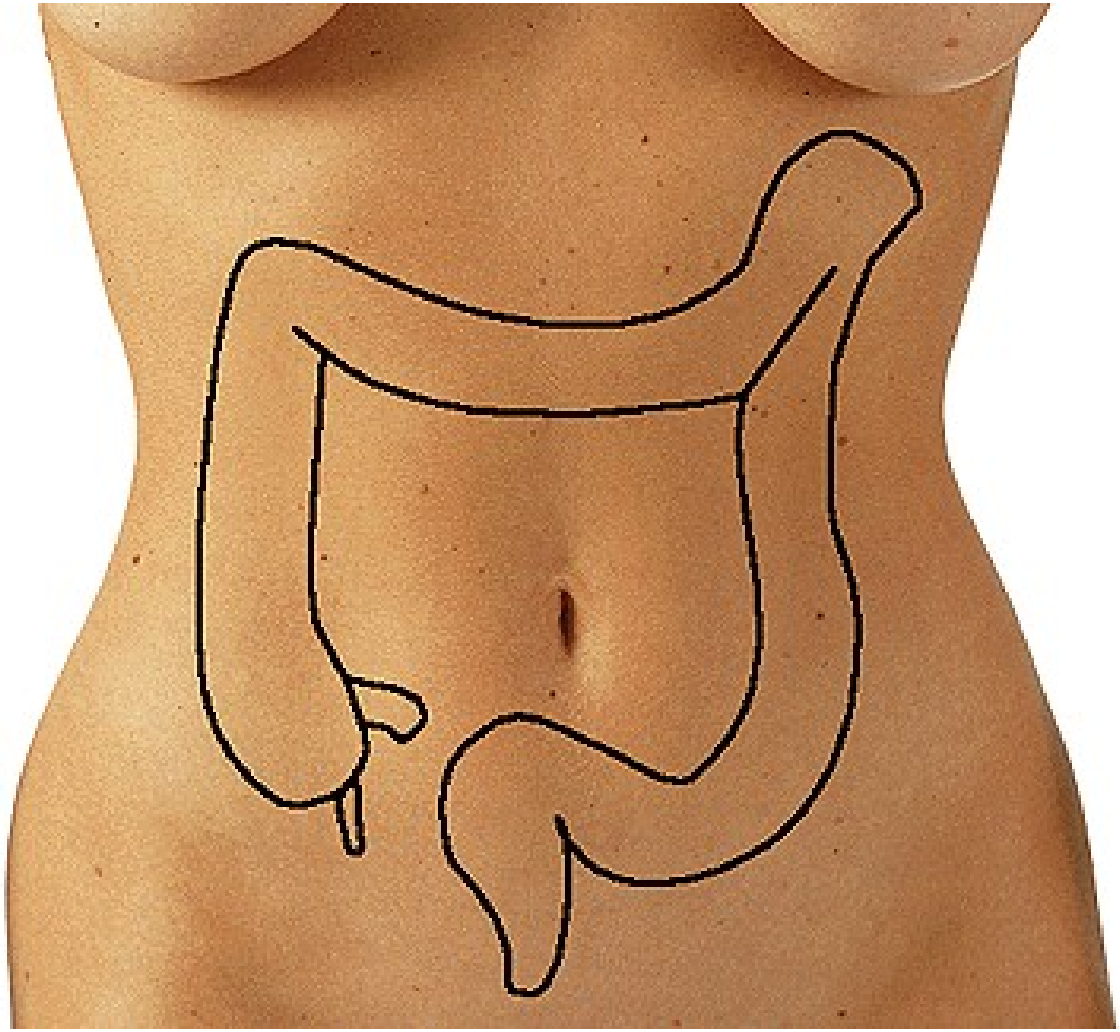
JEJUNUM	ILEUM
Upper left part of inframesocolic space	Lower right part of inframesocolic space
wider (3- 4 cm), 3/5 of length	narrower (2- 3 cm), 2/5 of length
Numerous circular folds	Lesser circular folds
1- 2 arterial arcades	2- 3 arterial arcades
folliculi lymphatici solitarii	folliculi lymphatici aggregati







LARGE INTESTINE



intestinum caecum

colon ascendens

flexura coli dextra (hepatica)

colon transversum

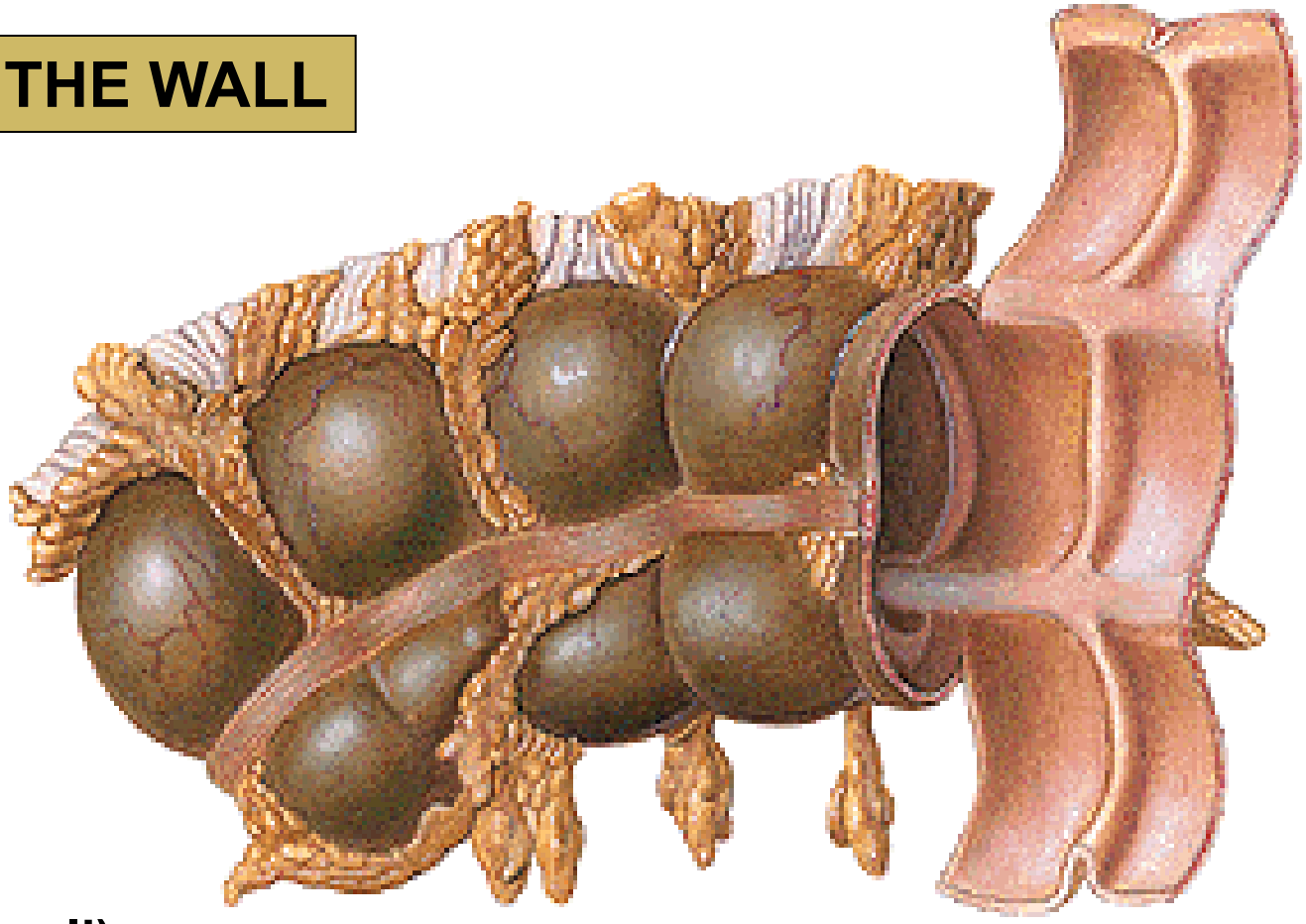
flexura coli sinistra (lienalis)

colon descendens

colon sigmoideum

rectum

STRUCTURE OF THE WALL



Mucous membrane:
Plicae semilunares
Gll. intestinales
Folliculi lymphatici

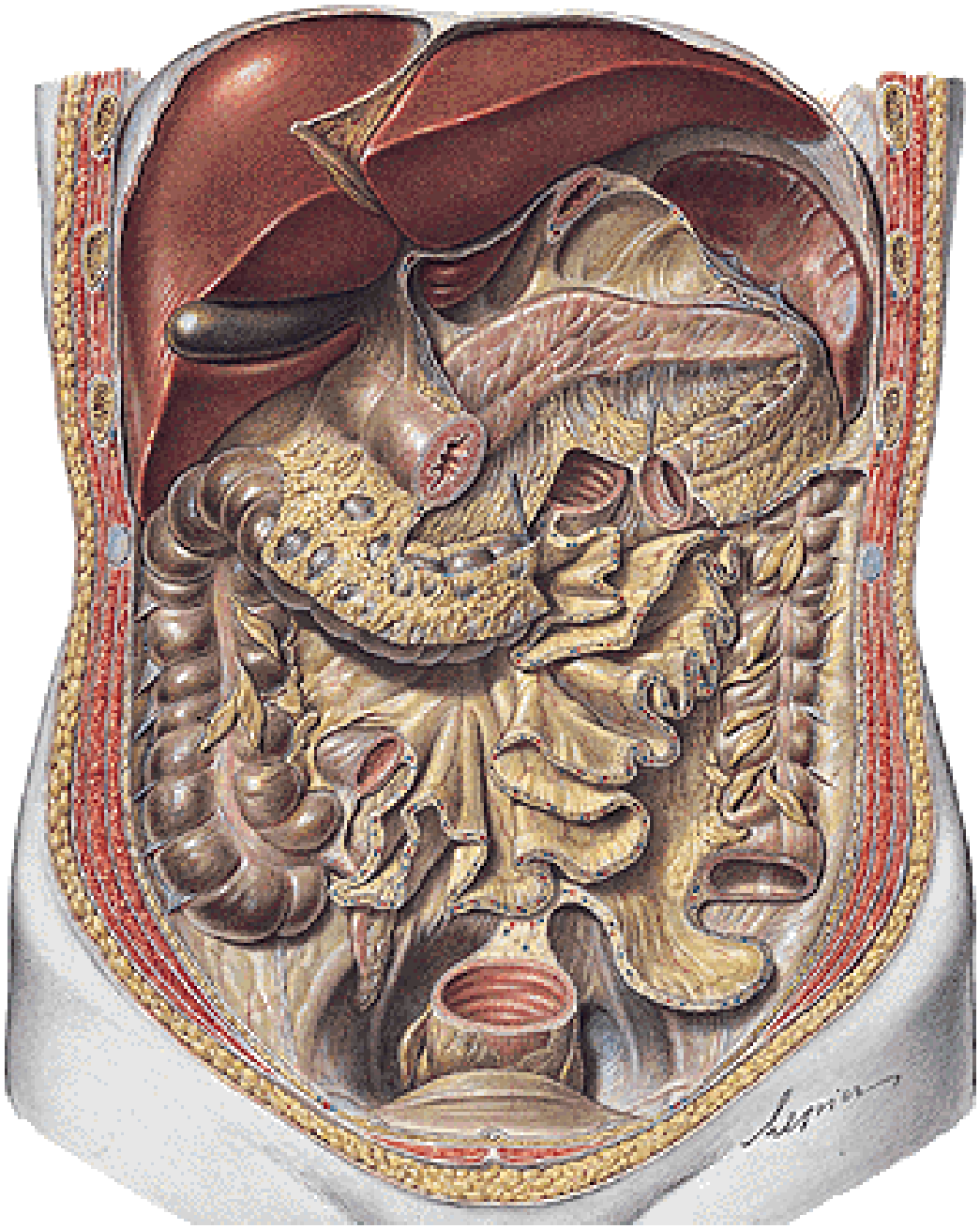
Submucosal tissue:
Vessels and nerves

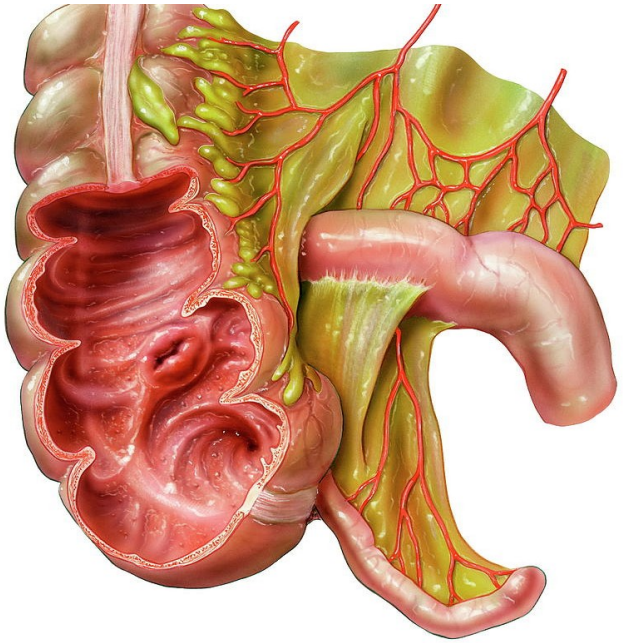
Muscular layer:
Inner circular (haustra coli)
Outer lingitudinal (taeniae coli)

Serosa

Appendices epiploicae
(peritoneal processes filled with fat)

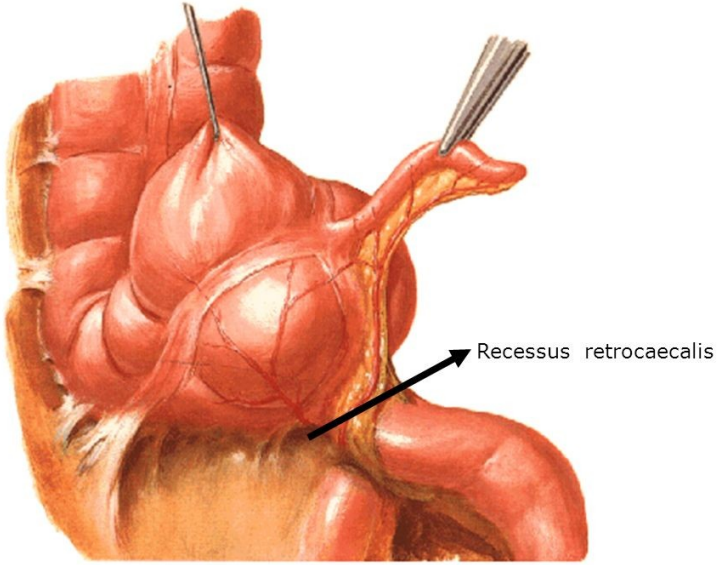
INTESTINUM CAECUM

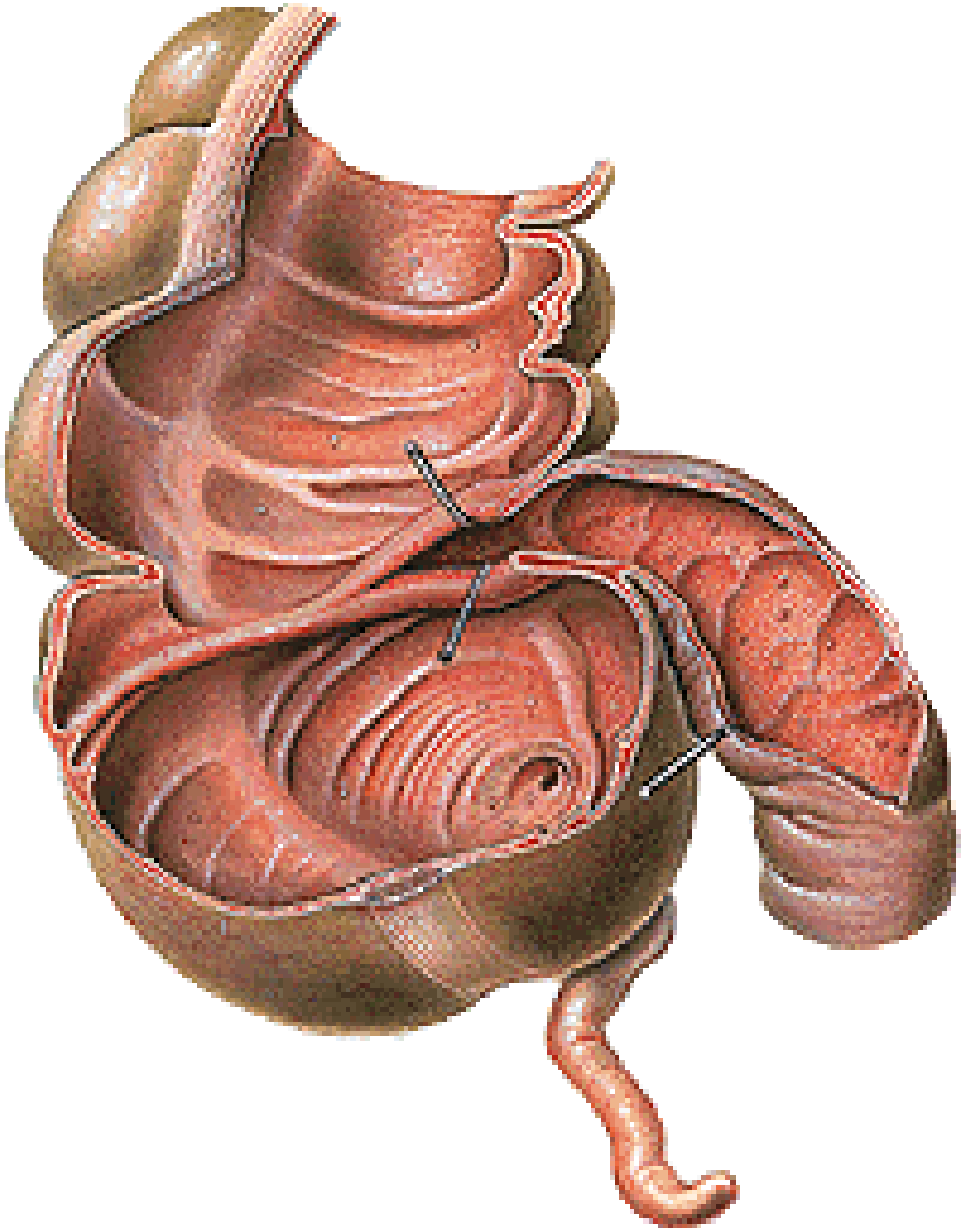




Ostium ileocaecale

Recessus retrocaecalis





Ostium ileocaecale
Valva ileocaecalis

Appendix vermiformis
Mesoappendix

APPENDIX VERMIFORMIS - POSITION

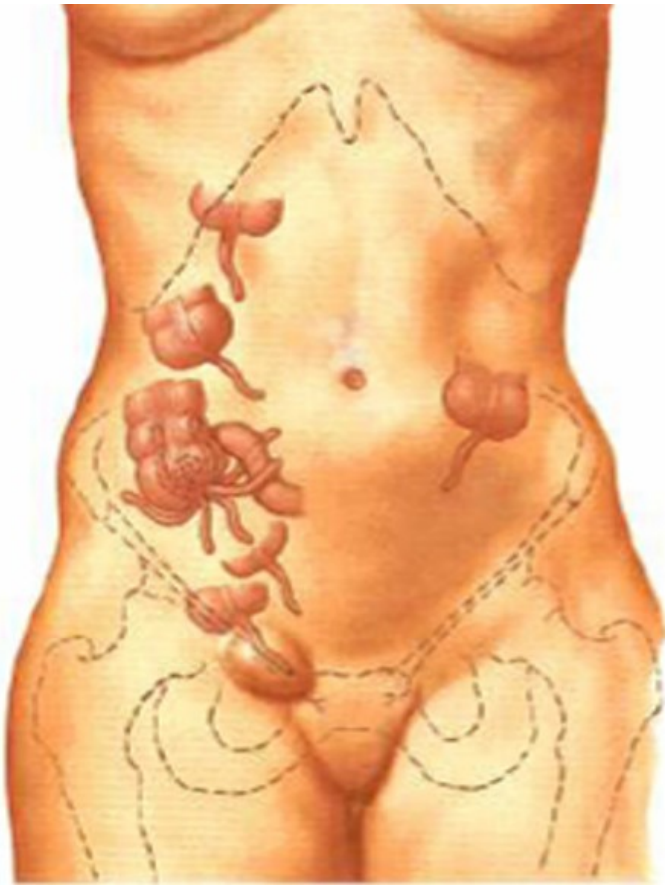
Positio pelvina
Positio retrocaecalis

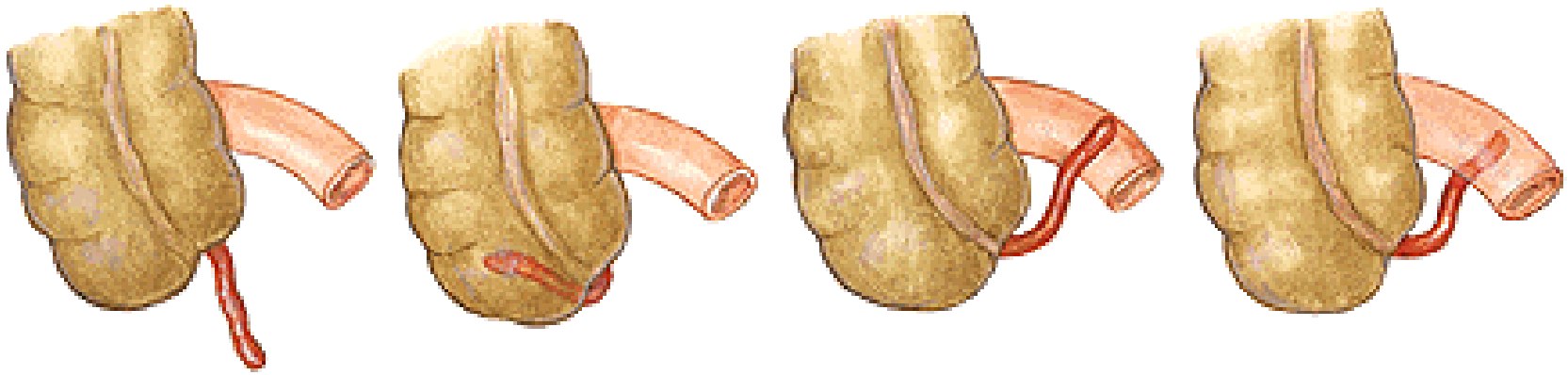
Positio ileocaecalis

Positio praecaecalis

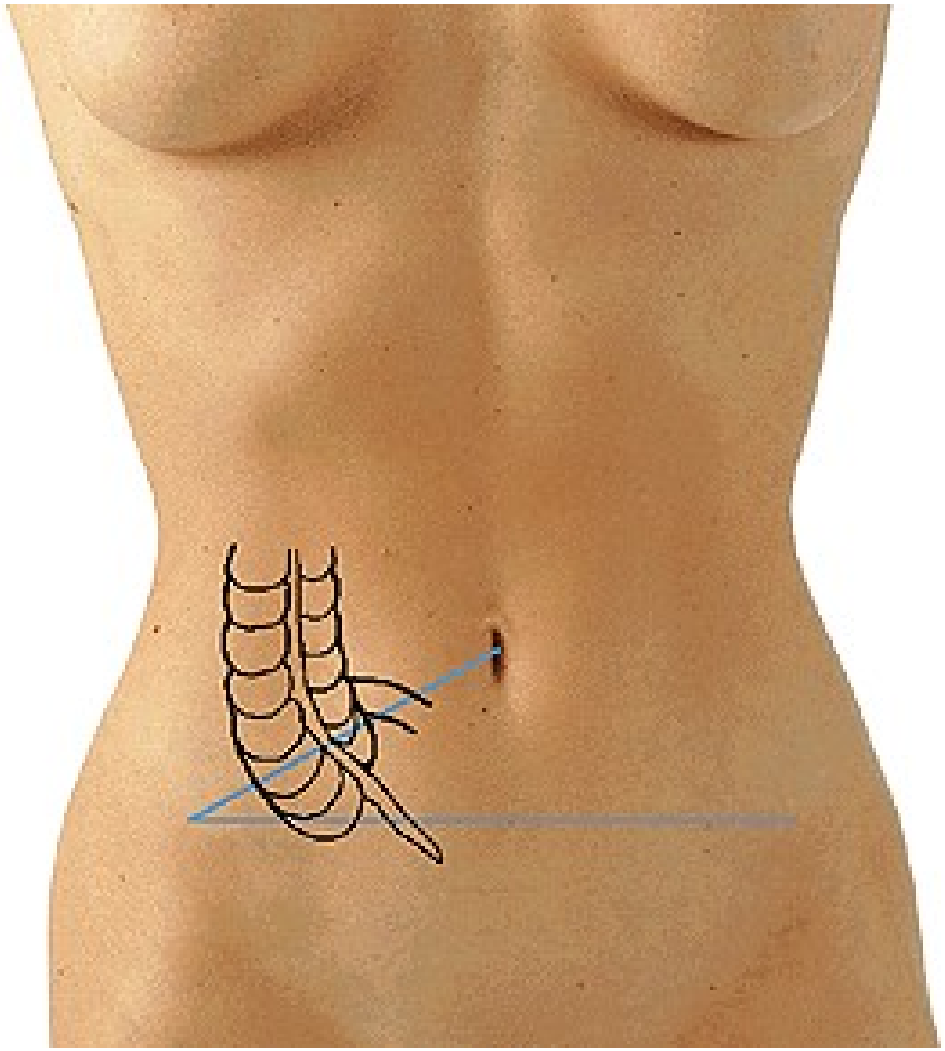
Positio laterocaecalis

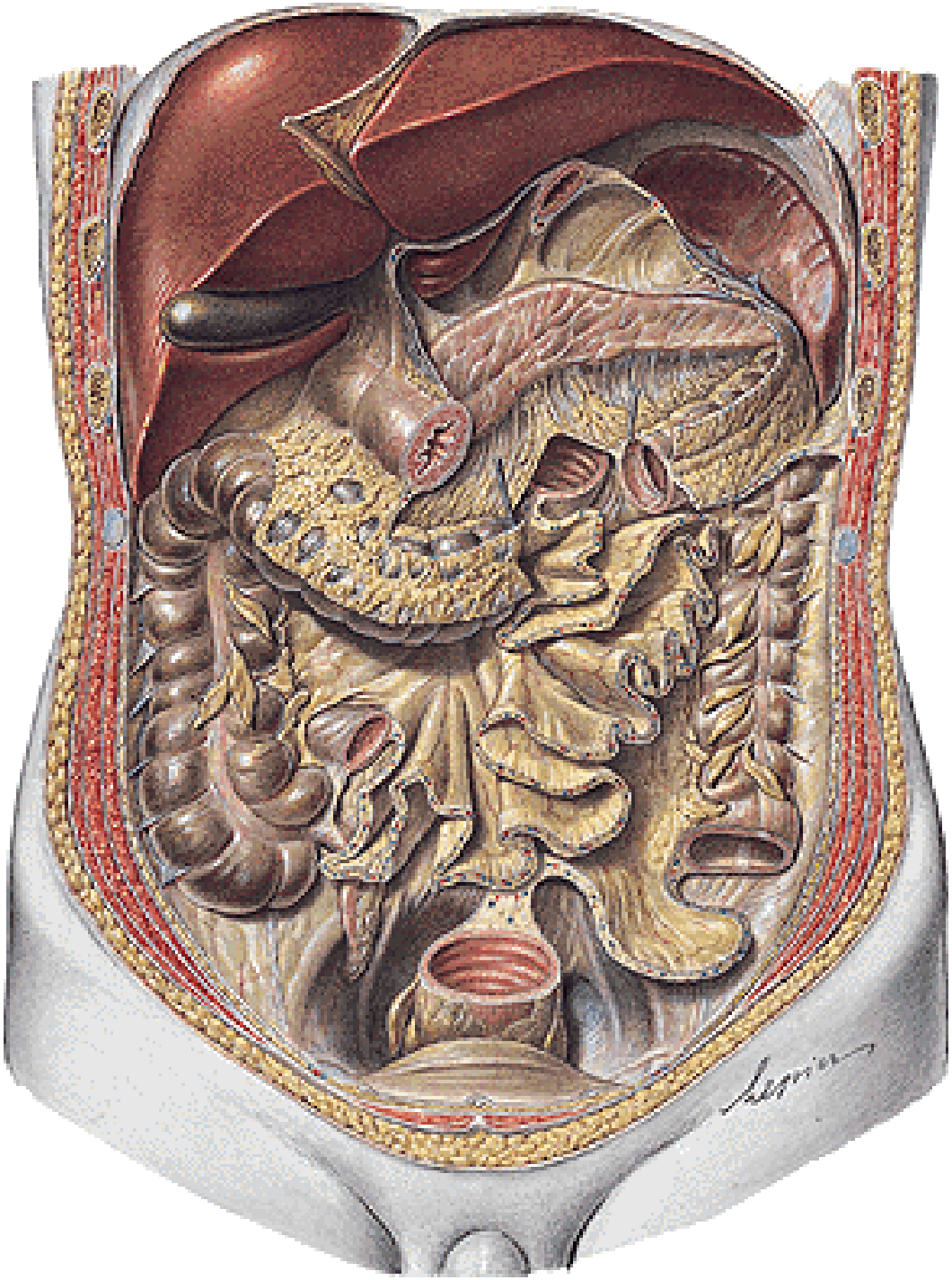
Positio subcaecalis





Monroe´s line (linea spinoumbilicalis dextra) – Mac Burney´s point
Linea bispinalis – Lanz´s point





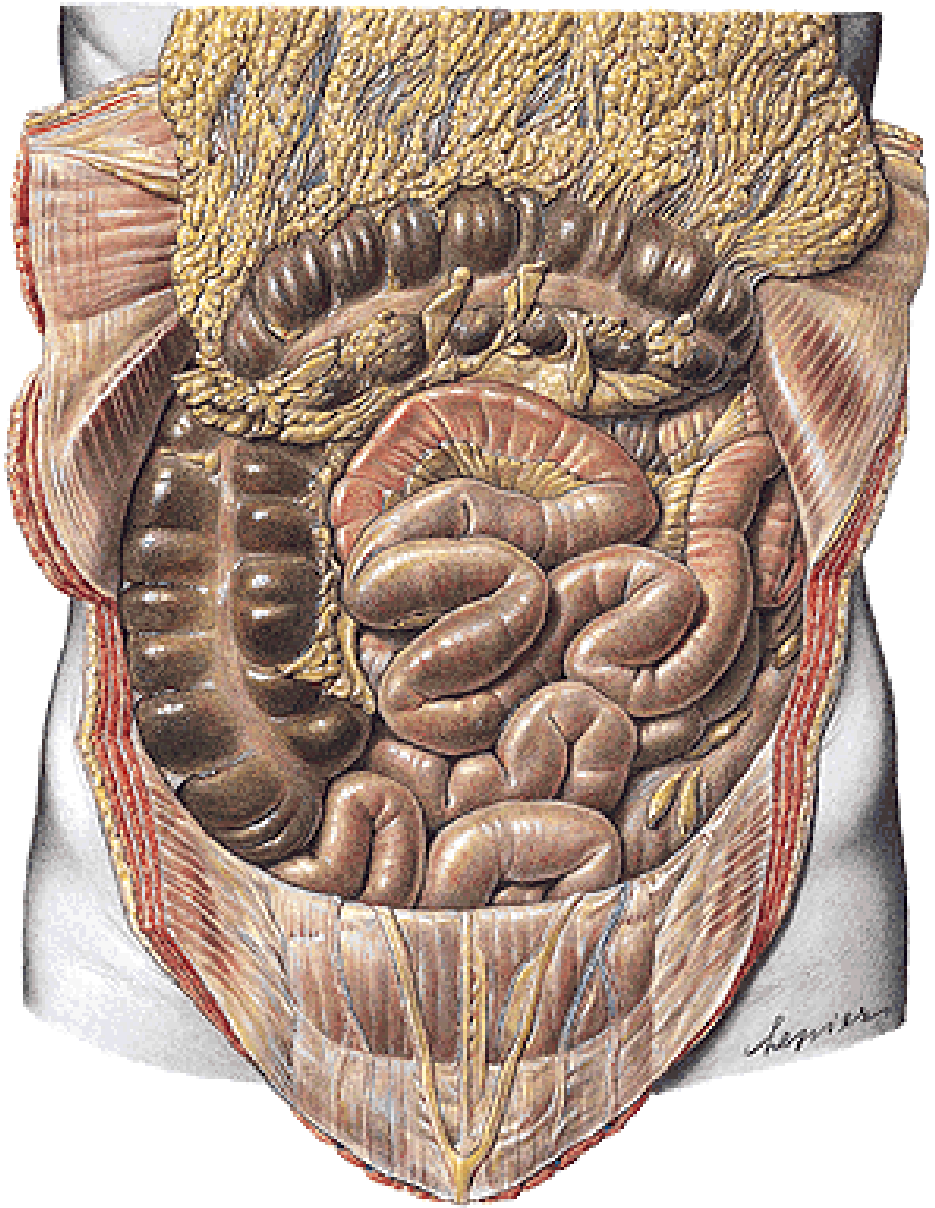
COLON ASCENDENS

Flexura coli dextra (hepatica)

lobus hepaticus dx.
(impressio colica)

secondary retroperitoneally

COLON TRANSVERSUM



Flexura coli sinistra (lienalis)

facies visceralis lienis (impressio colica)

lig. phrenicocolicum

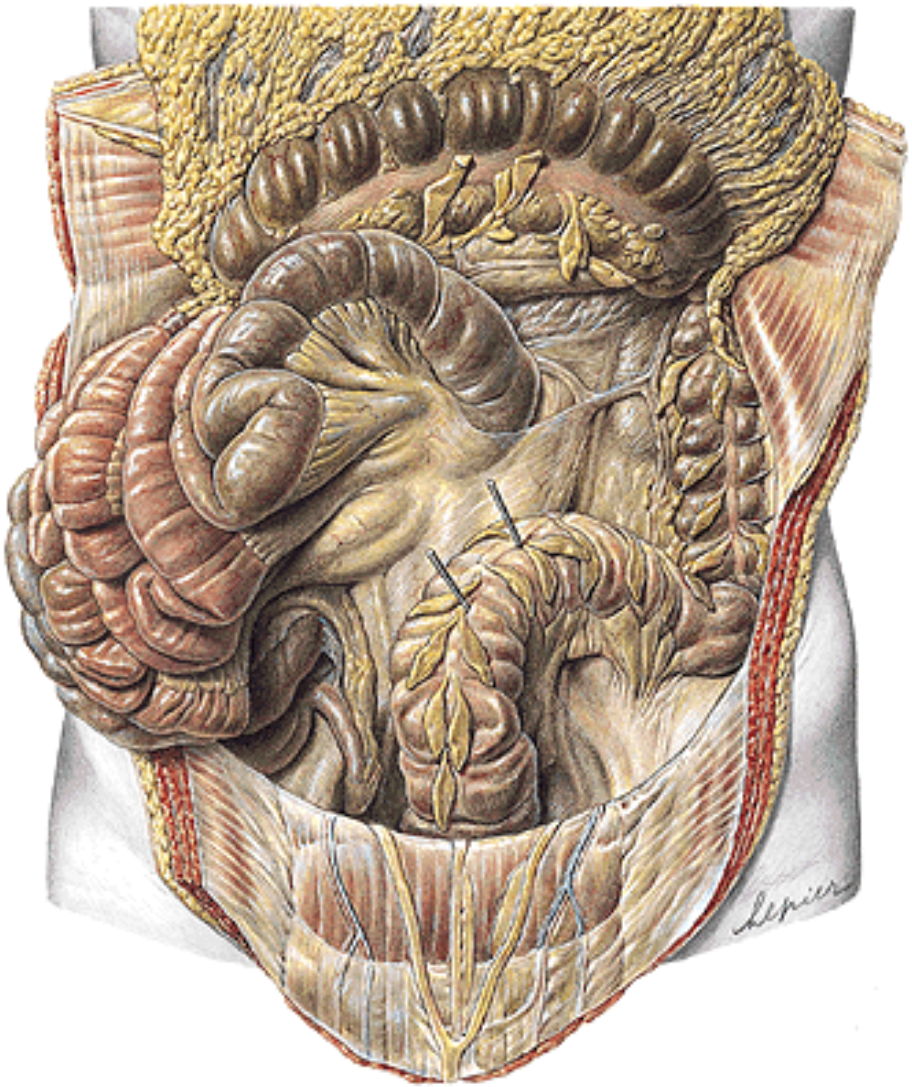
Mesocolon transversum

Omentum majus

lig. gastrocolicum

COLON DESCENDENS

COLON SIGMOIDEUM



Mesosigmoideum

Recessus intersigmoideus

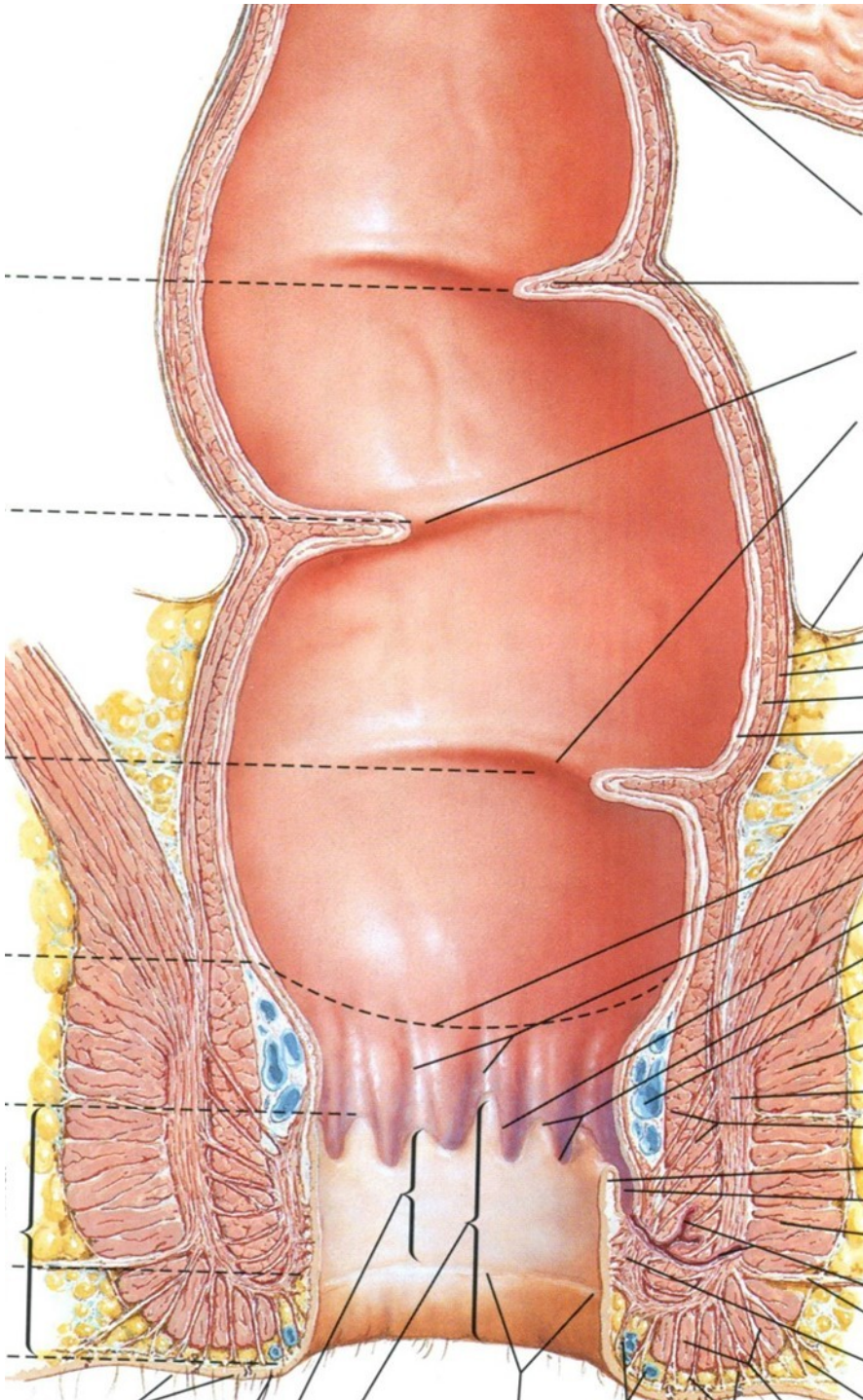
IRIGOGRAPHY

RECTUM

ampulla recti

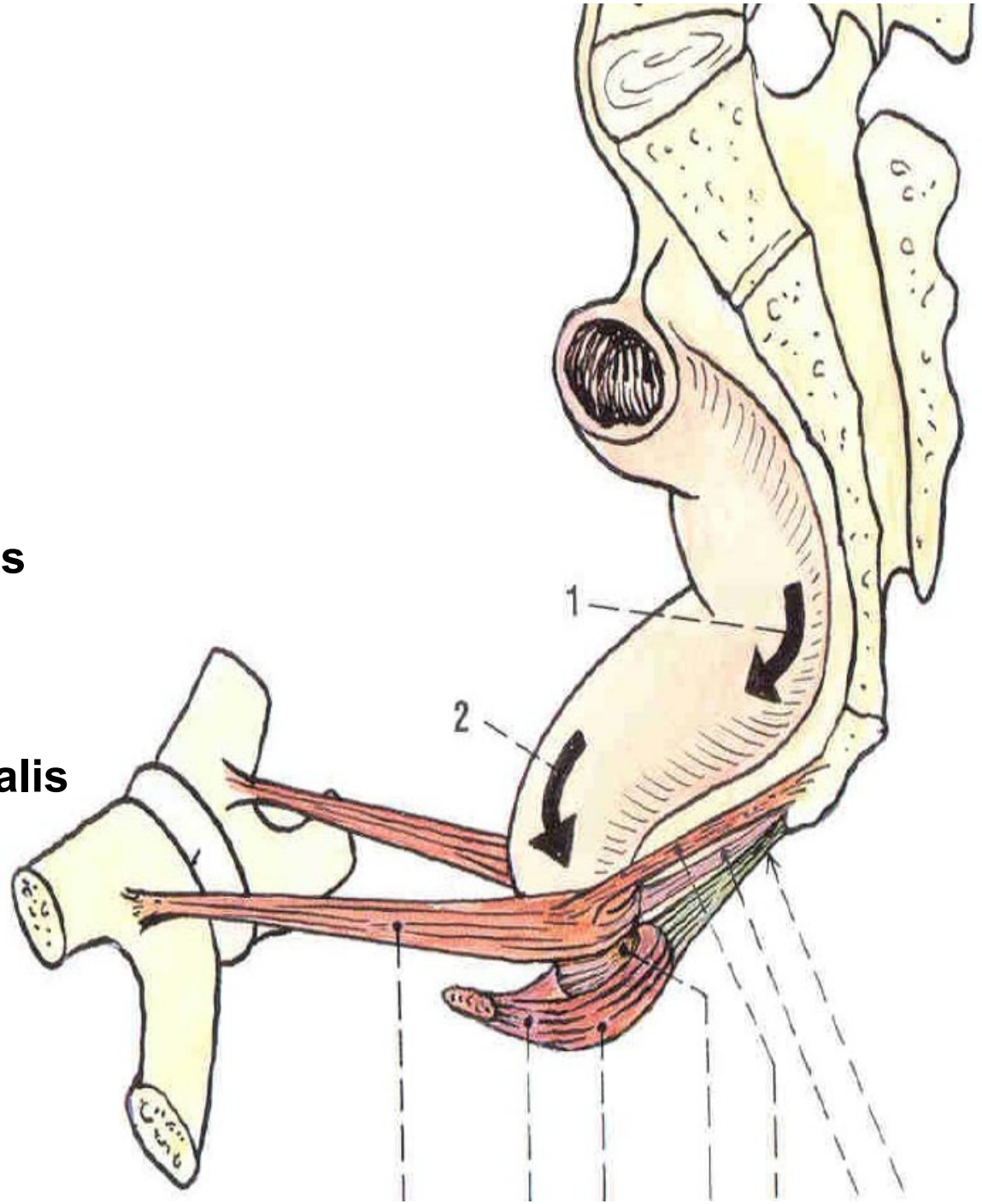
linea anorectalis

canalis analis

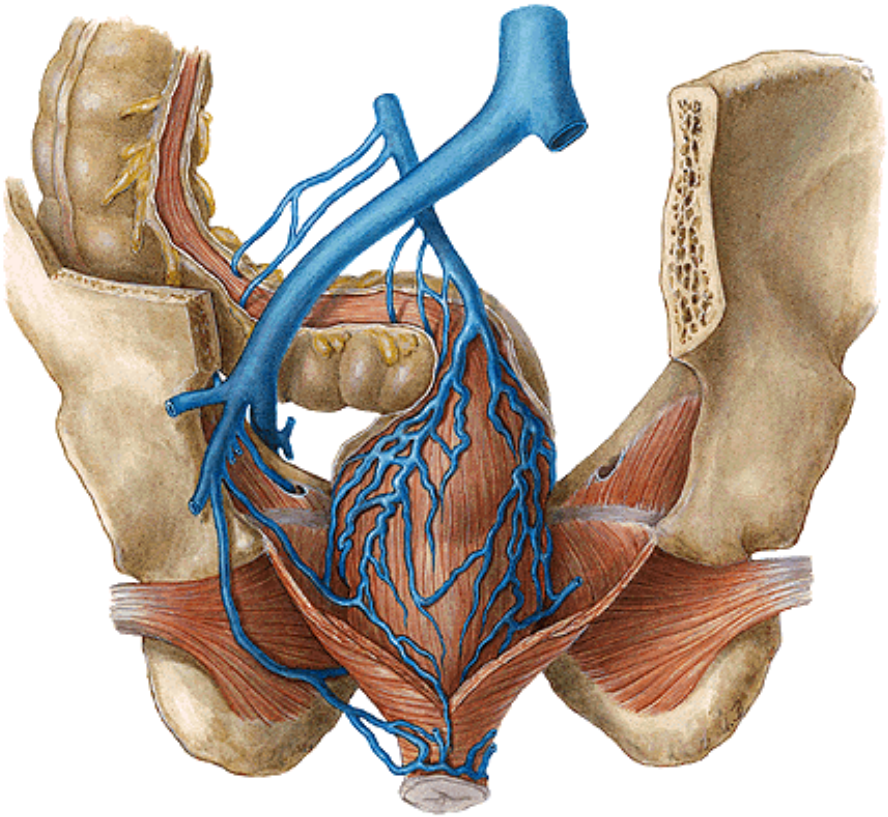


flexura sacralis

flexura perinealis

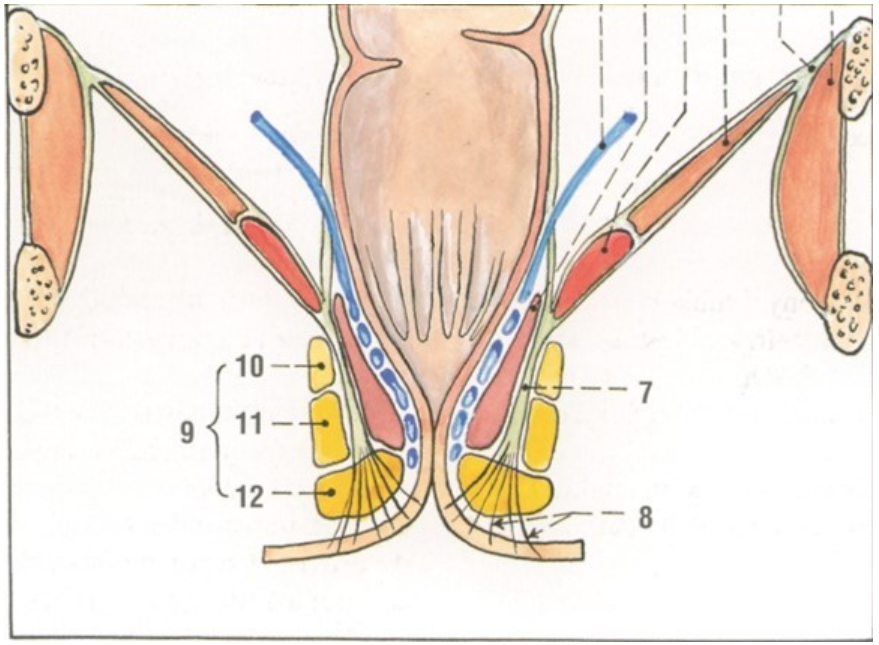


Plexus venosus rectalis

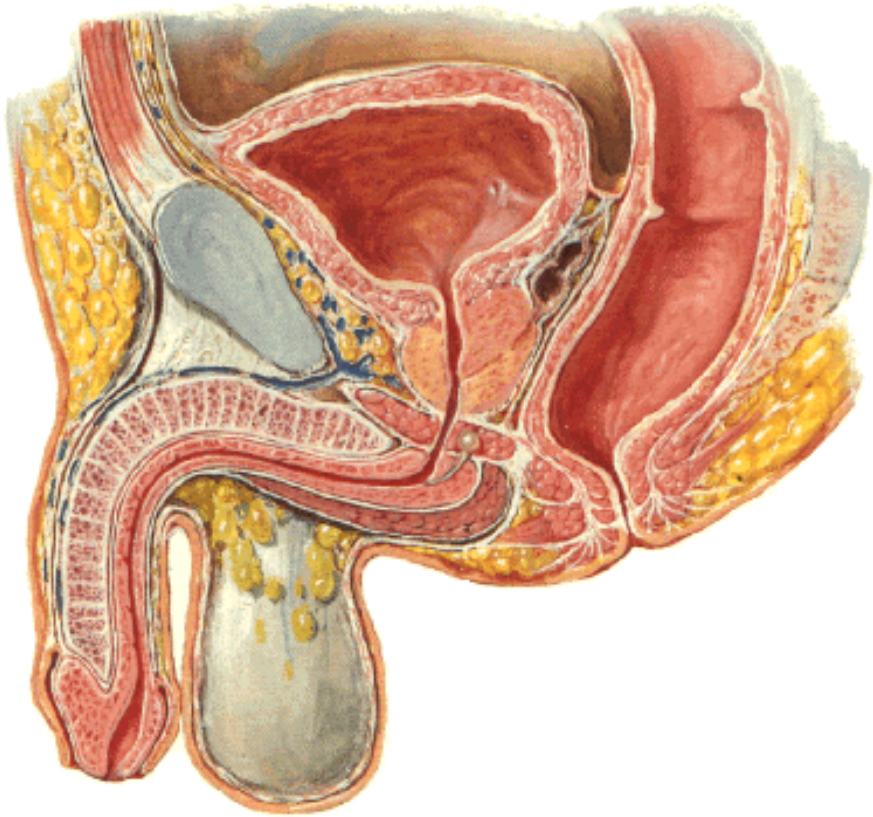


Musculus sphincter ani internus

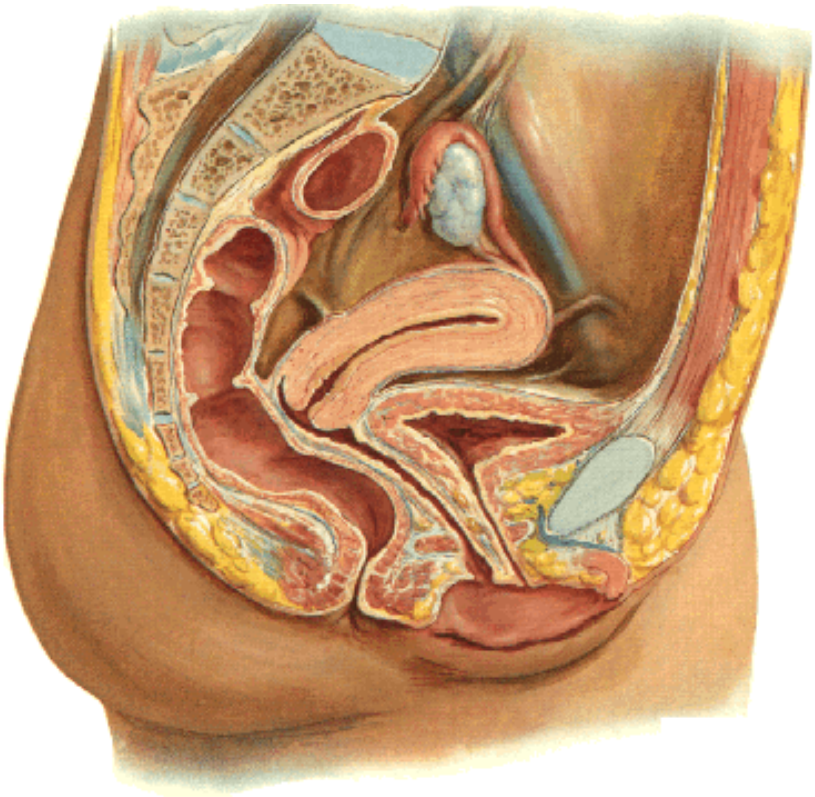
Musculus sphincter ani externus



Excavatio (pouch) rectovesicalis



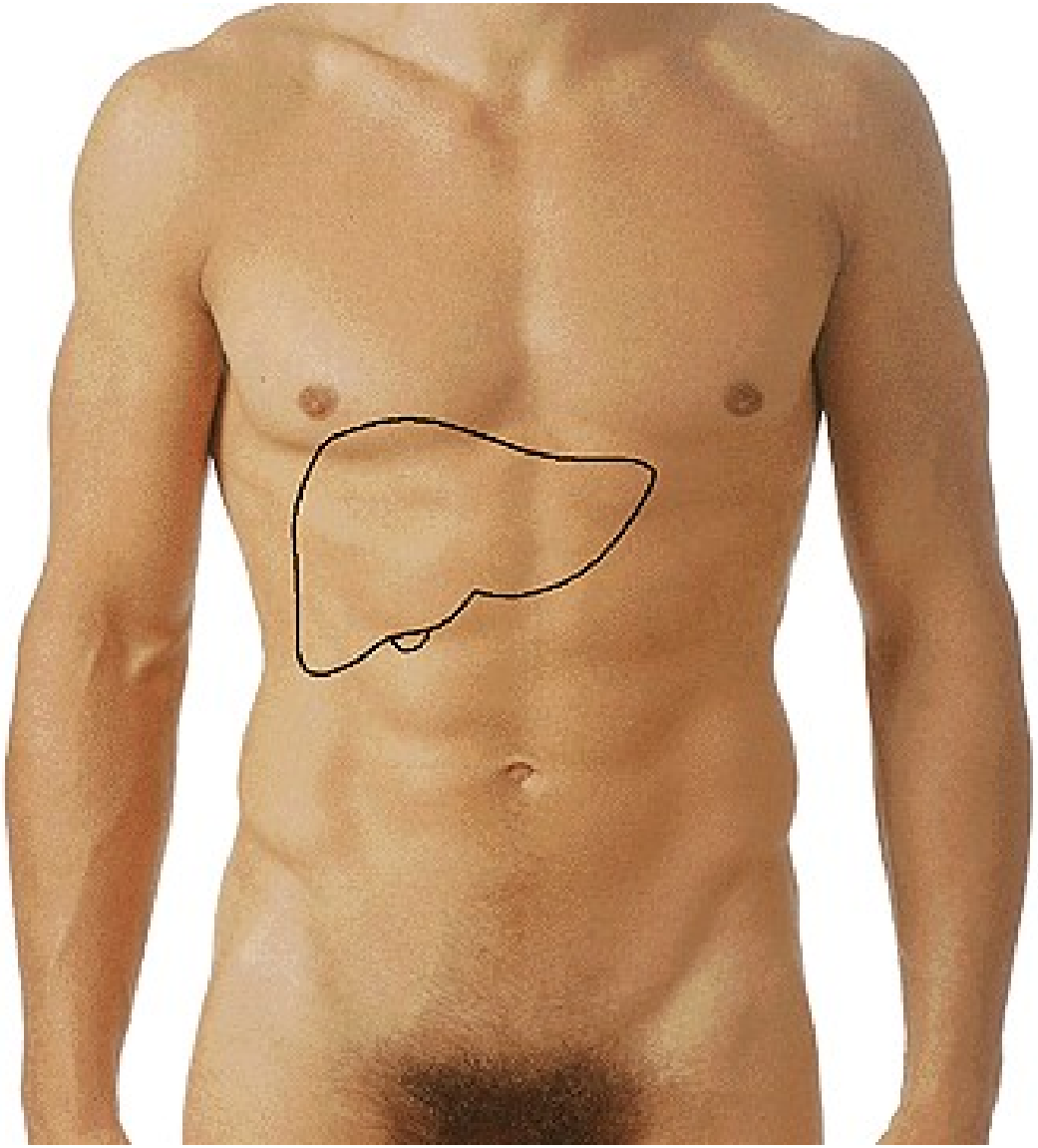
Excavatio rectouterina

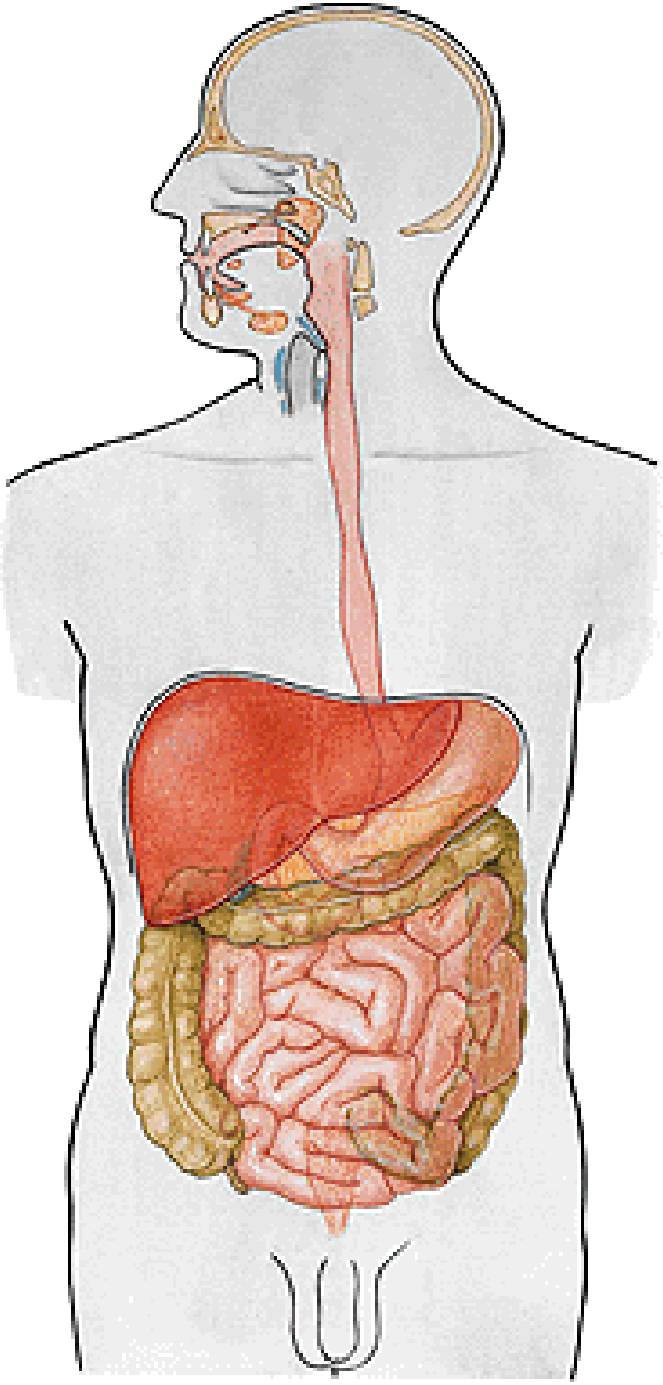


Break – 15 minutes

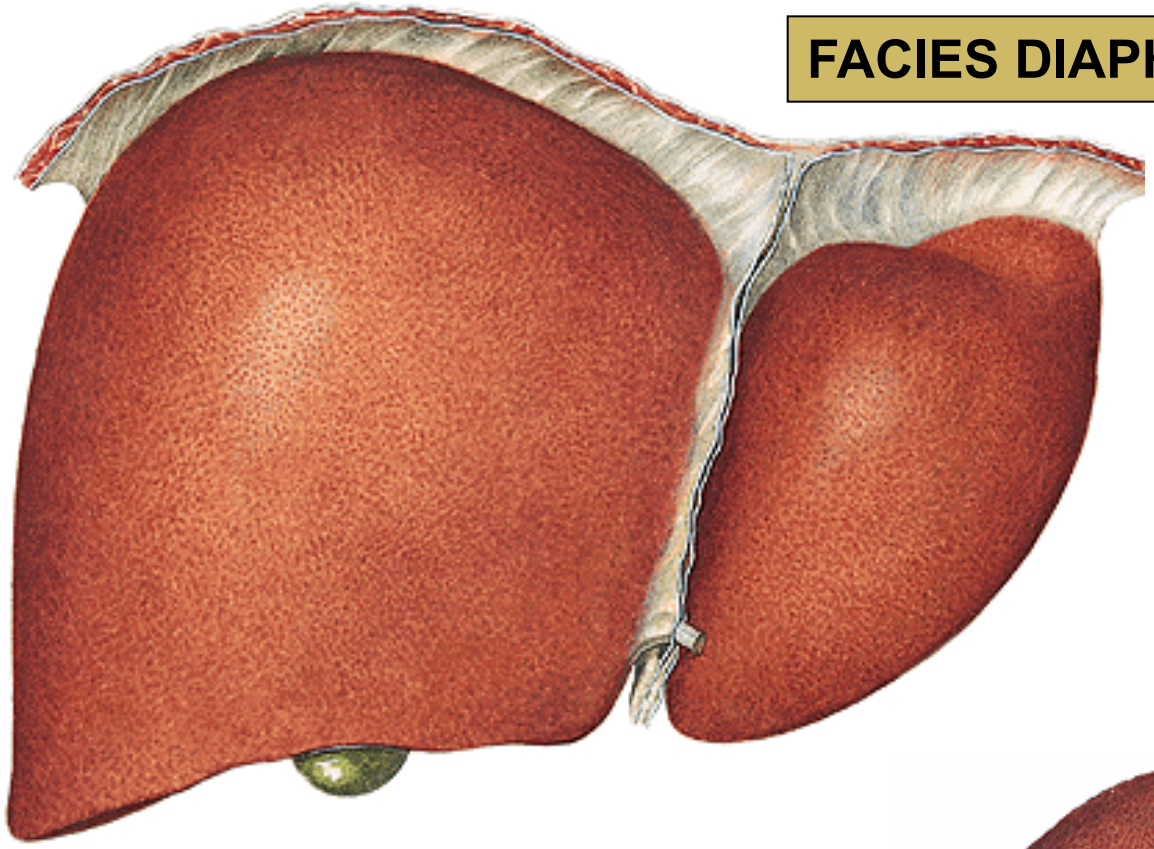
This is optical illusion – try to find the head between the coffee beans ☺

LIVER (HEPAR)





FACIES DIAPHRAGMATICA HEPATIS



lig. falciforme hepatis

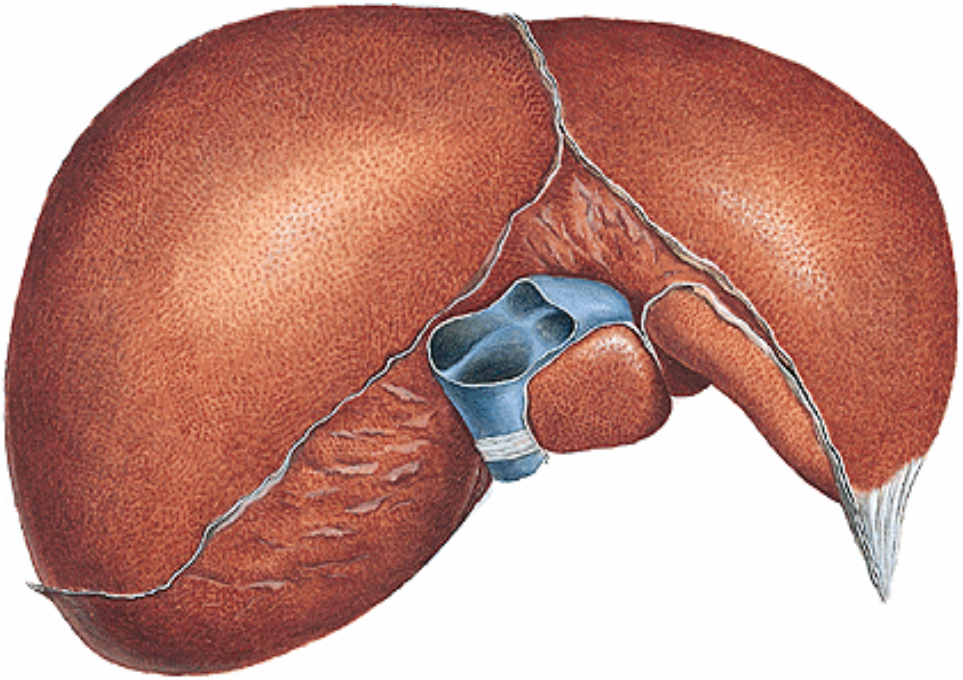
lig. teres hepatis

appendix fibrosa hepatis

Pars superior(area nuda)

Pars anterior

Margo inferior



FACIES VISCERALIS HEPATIS

Fissura sagittalis sin.

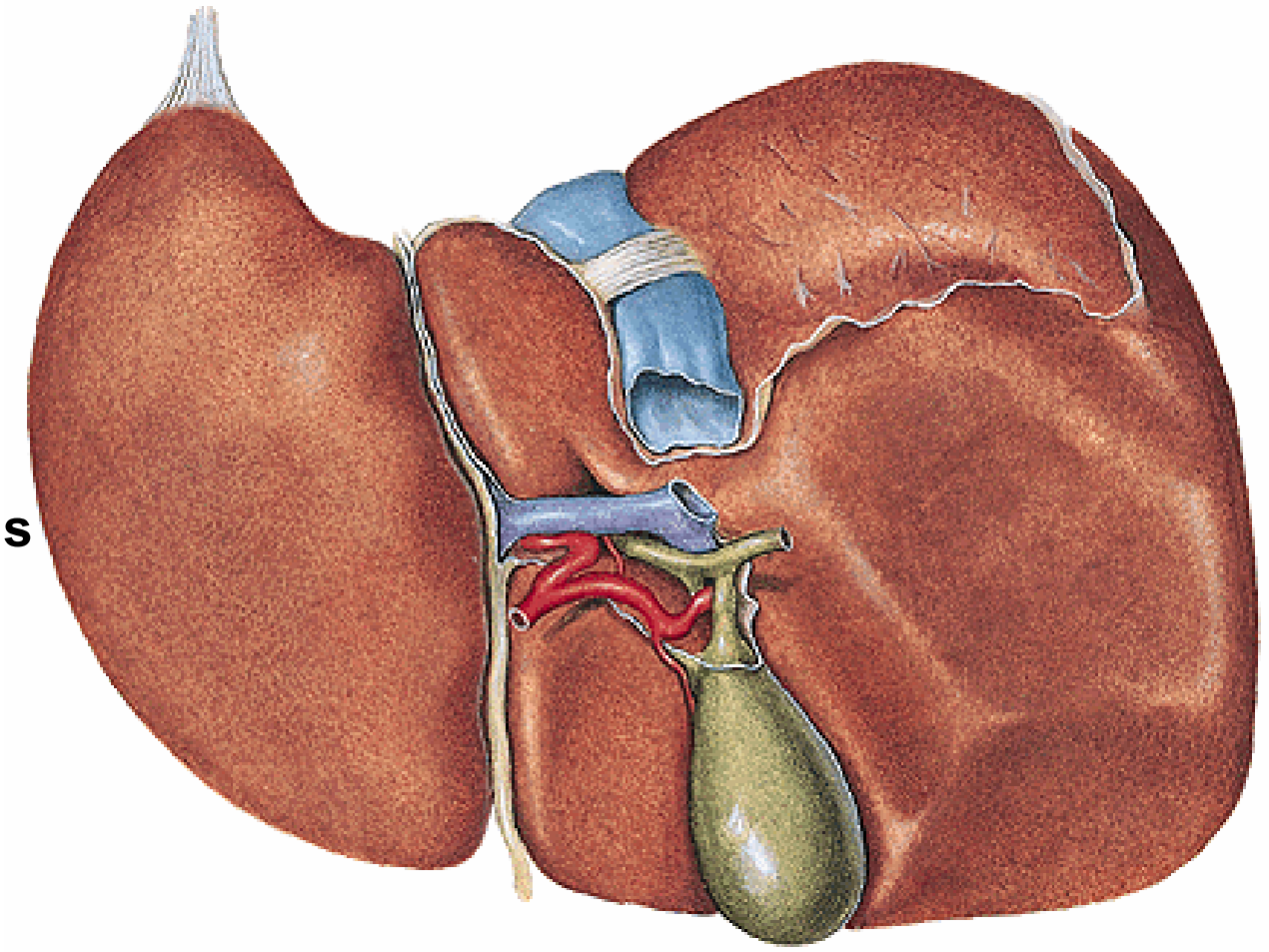
- lig. teres hepatis
- lig. venosum

Fissura sagittalis dx.

- fossa vesicae biliaris
- sulcus v. cavae inf.

Porta hepatis

- vena portae
- a. hepatica propria
- ductus hepaticus communis



LOBES

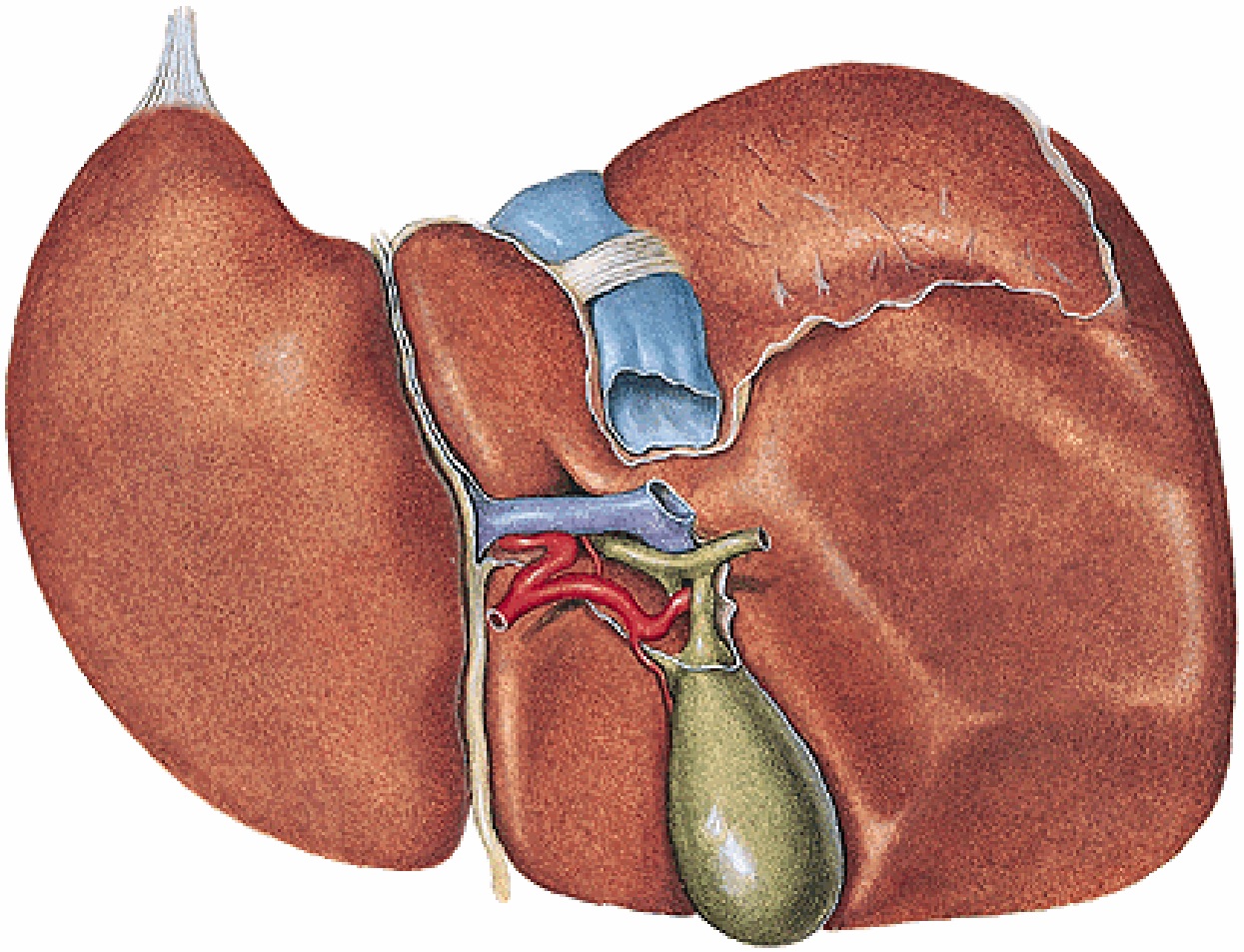
Lobus sinister

tuber omentale

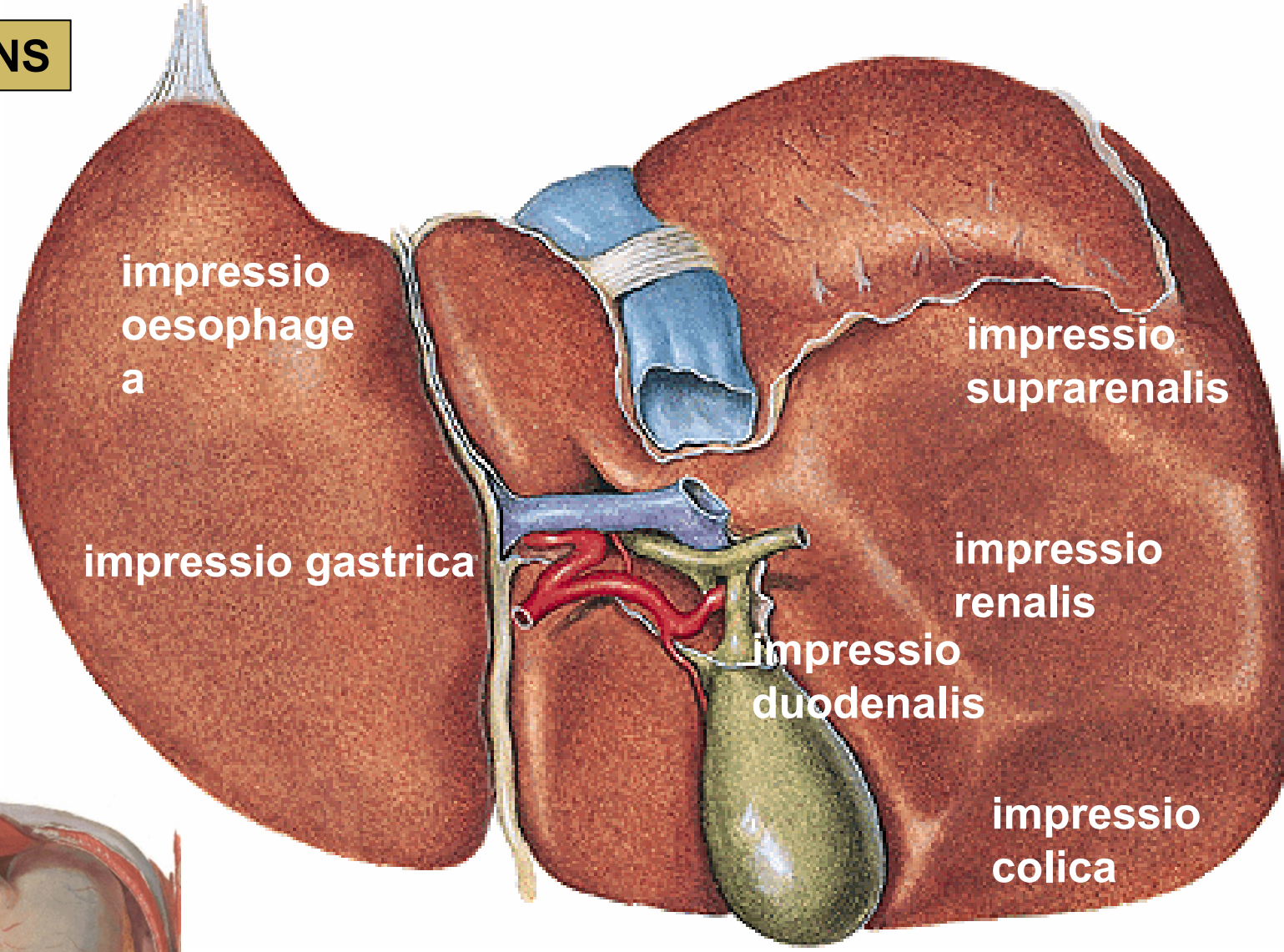
Lobus dexter

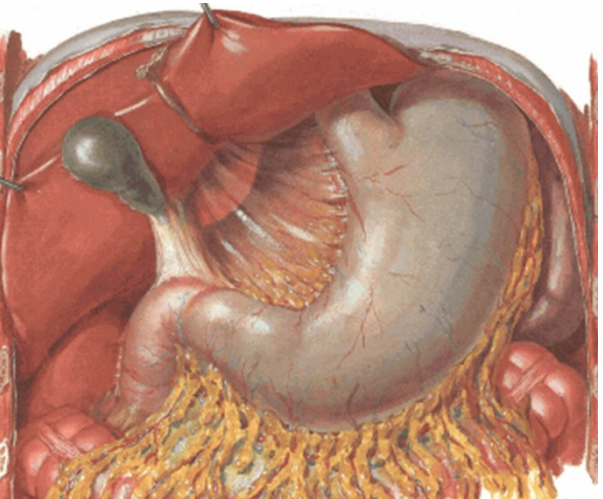
Lobus caudatus

Lobus quadratus

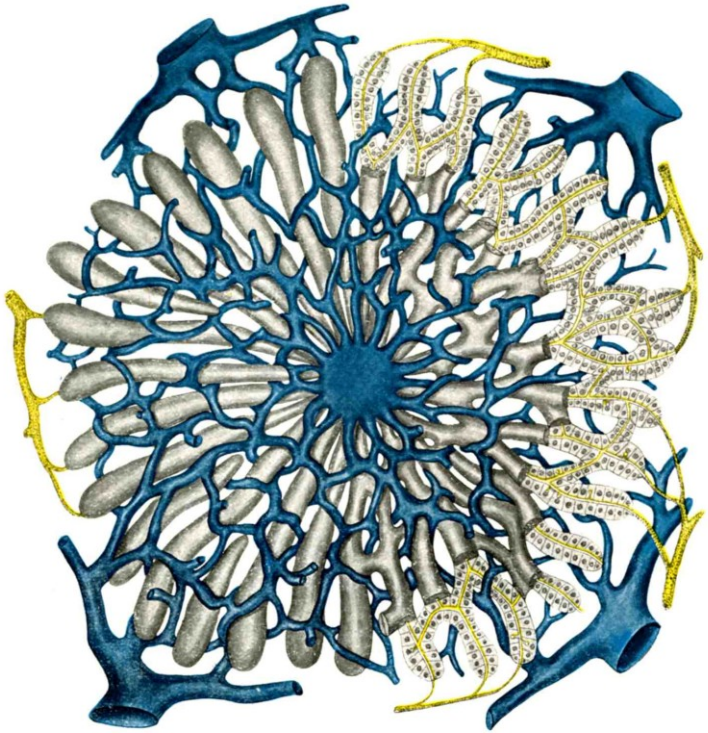


IMPRESSIONS





LOBUS VENAE CENTRALIS

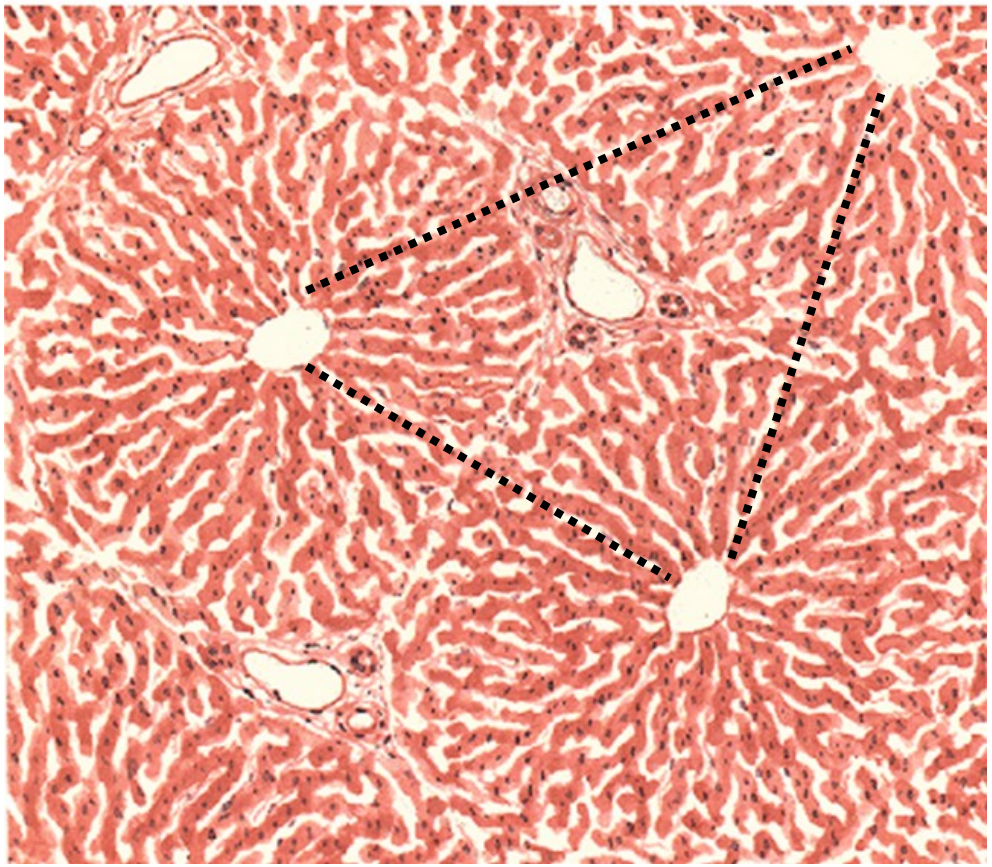


LOBUS VENAE INTERLOBULARIS

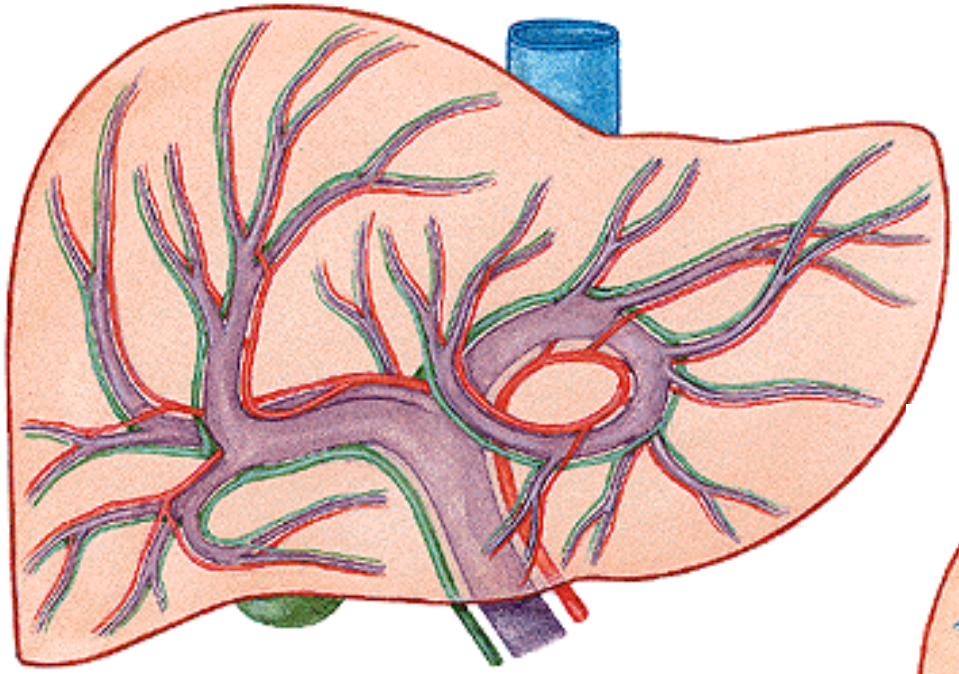
arteriae interlobulares (a. hepatica propria)

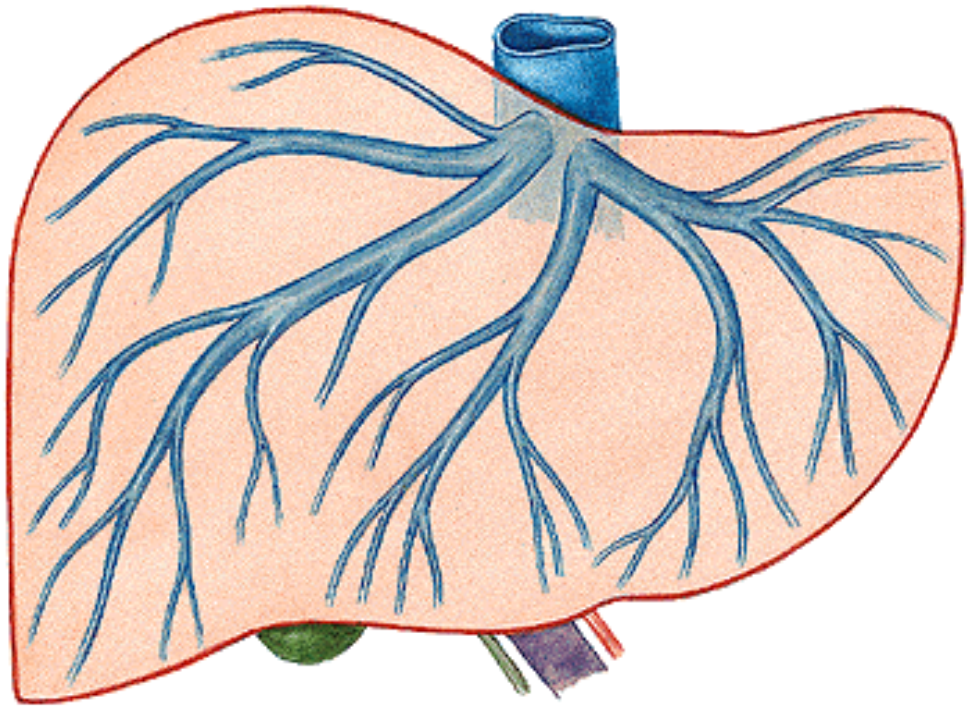
venae interlobulares (vena portae)

ductus biliferi interlobulares



FUNTIONAL AND NUTRITIVE BLOOD SUPPLY



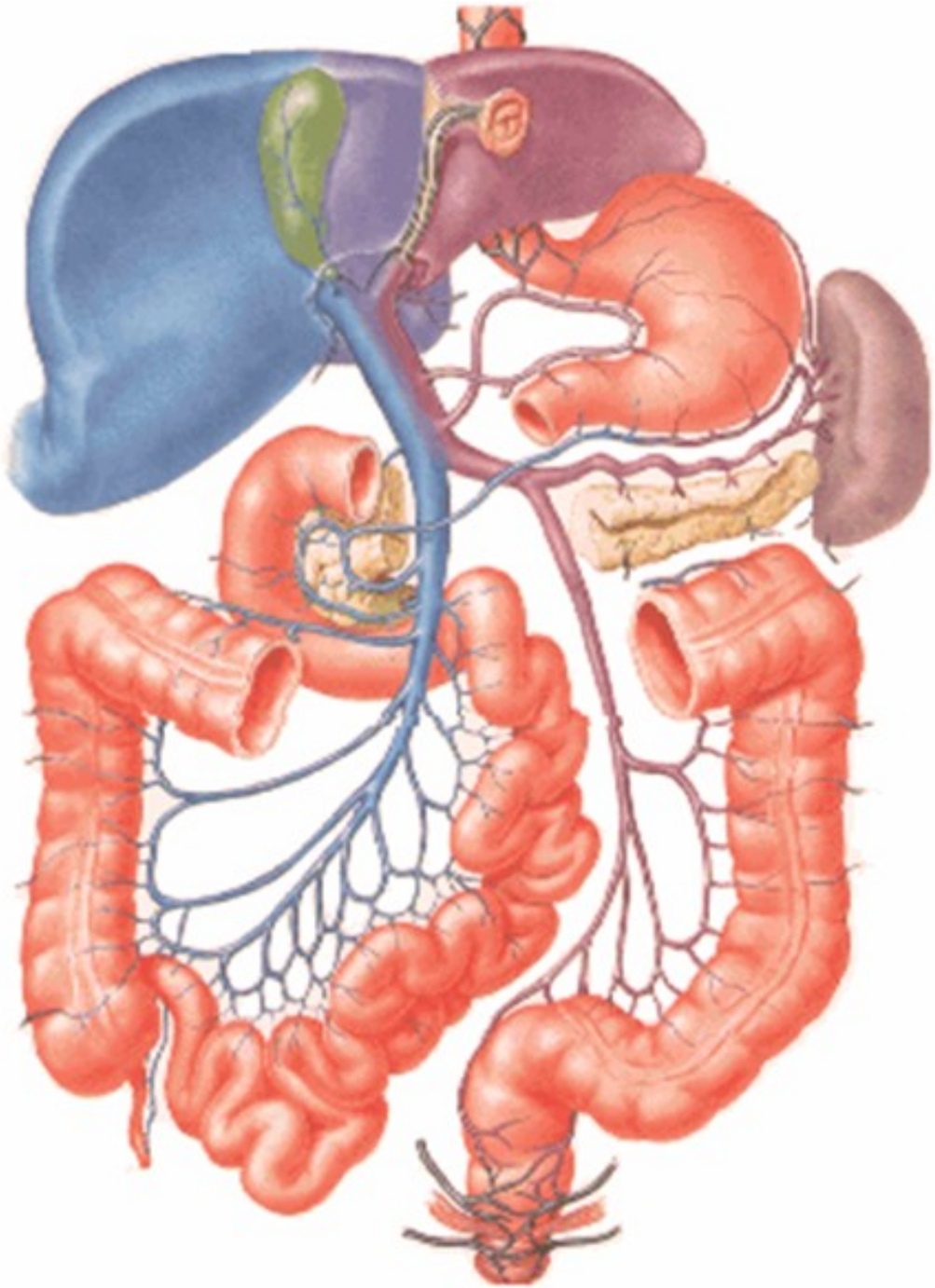


VENA PORTAE

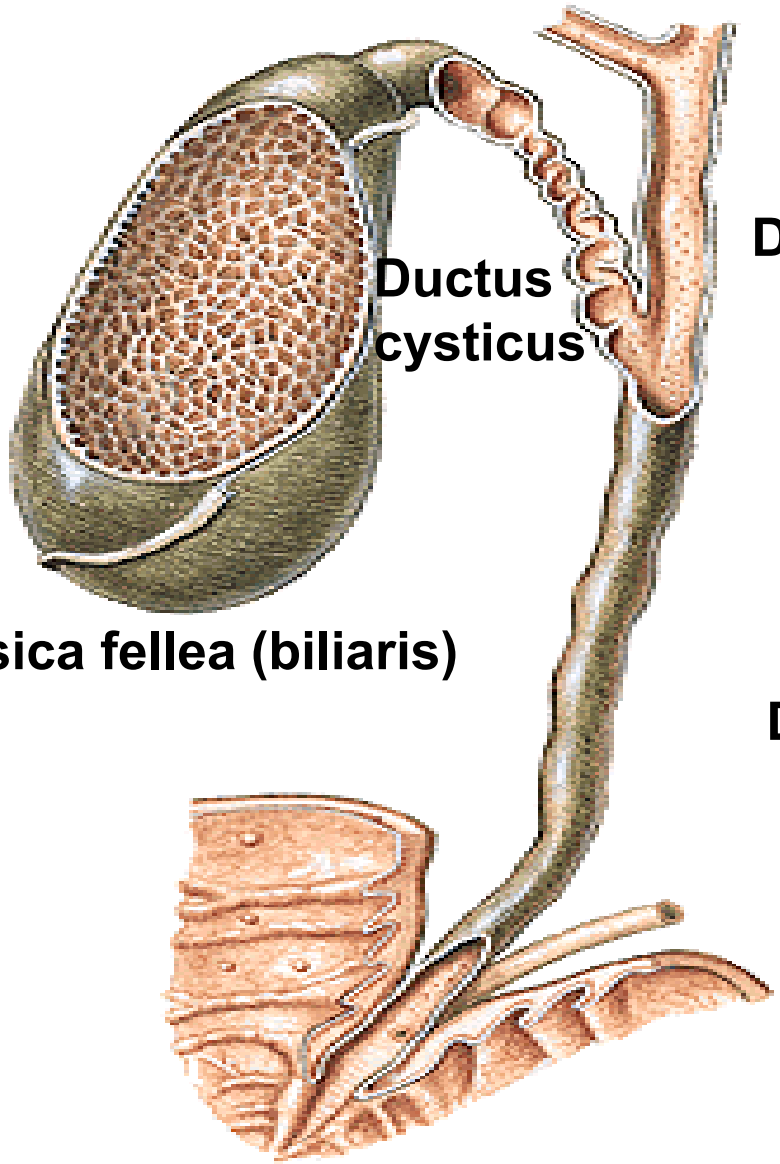
Formed by:

v. lienalis

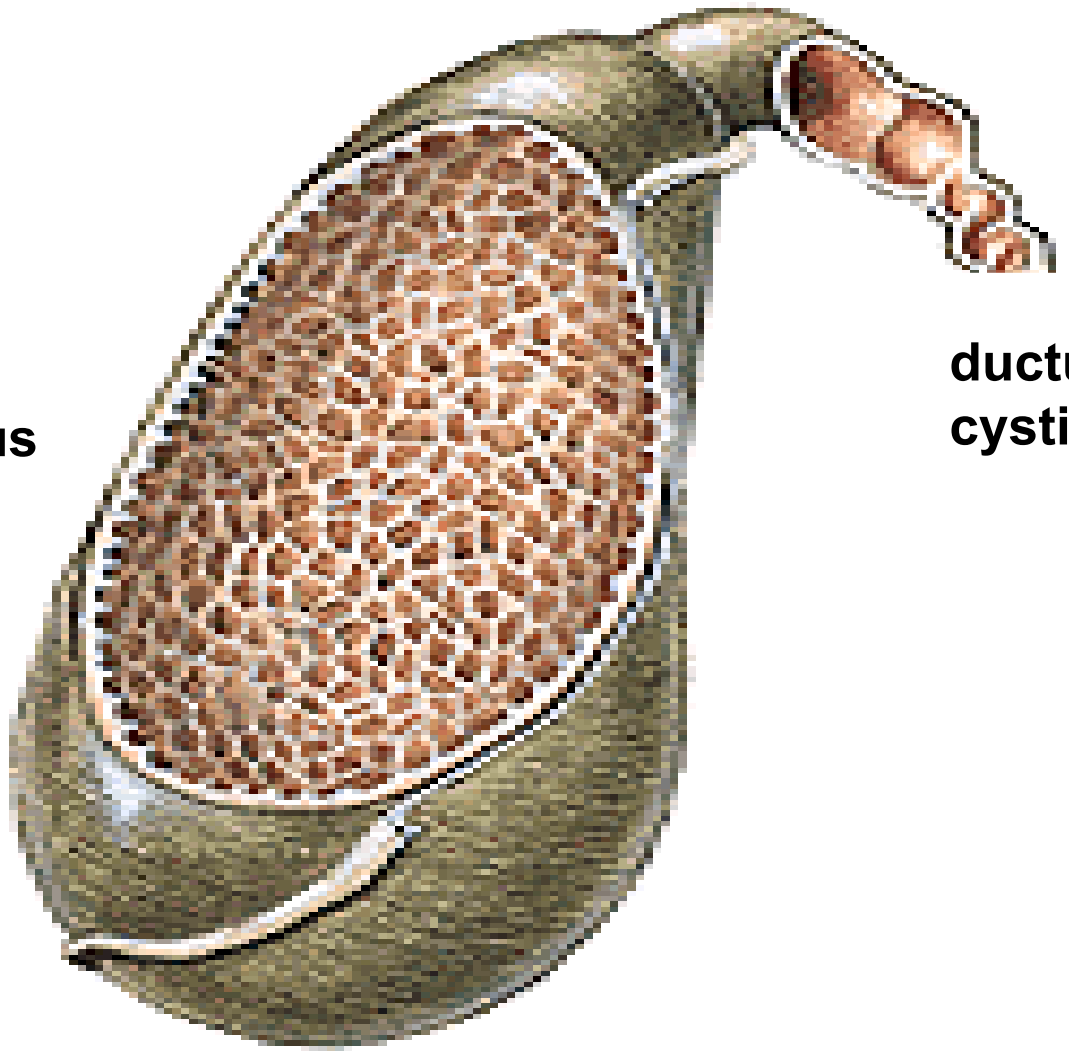
v. mesenterica sup.



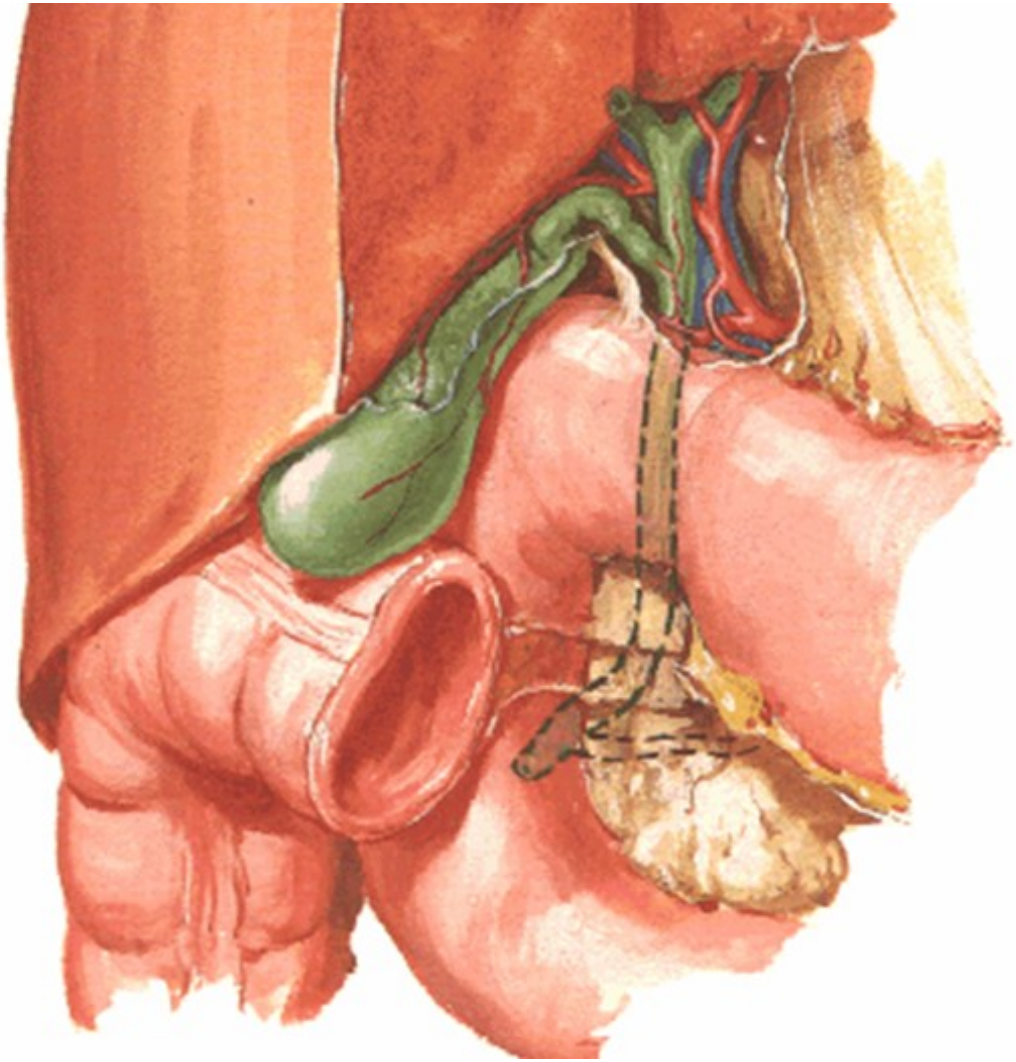
EXTRAHEPATAL BILIARY PATHWAY

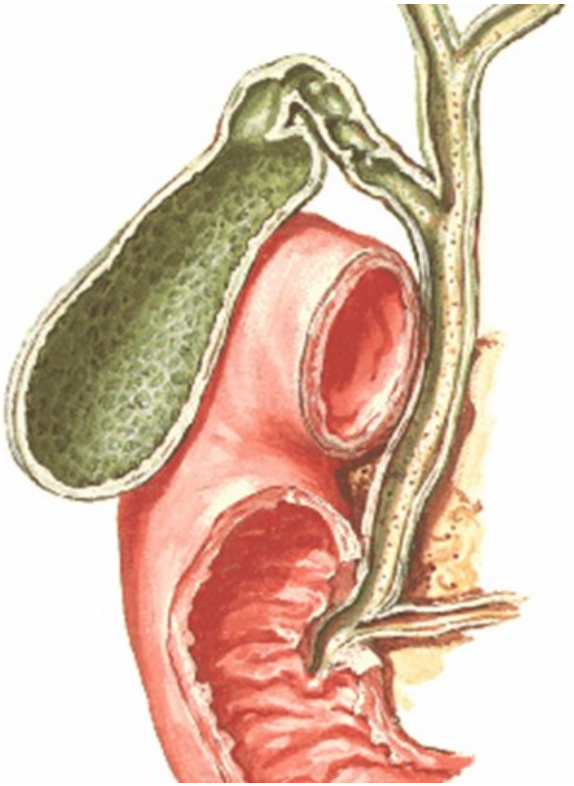


GALLBLADDER

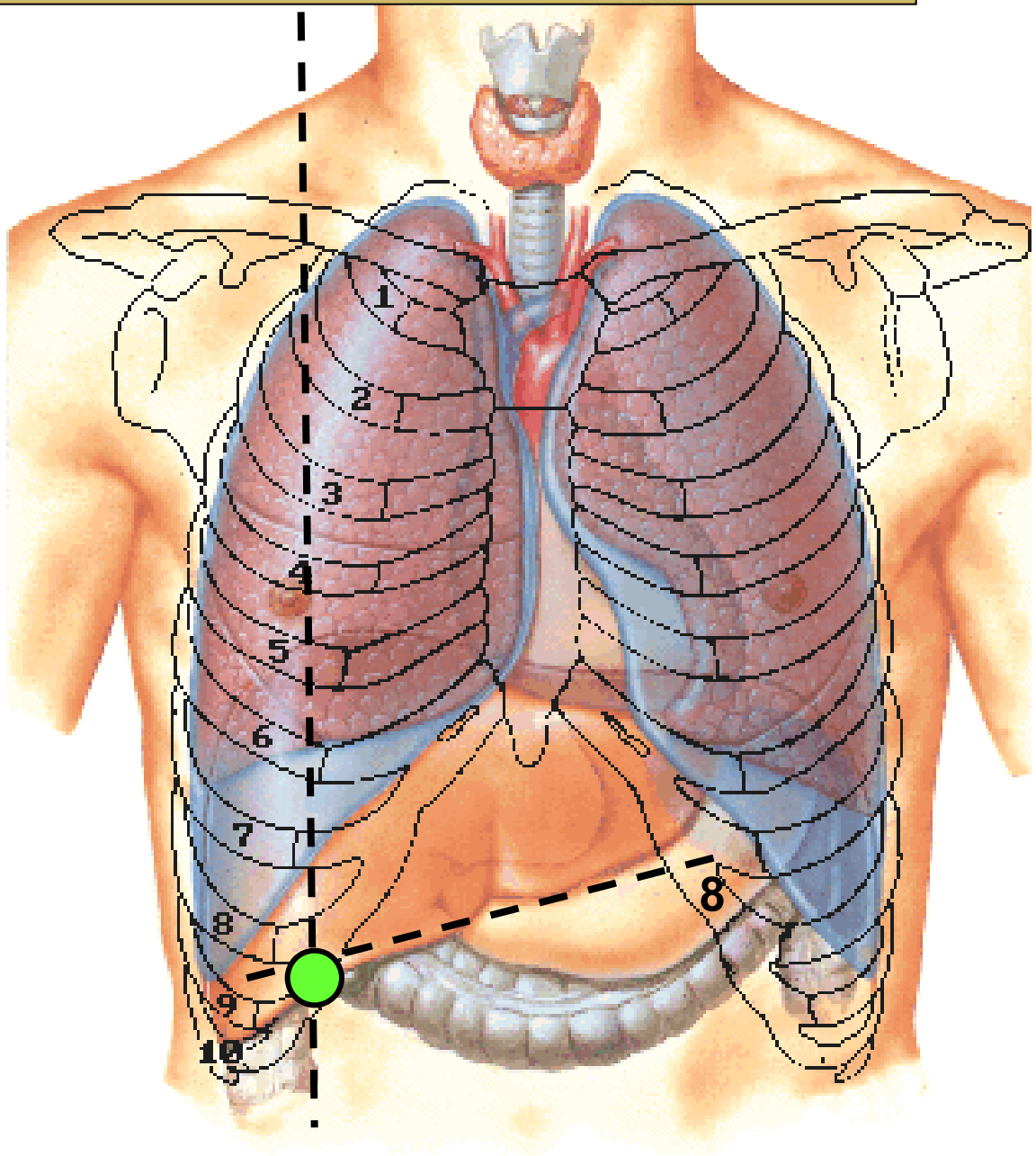


DUCTUS CHOLEDOCHUS (BILE DUCT)

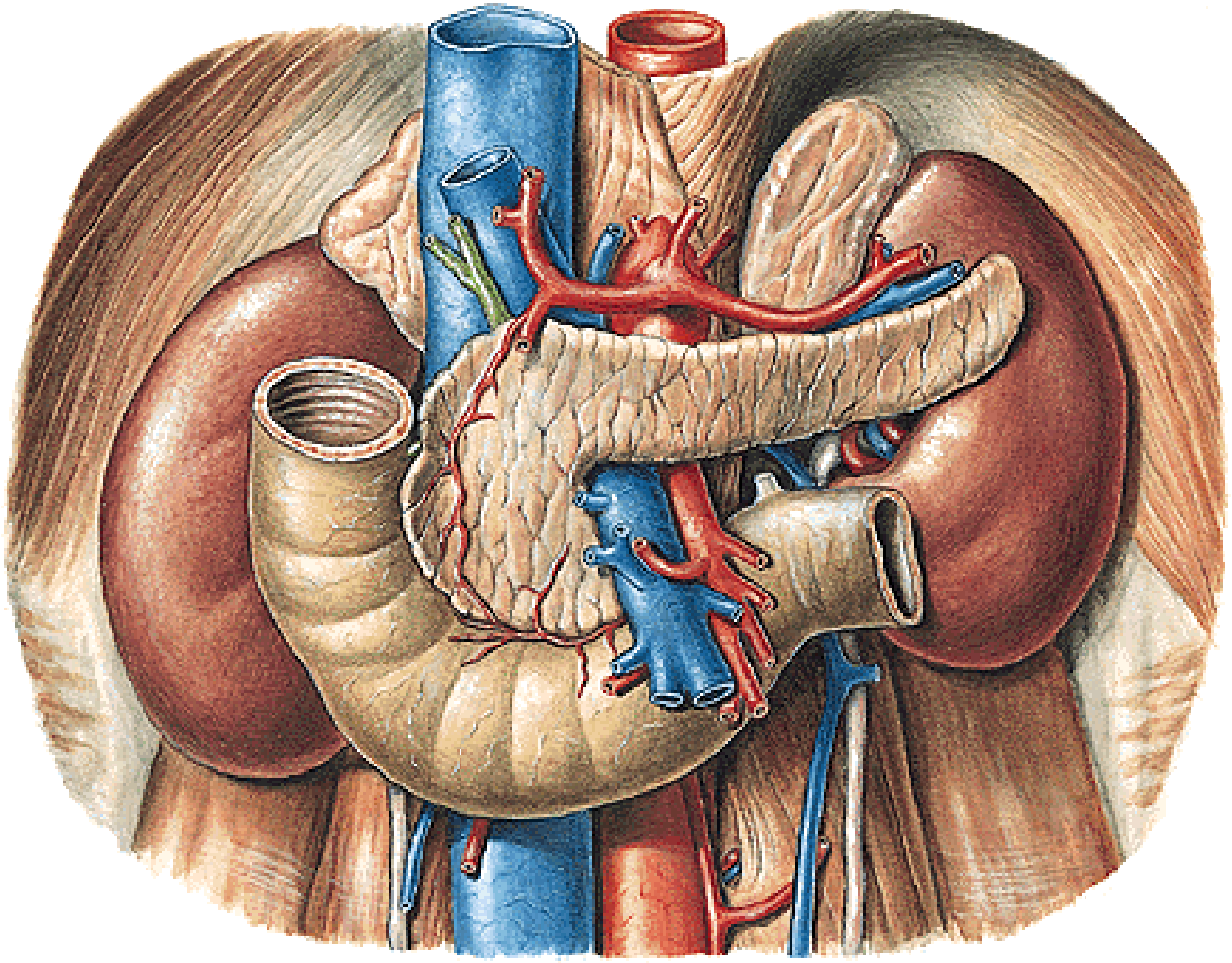




PROJECTION OF GALLBLADDER AND LIVER



PANCREAS



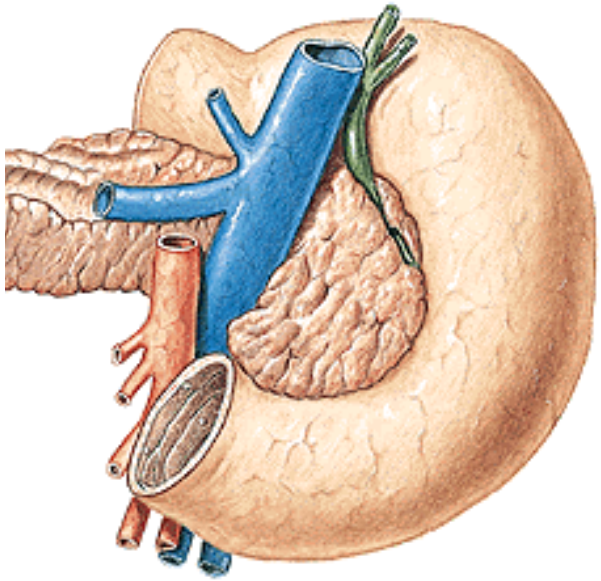
Caput pancreatis

incisura pancreatis

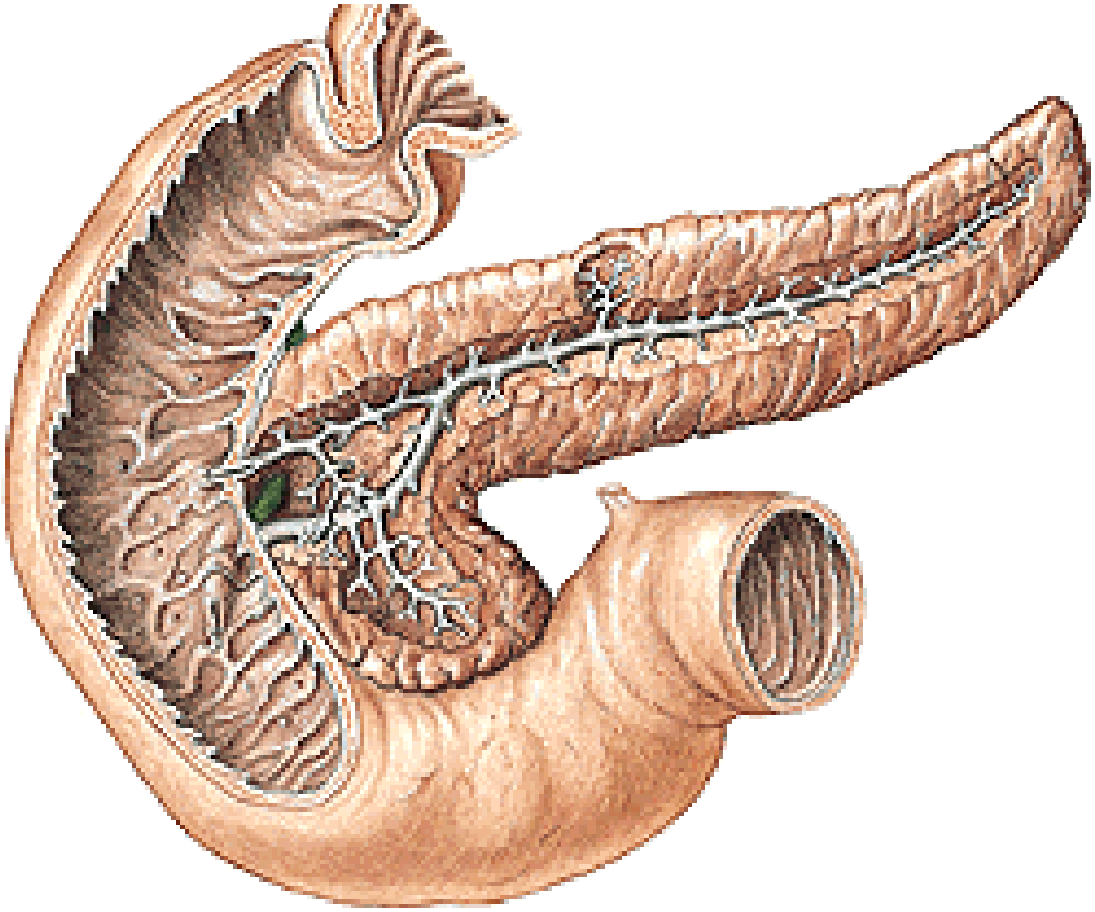
processus uncinatus

Corpus pancreatis

Cauda pancreatis



PARS EXOCRINA PANCREATIS



Serous tuboalveolar gland

Succus pancreaticus

Ductus pancreaticus acces.

Papilla duodeni minor

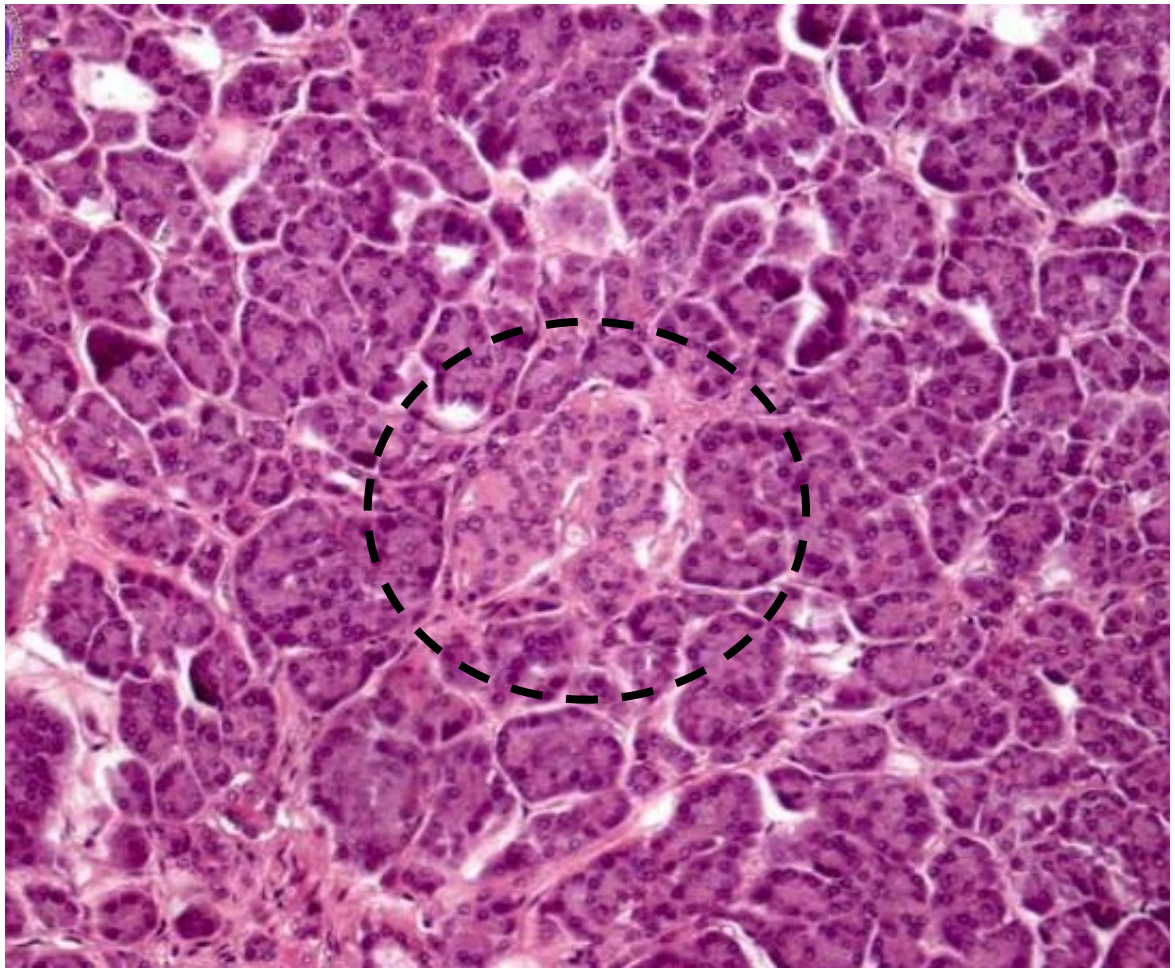
Ductus pancreaticus

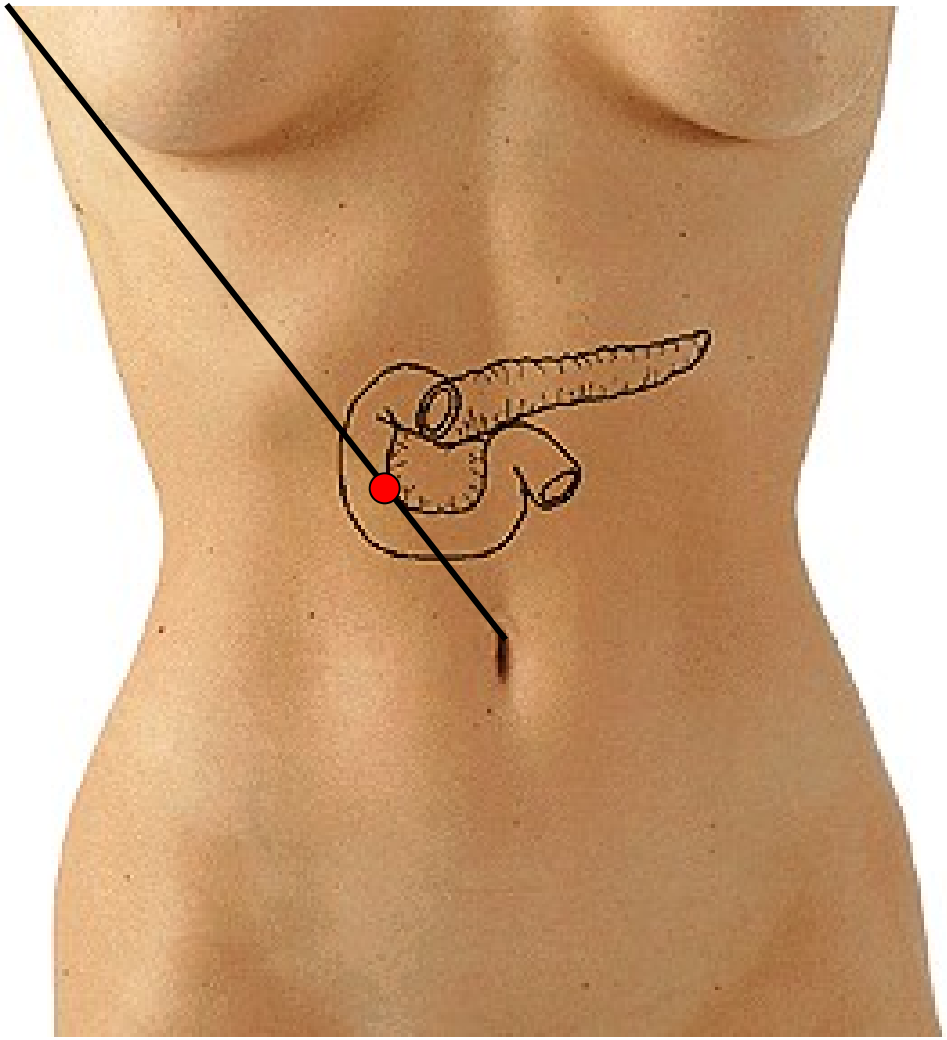
Papilla duodeni major

PARS ENDOCRINA PANCREATIS

Insulae pancreaticae – Islets of Langerhans

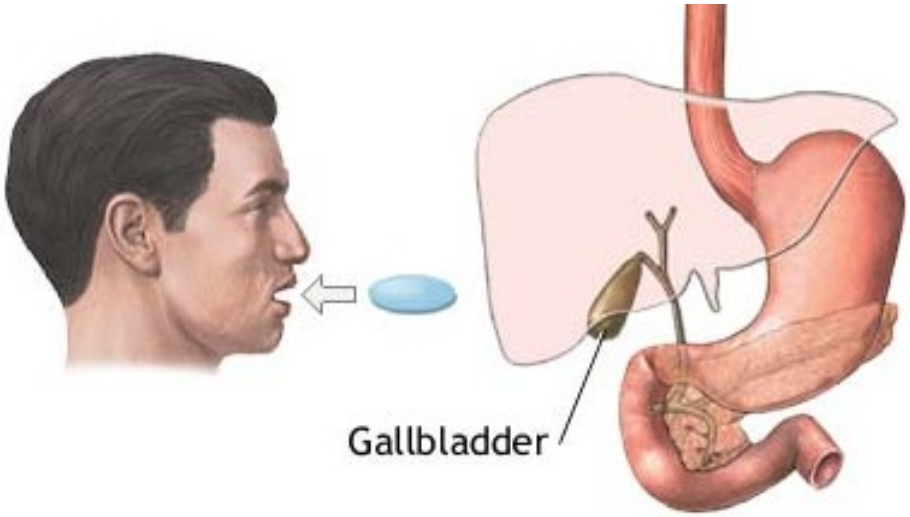
Insulin, glukagon

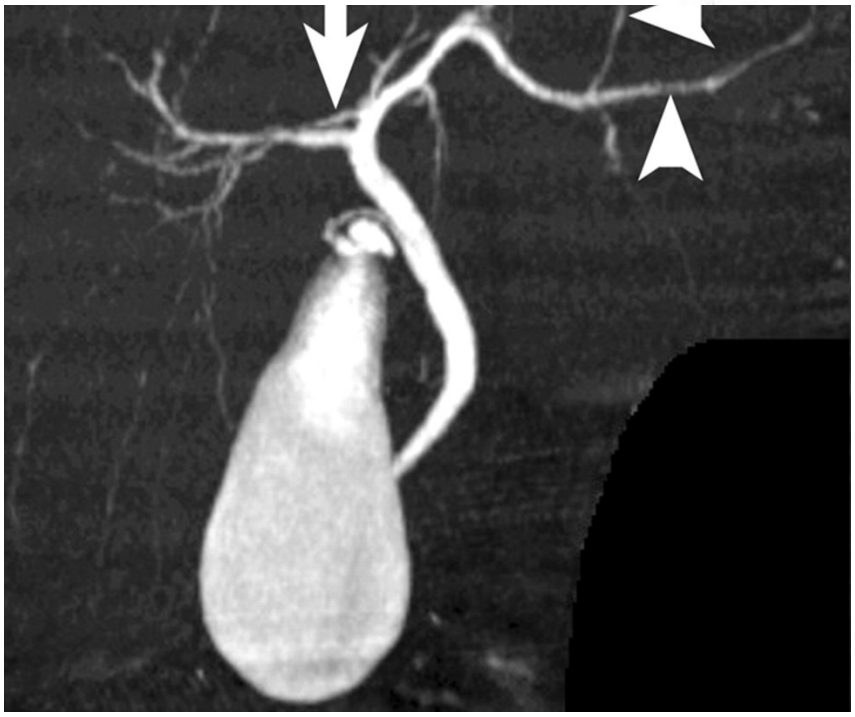


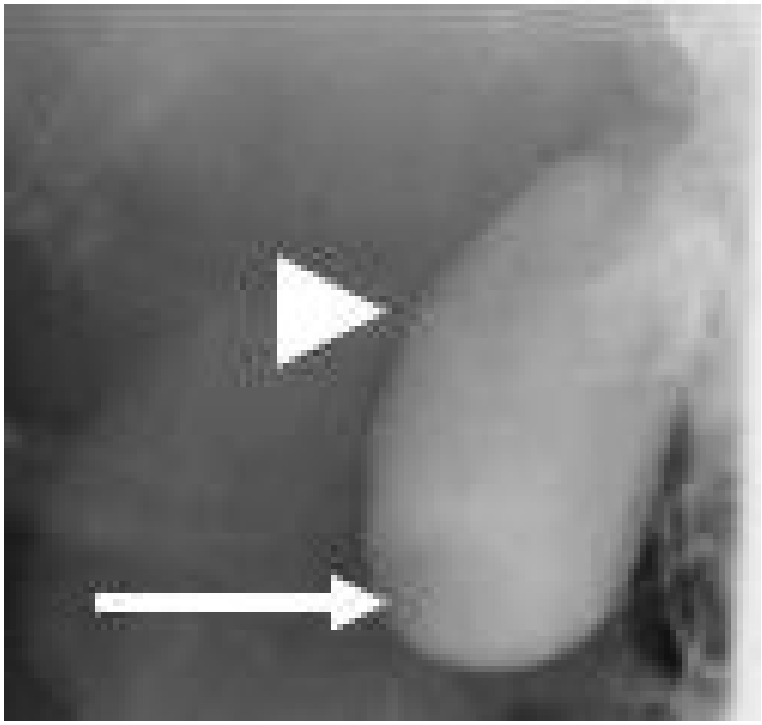


POINT OF DESJARDIN
(6 CM FROM NAVEL)

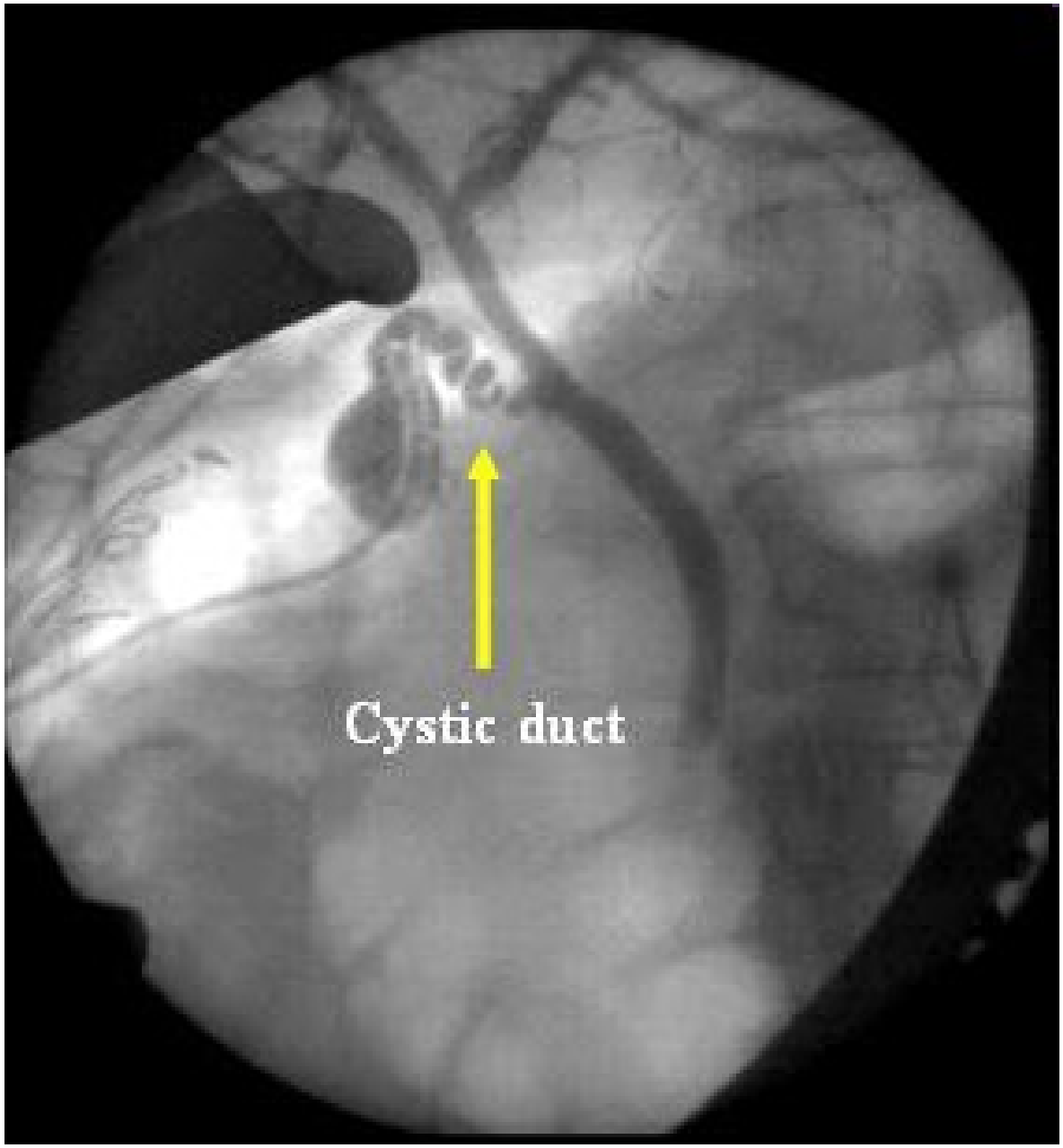
CHOLECYSTOGRPHY



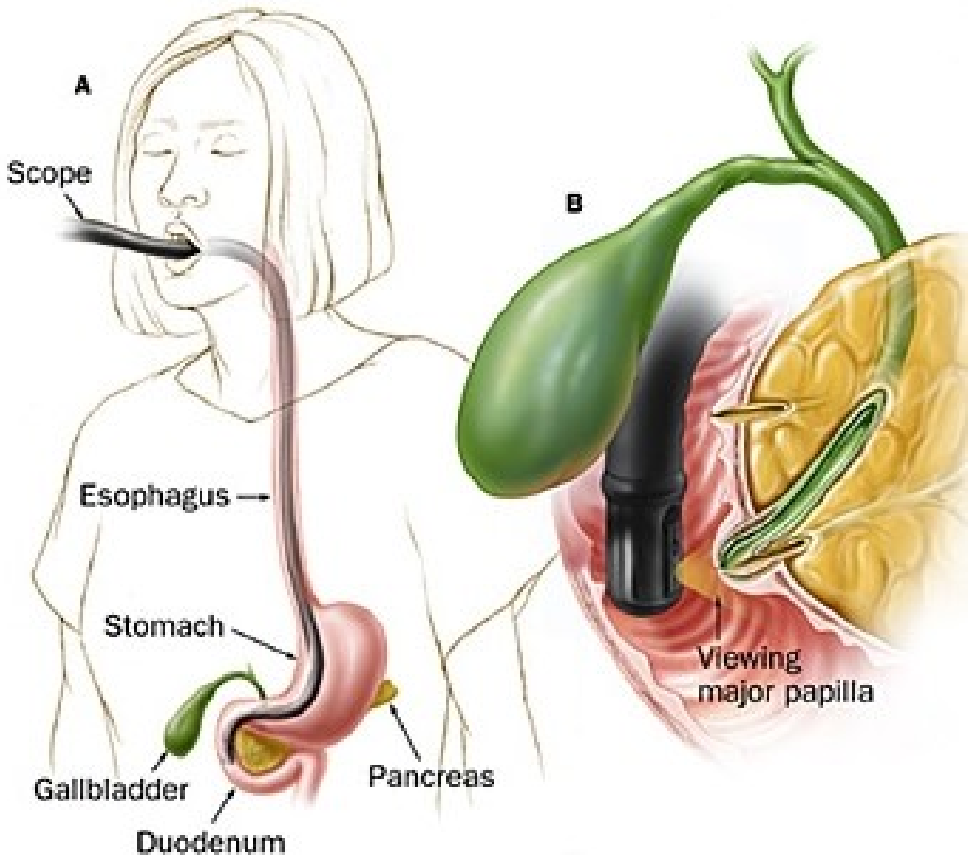


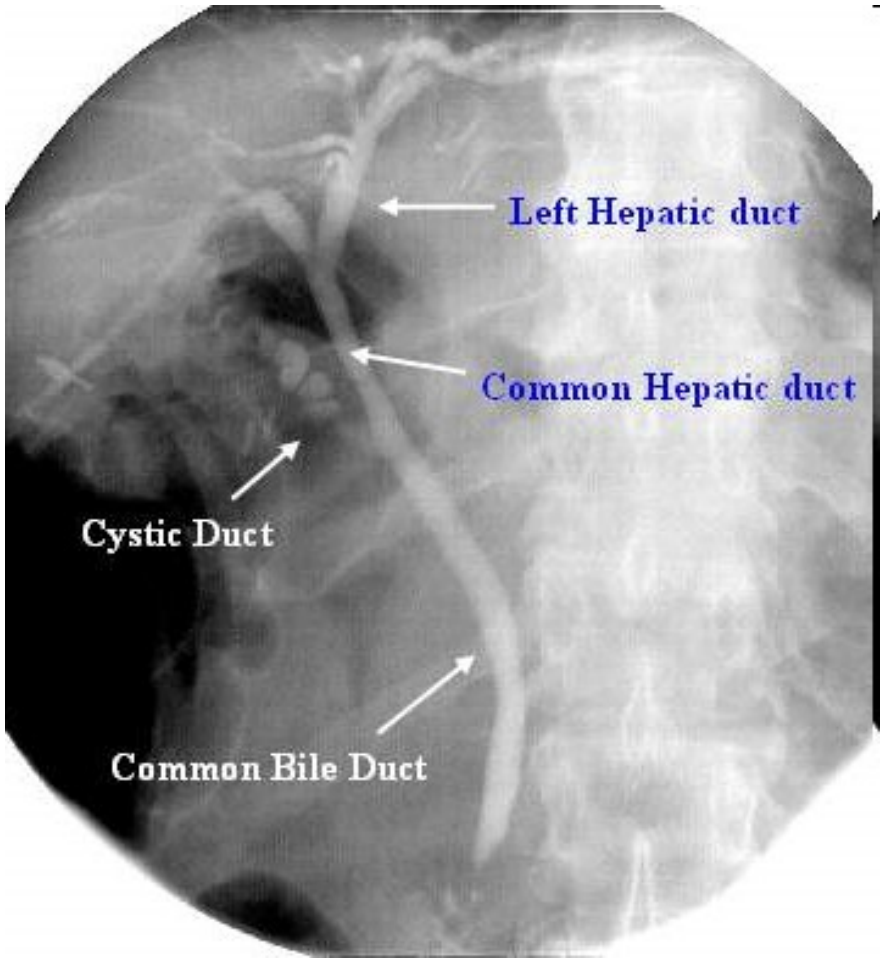


CHOLANGIOGRAPHY

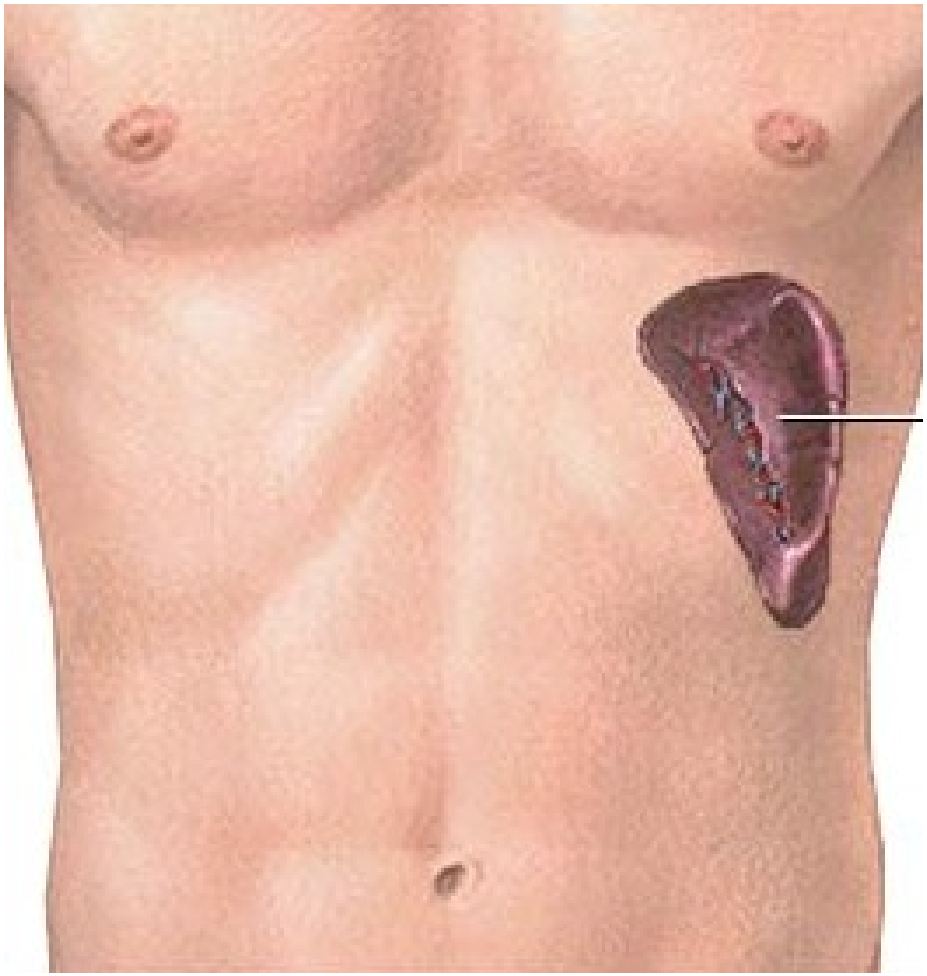


ERCP (endoscopic retrograde cholangiopancreaticography)





SPLEEN



Supramesocolic part of peritonel cavity

Storage of blood

Erythrocyte degradation

Production of lymphocytes

Hematopoesis (children)

LIEN (SPLEN)

extremitas anterior

extremitas posterior

facies diaphragmatica

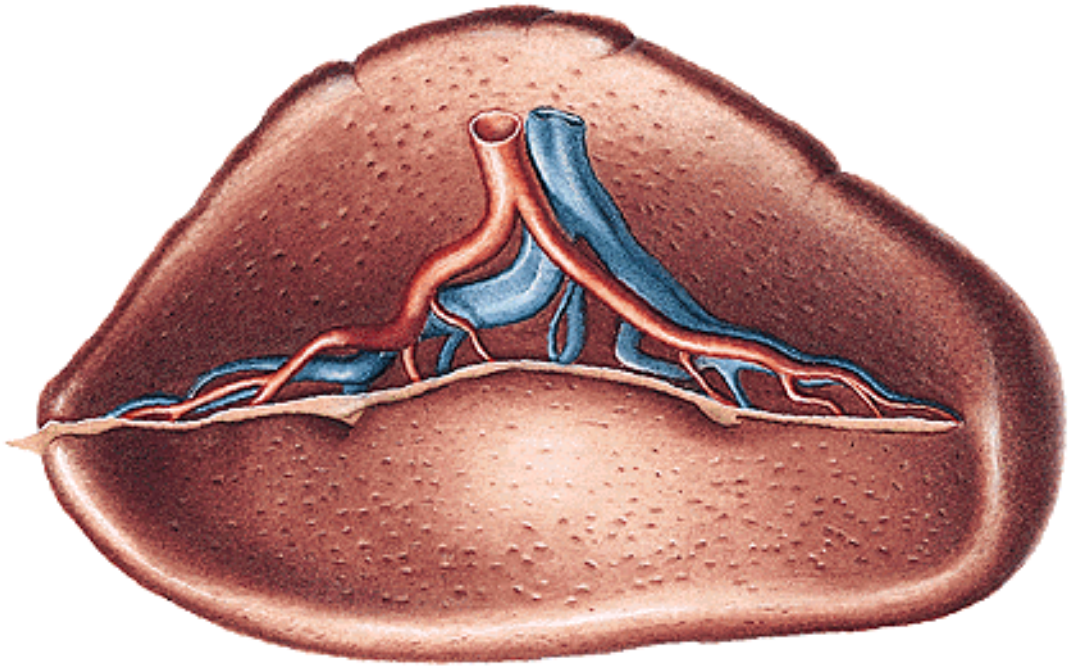
facies visceralis

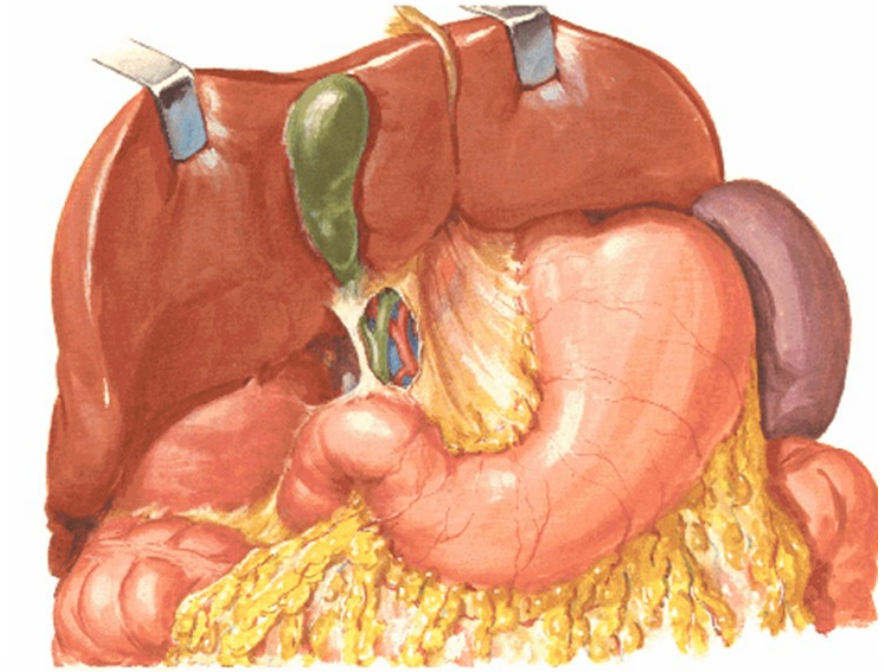
hilum lienis

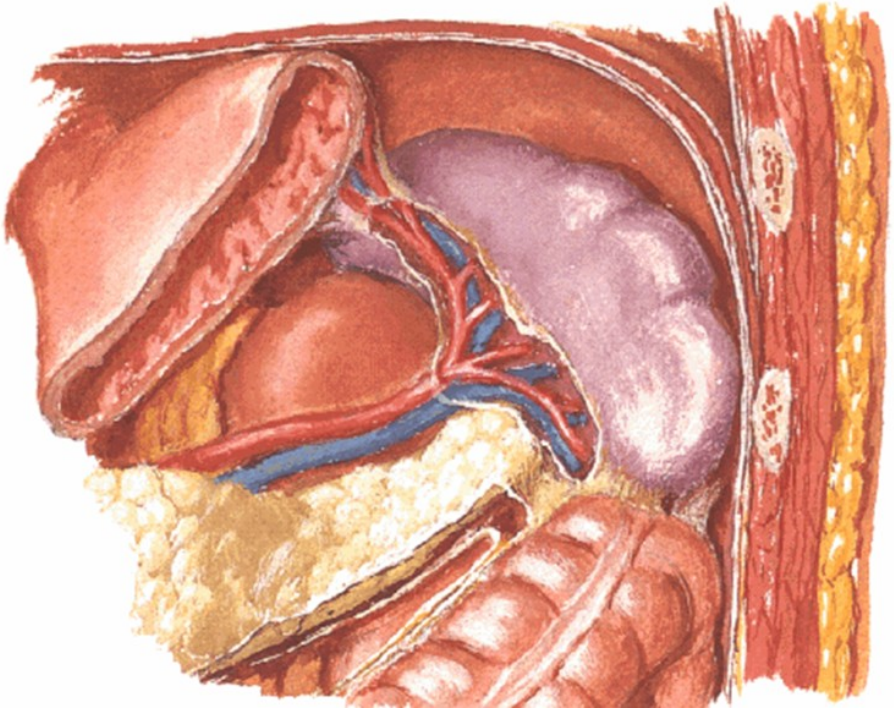
margo superior (acutus)

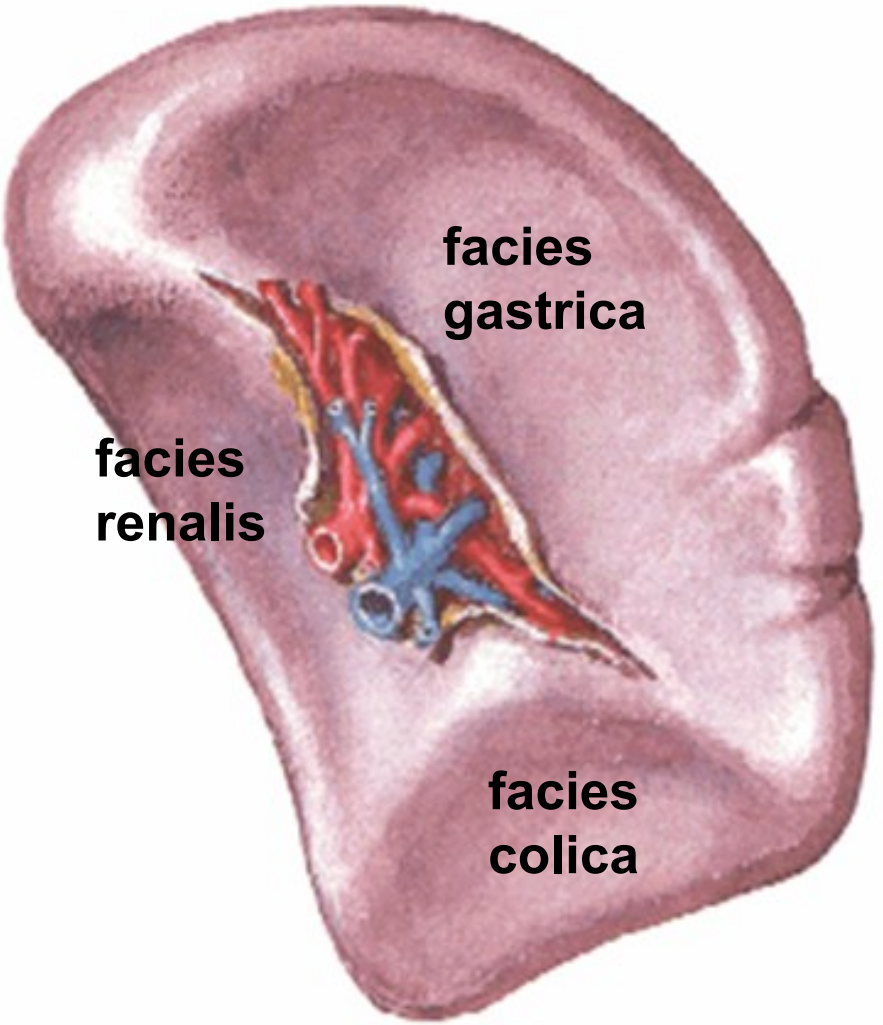
crenae lienis

margo inferior (obtusus)

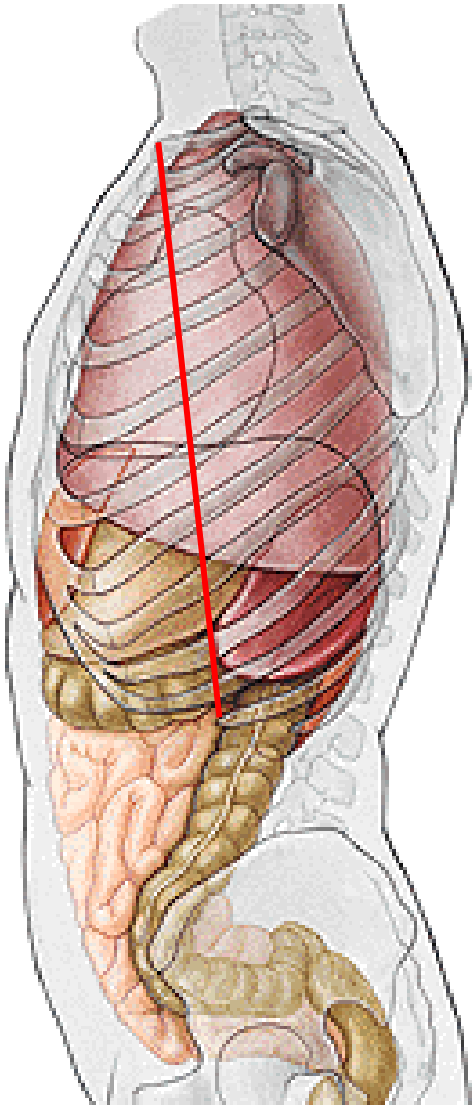


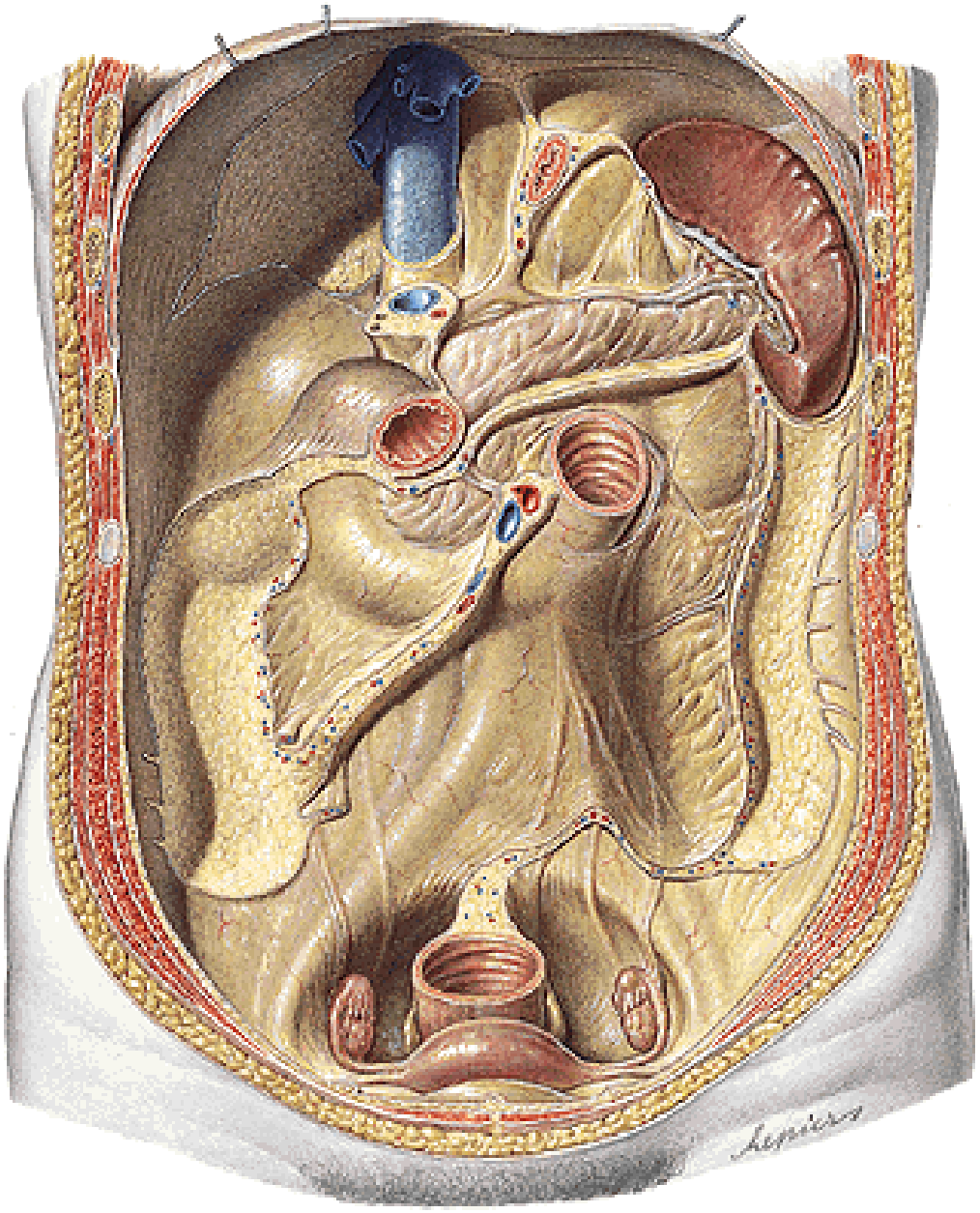





facies
gastrica
facies
renalis
facies
colica

Linea costoarticularis





PERITONEUM

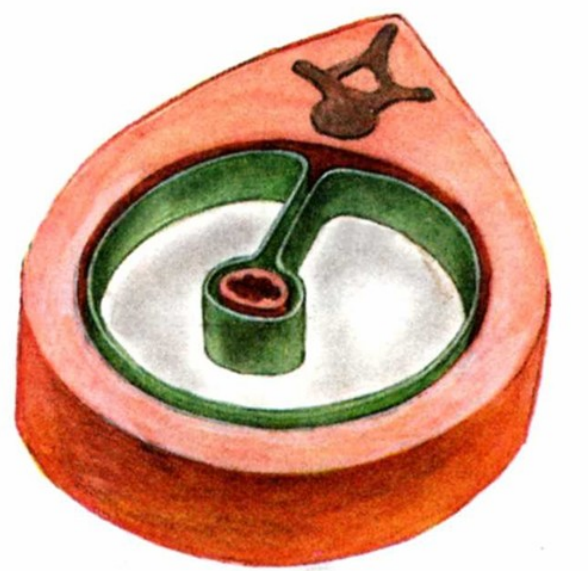
Peritoneum parietale et viscerale (mesenterium)

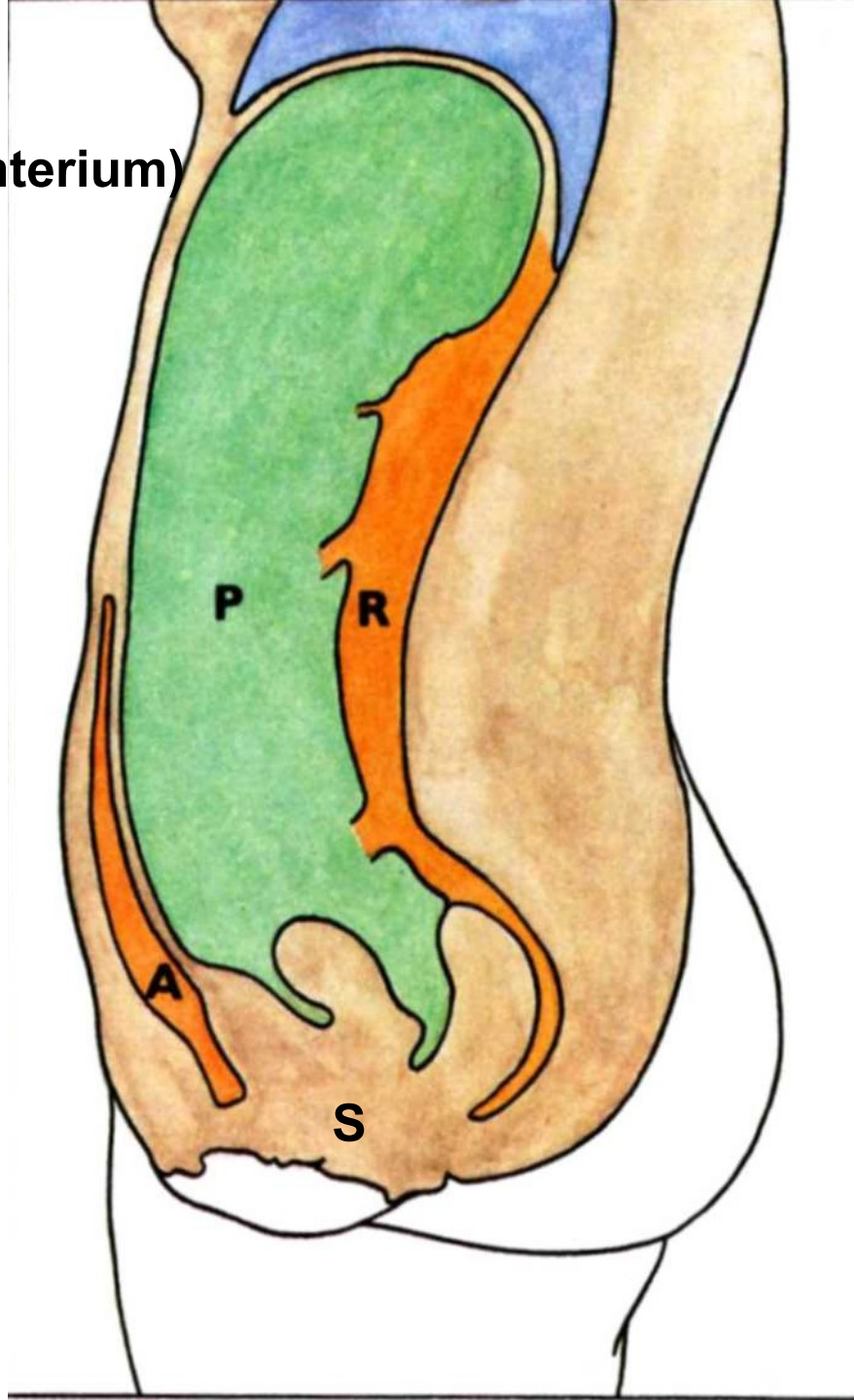
P – cavitas peritonealis (liguor peritonei)

A – spatium praeperitoneale

R – spatium retroperitoneale

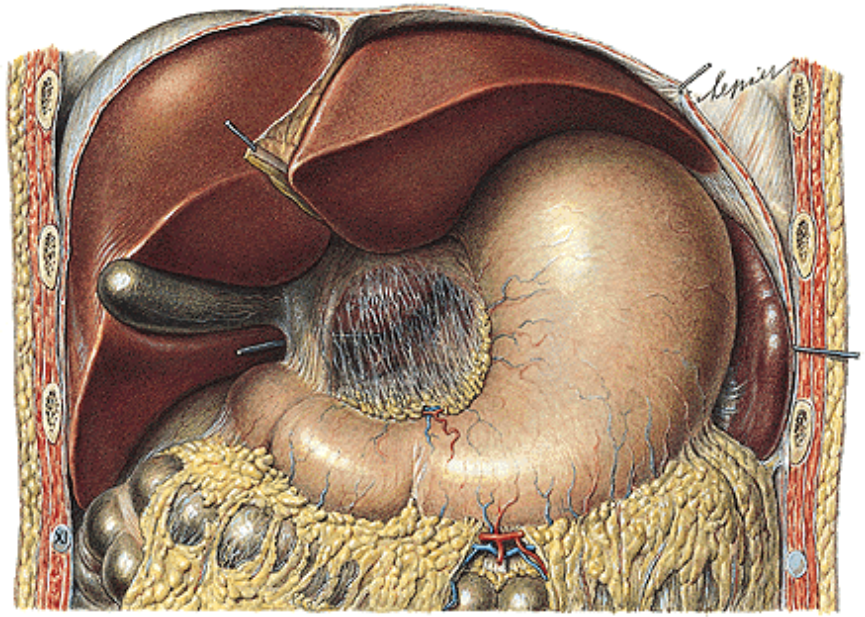
S – spatium subperitoneale (infra-)

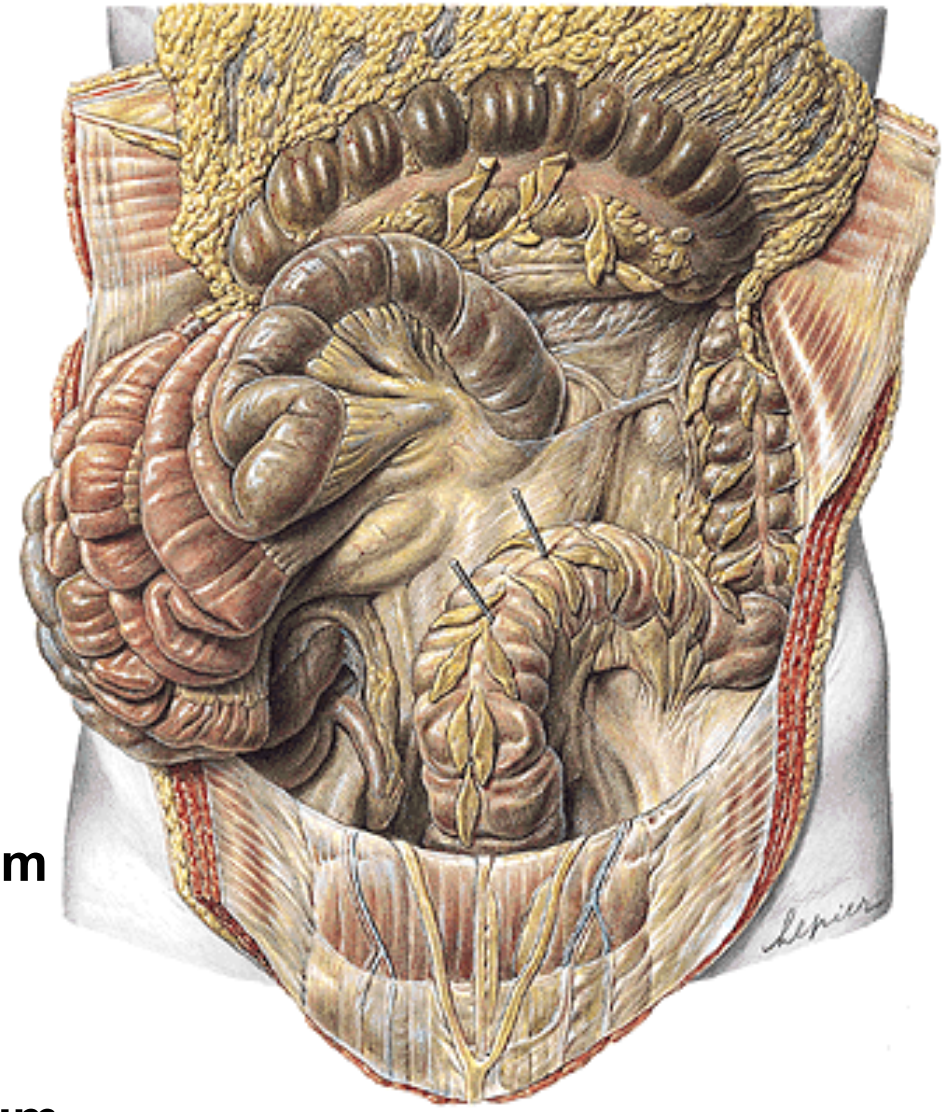




INTRAPERITONEAL ORGANS

Fixed on the folds





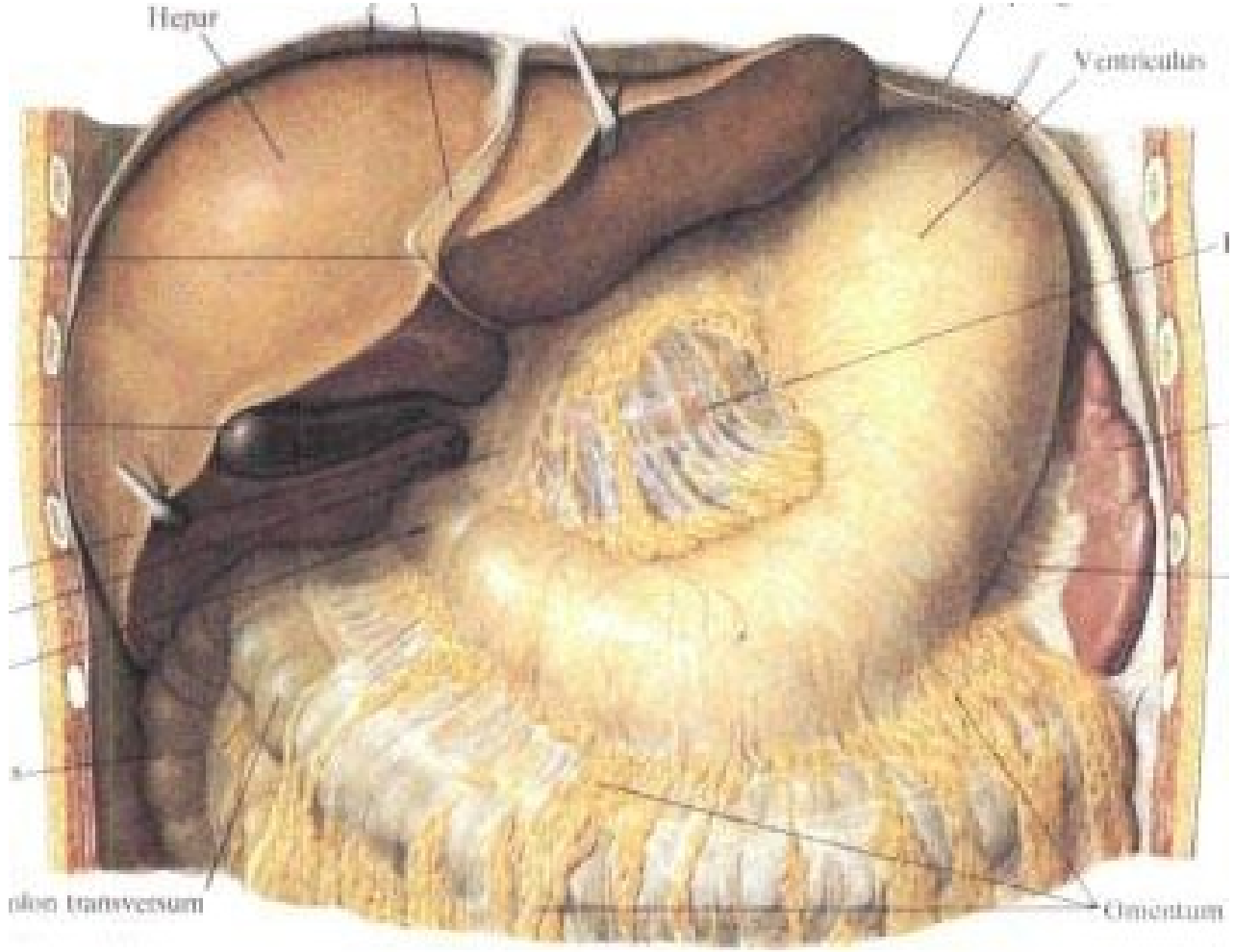
liver, spleen, stomach

pars superior duodeni, jejunum, ileum

appendix

colon transversum, colon sigmoideum

PERITONEAL FOLDS OF STOMACH



Omentum minus

lig. hepatoduodenale

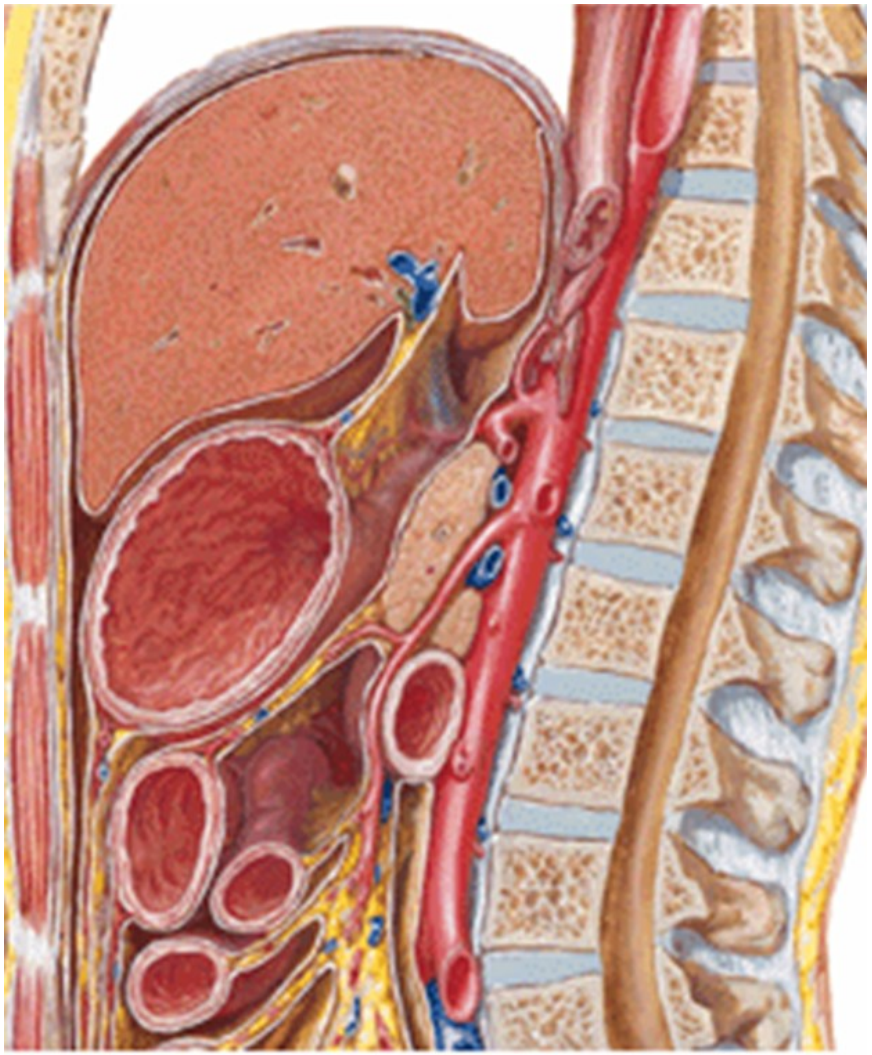
lig. hepatogastricum

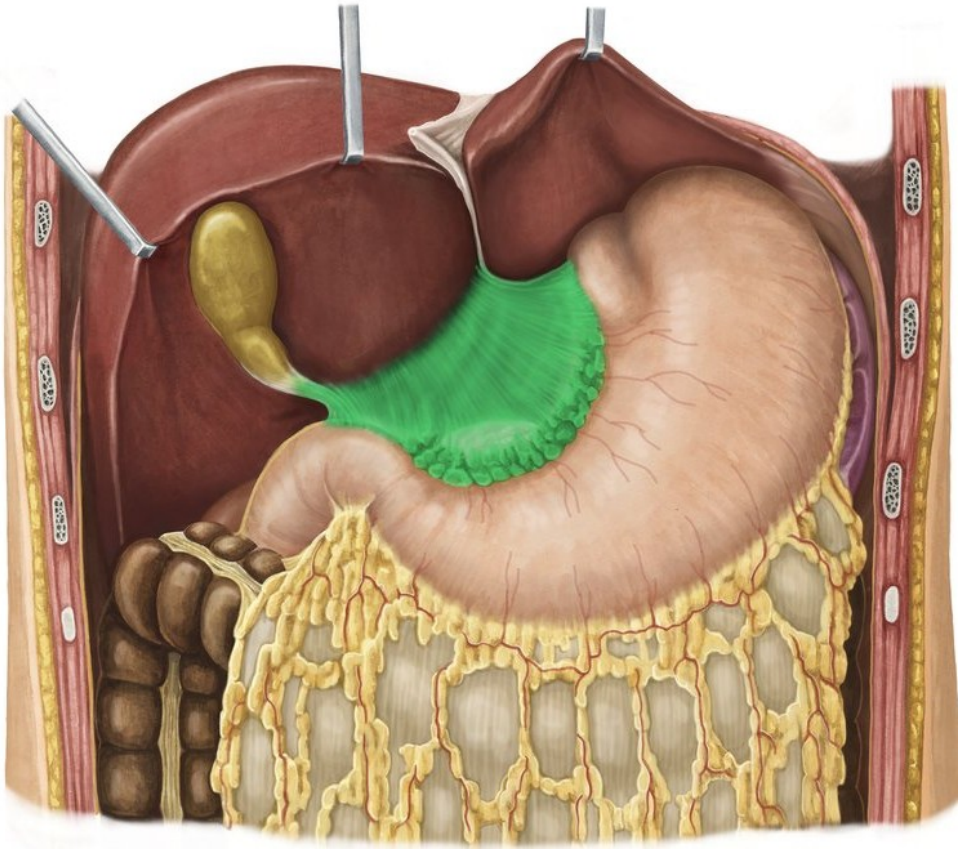
Lig. gastrolienale

Omentum majus

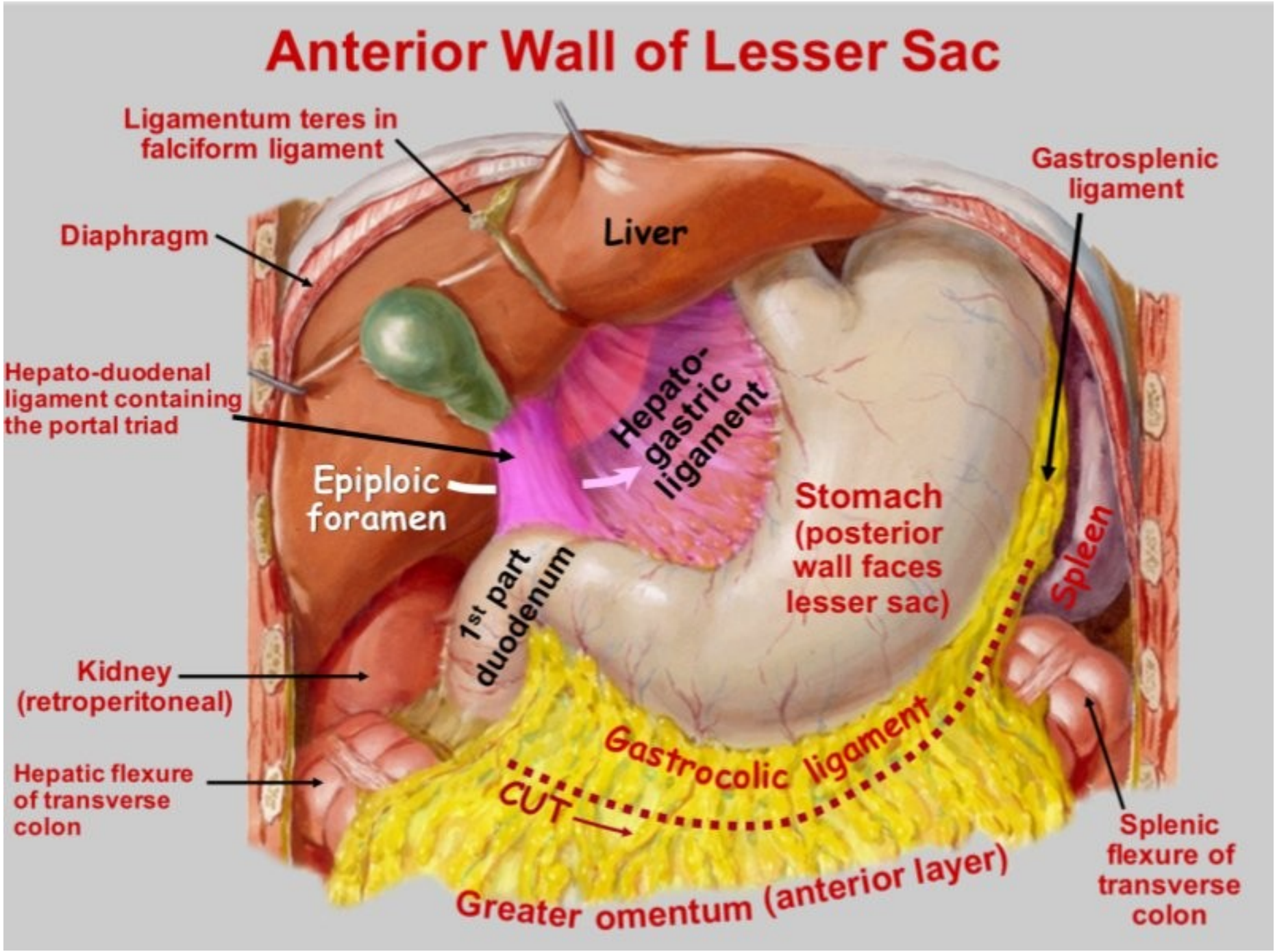
lig. gastrocolicum

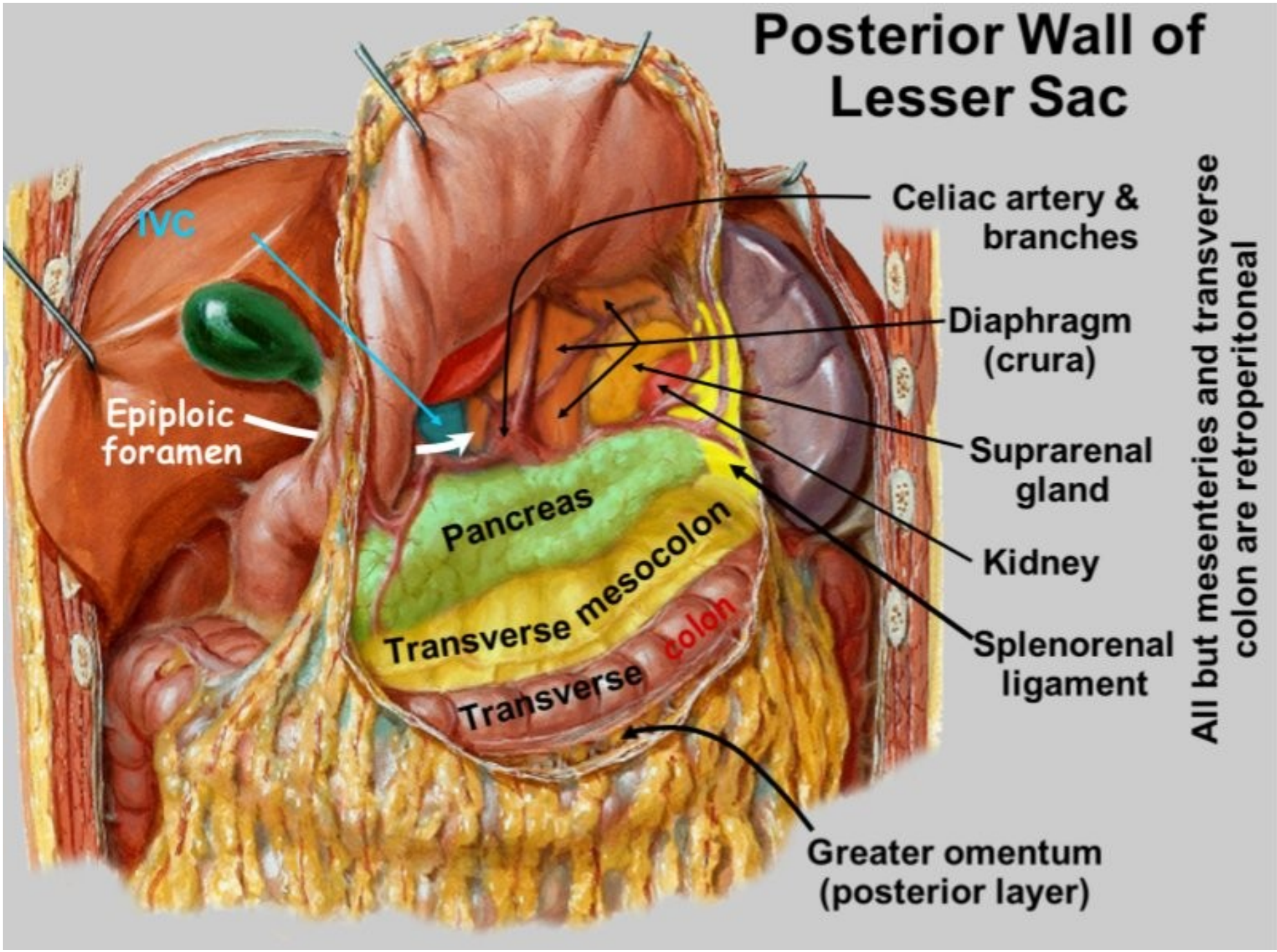
BURSA OMENTALIS



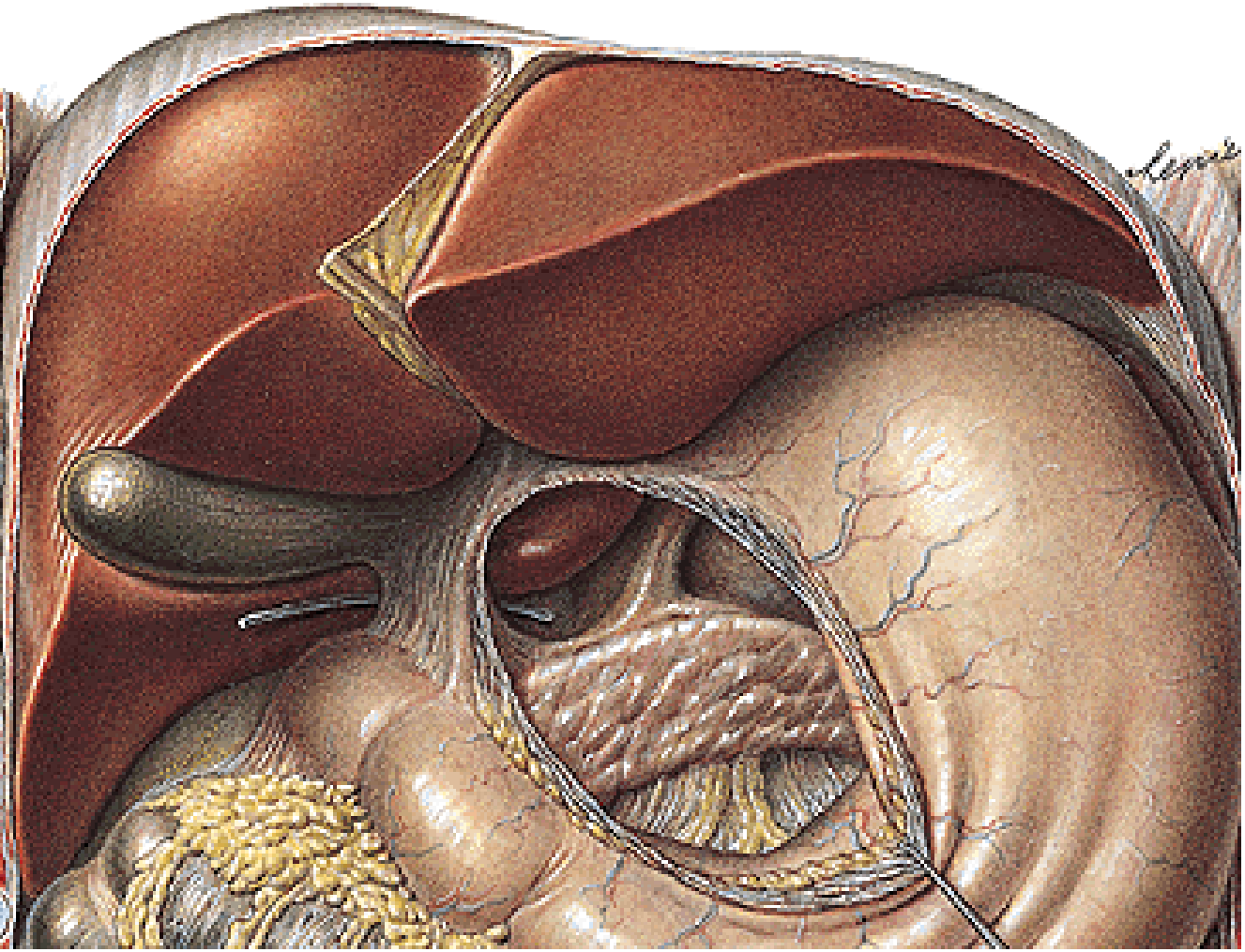


Anterior Wall of Lesser Sac




Posterior Wall of Lesser Sac
IVC
Epiploic foramen
Celiac artery & branches
Diaphragm (crura)
Suprarenal gland
Kidney
Splenorenal ligament
Pancreas
Transverse mesocolon
Transverse colon
Greater omentum (posterior layer)
All but mesenteries and transverse colon are retroperitoneal

FORAMEN EPIPLOICUM

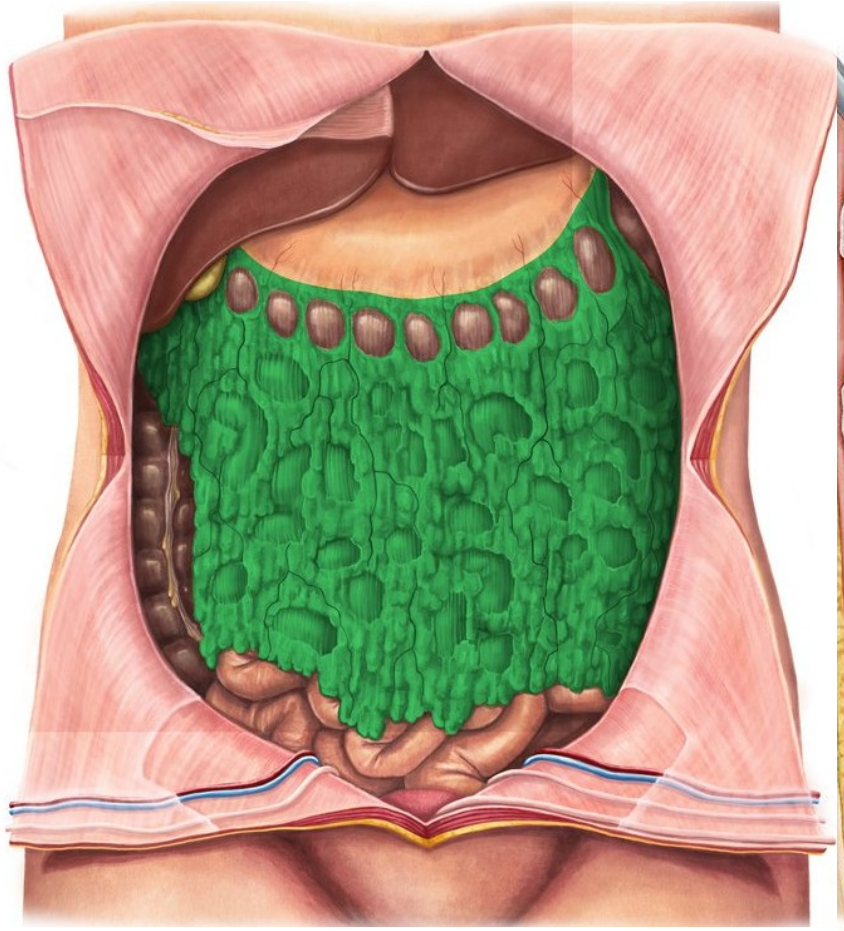


lig. hepatoduodenale

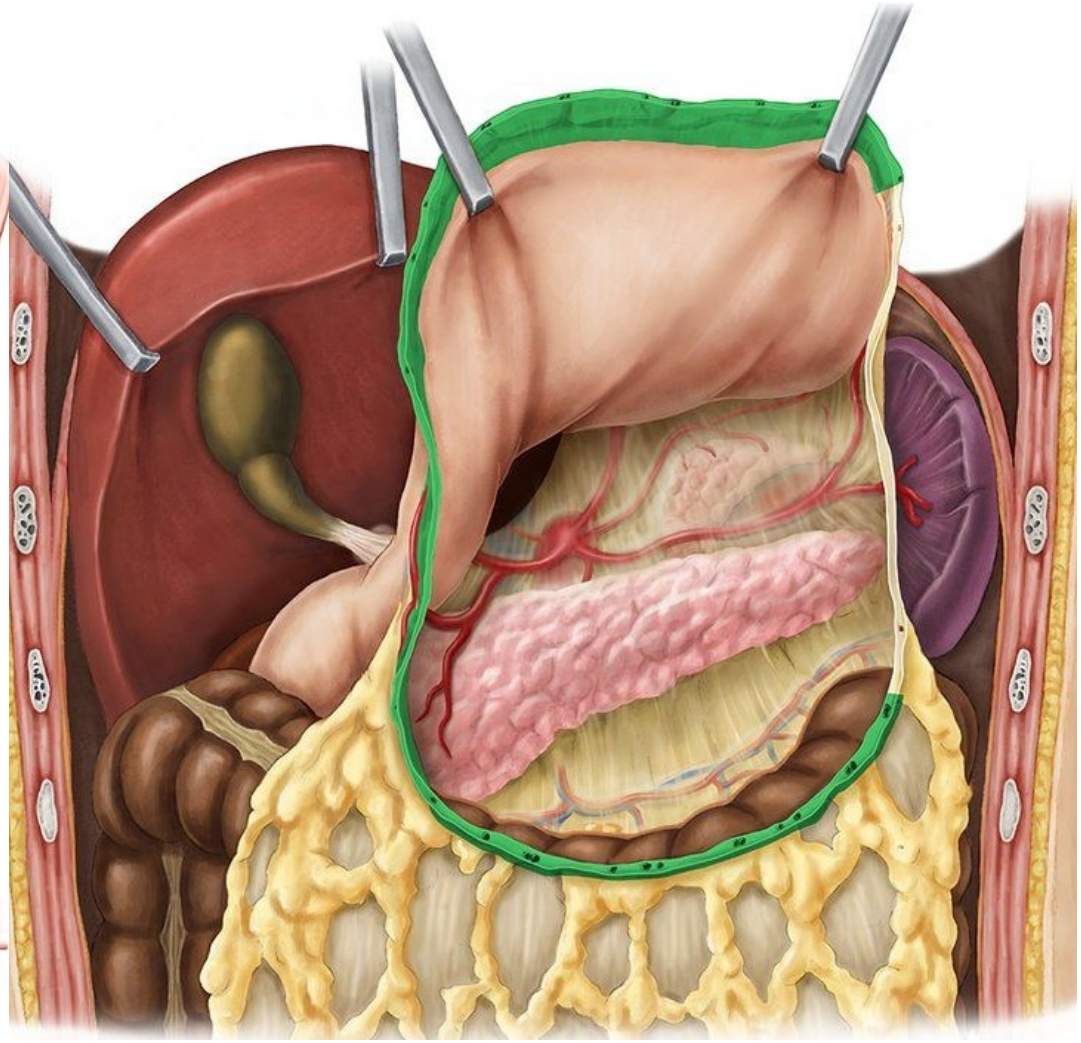
plica hepatorenalis

lobus caudatus hepatis

bulbus duodeni

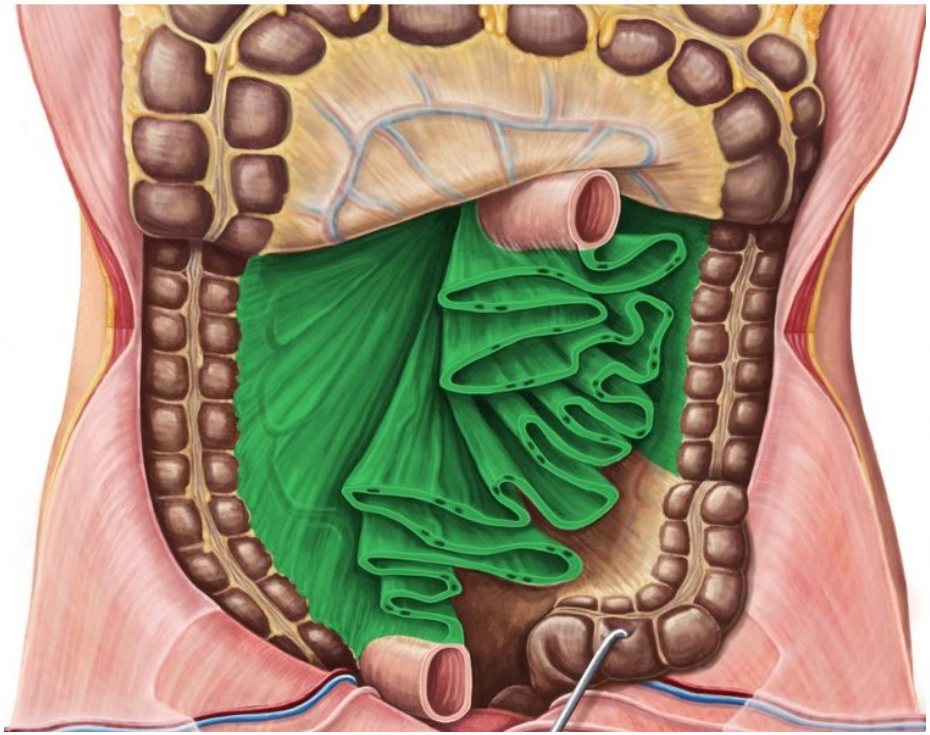


Omentum majus

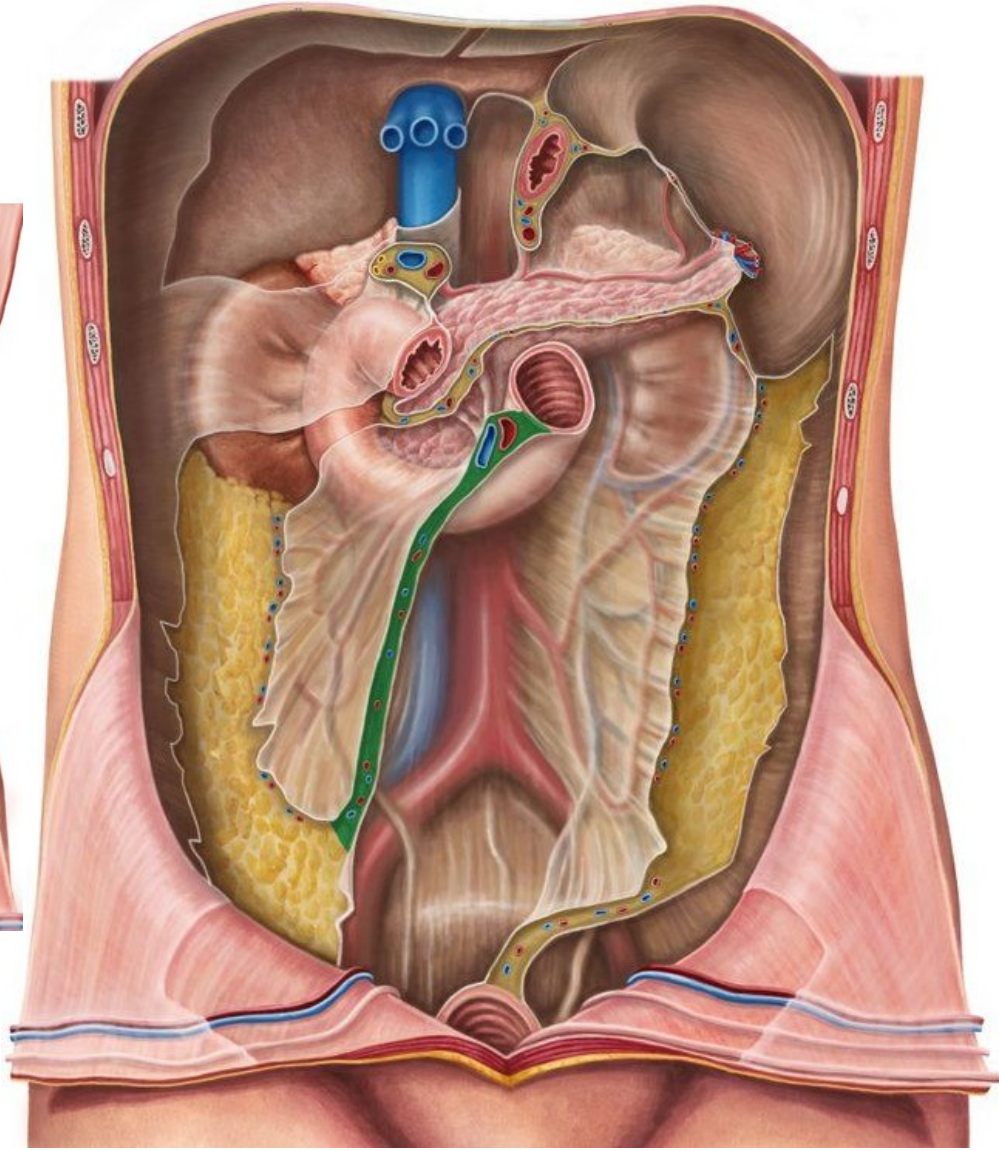


Lig. gastrocolicum

MESENTERIUM

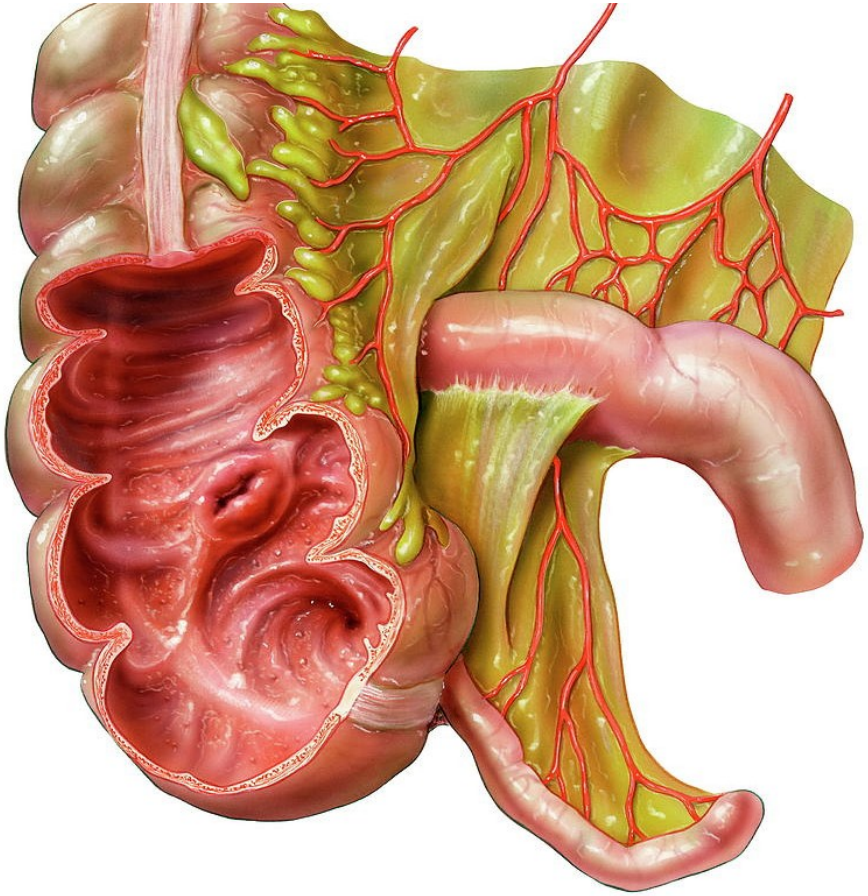


radix mesenterii

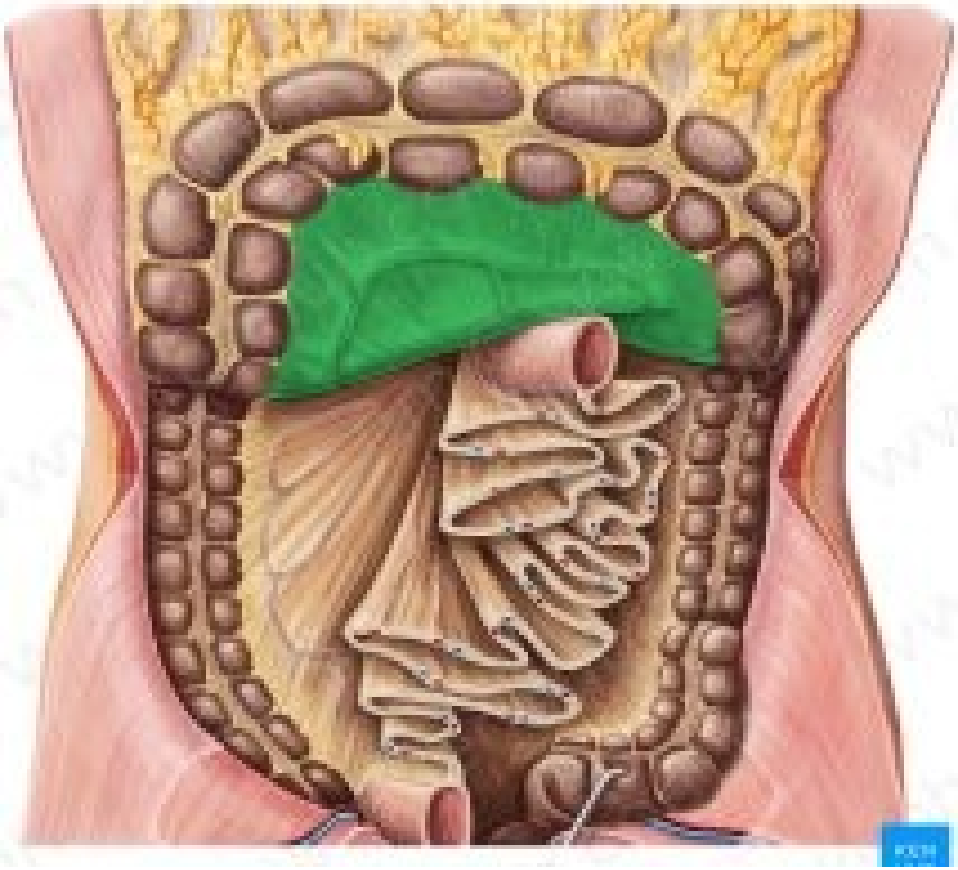


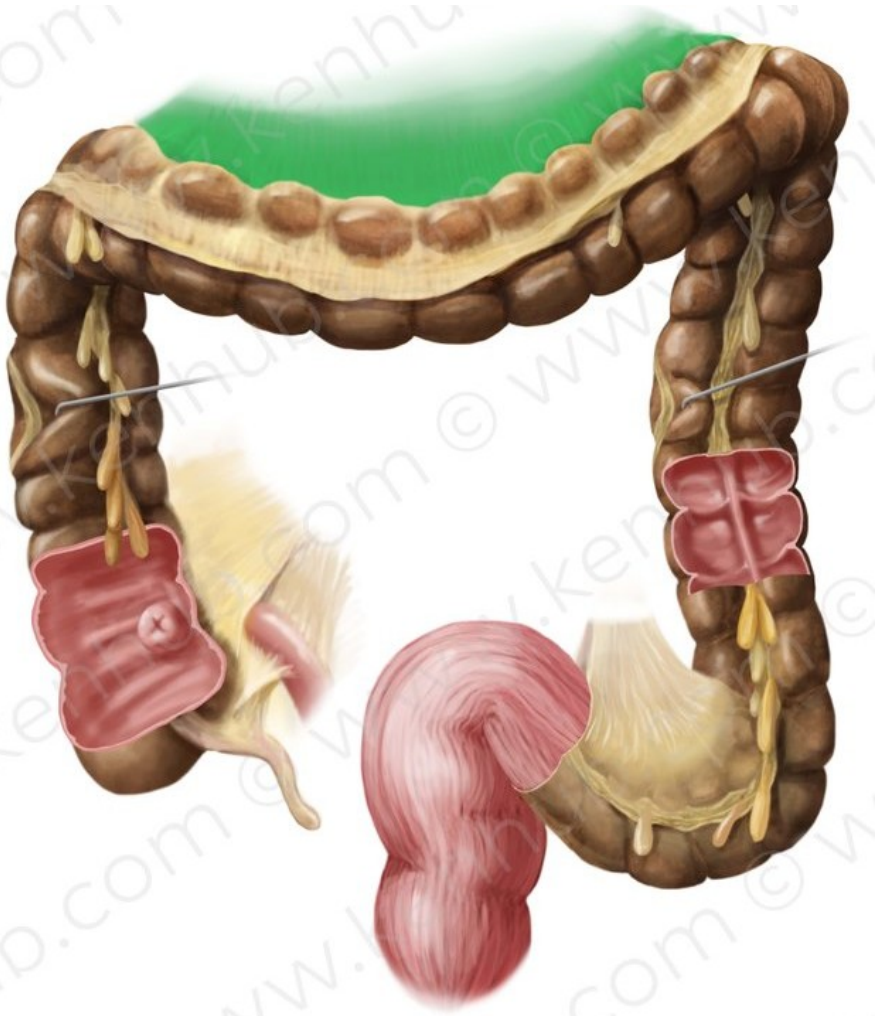
Pars inframesocolica dextra et sinistra

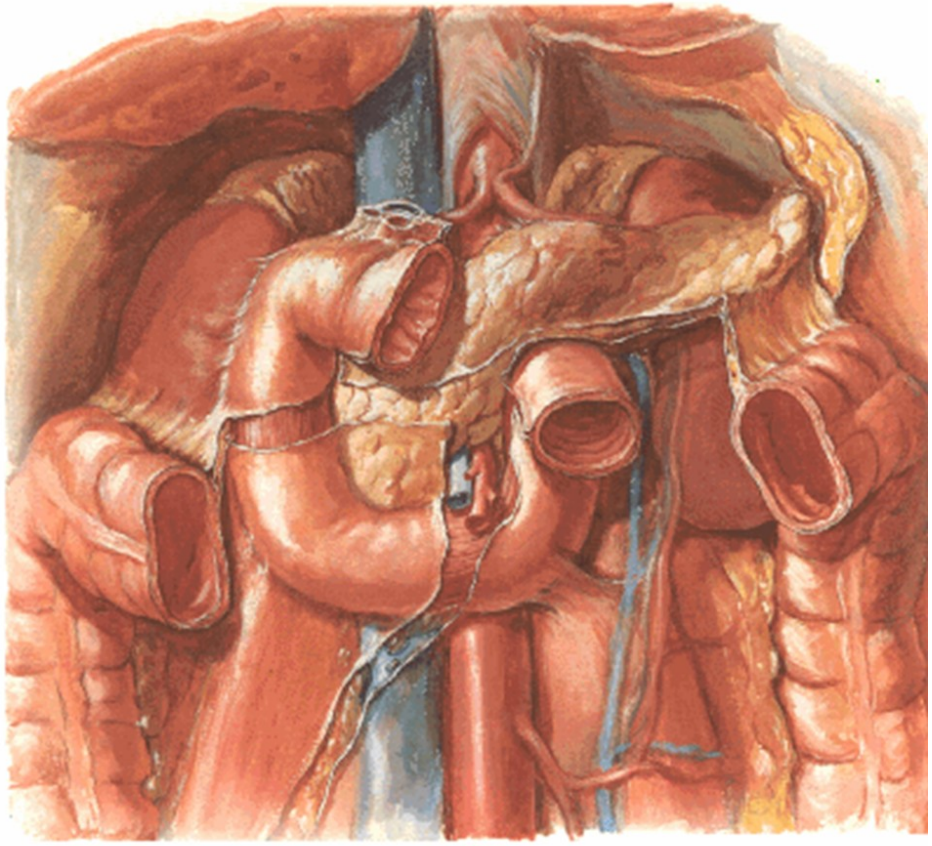
MESOAPPENDIX

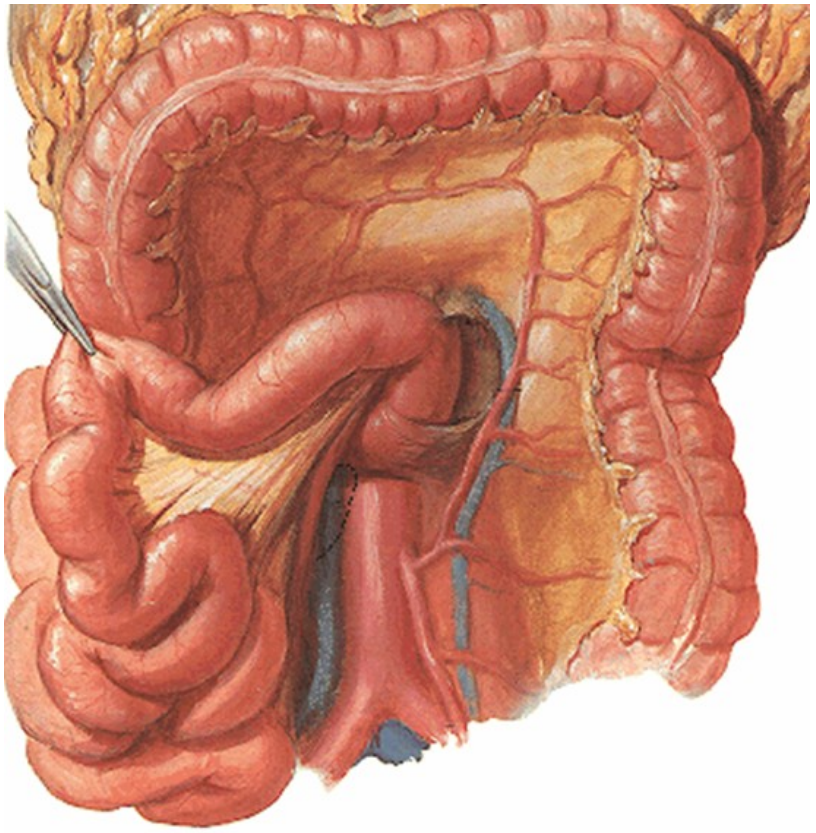


MESOCOLON TRANSVERSUM



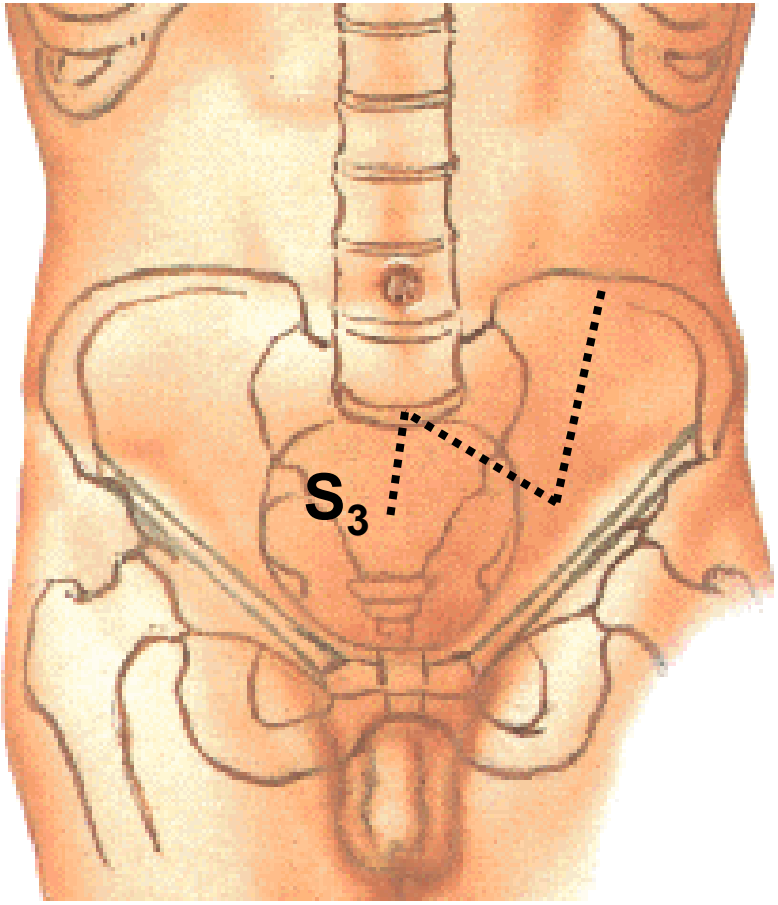






pars supramesocolica et inframesocolica

MESOSIGMOIDEUM



RETROPERITONEAL ORGANS

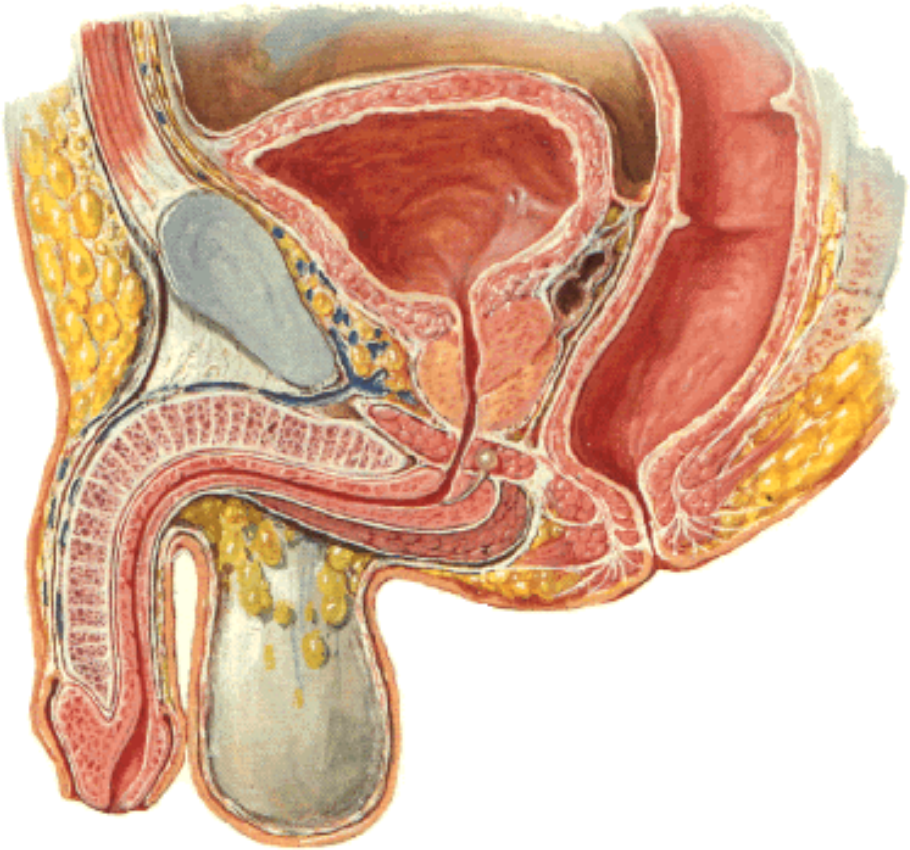
Primary retroperitoneal (kidney, suprarenal glands, genital glands)

Sekundary retroperitoneal:

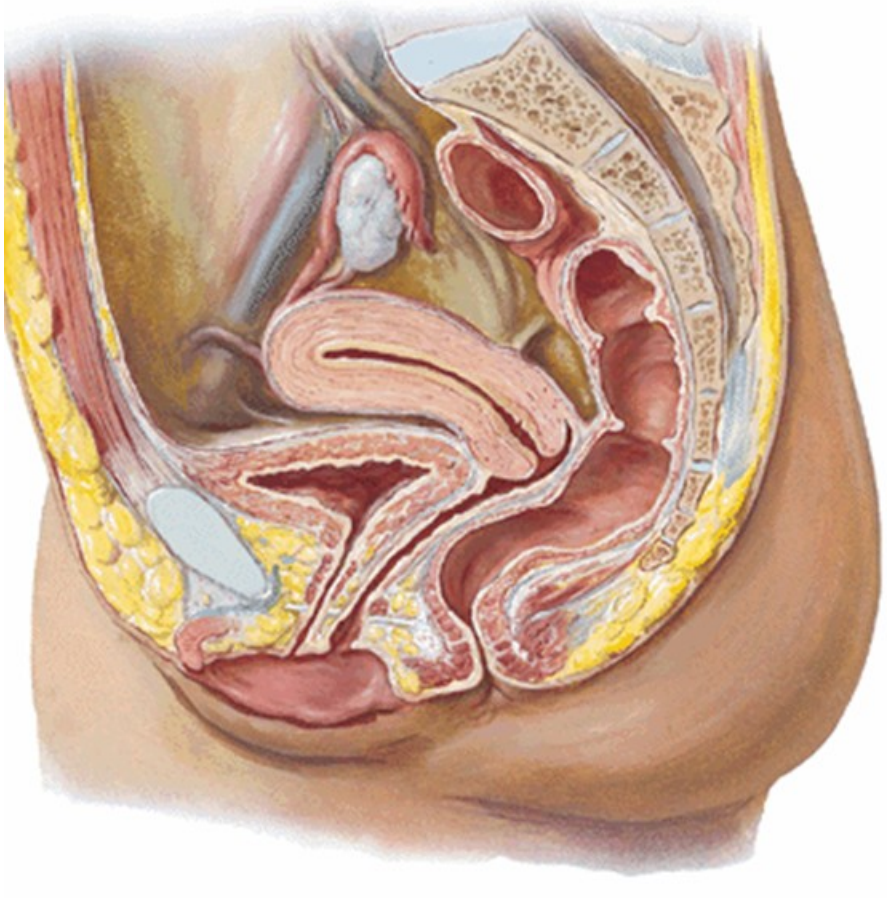
- **Duodenum (except pars sup.)**
- **Pancreas**
- **Caecum**
- **Colon ascendens**
- **Colon descendens**

SUBPERITONEAL ORGANS

Rectum



Excavatio rectovesicalis



Excavatio rectouterina

THANK YOU FOR YOUR ATTENTION!

What is not part of rectum :
:r1 anus
:r2 musculus sphincter ani internus
:r3 glandulae mucinosae
:r4 no answer is correct

Which structure is not found on the liver :
:r1 lobus caudatus
:r2 porta hepatis
:r3 cauda pancreatis
:r4 all statements are correct

Which structure does not belong to biliary ducts:
:r1 vesica fellea
:r2 chole
:r3 ductus choledochus
:r4 all statements are correct

Which structure does not end in the pars descendens duodeni:
:r1 ductus pancreaticus
:r2 ductus choledochus
:r3 ductus hepaticus dexter
:r4 no answer is correct

Choose the correct statement about intestinum crassum :
:r1 appendix vermiformis is long 20 cm
:r2 colon transversum is continuation of colon ascendens
:r3 colon sigmoideum is its longest part
:r4 no answer is correct

Which structure is not located behind peritoneum (extraperitoneally):
:r1 appendix
:r2 aorta
:r3 ureter
:r4 all statements are correct

Which structure is not part of stomach :
:r1 pars cardiaca
:r2 fundus
:r3 pars intestinalis
:r4 no answer is correct

The tunica muscularis of stomach is consist of:
:r1 one layer
:r2 two layers
:r3 three layers
:r4 no answer is correct

Papilla duodeni major:
:r1 exocrine part of pankreas terminates here
:r2 is in the pars descendens duodeni
:r3 bile ducts terminates here
:r4 all statements are correct

Ostium ileocaecale is:
:r1 part of rectum
:r2 contains a valve
:r3 the oppening of the appendix from caecum
:r4 no answer is correct

Parts of intestinum crassum are not :
:r1 haustra coli
:r2 appendices eppiploicae
:r3 plicae semilunares
:r4 no answer is correct