

Session 3: Cavities of the Head, Abdomen, & Pelvis

Part 1: Abdomen

1.1 Abdominal wall

Locate the structures of the abdominal wall and inguinal canal.

- Rectus abdominis m.
- External oblique m.
- Inguinal canal (location)
- Superficial inguinal ring

Describe the layers of the anterolateral abdominal wall. How is the inguinal ligament formed?

1.2 Inguinal Canal

Locate the structures of the abdominal wall and inguinal canal.

- Rectus abdominis m.
- Inferior epigastric a. & v.
- Transversalis fascia
- Deep inguinal ring
- Round ligament of the uterus (or spermatic cord)

Describe the movement of the spermatic cord or round ligament through the inguinal canal. How is the inguinal canal formed?

1.3 Abdominal Organs

Identify the organs in each quadrant of the abdominal cavity.

- Stomach
- Duodenum
- Liver
- Gallbladder
- Pancreas
- Spleen
- Jejunum
- Ileum
- Colon (cecum, ascending, transverse, descending, sigmoid)
- Rectum and anal canal
- Kidneys
- Ureters

List the primary organs in each of the four quadrants.

1.4 GI Organs

Identify the gastrointestinal organs.

- Oral cavity
- Pharynx
- Esophagus
- Stomach
- Small intestine
- Large intestine (colon)

Describe the movement of food from the oral cavity through the anal canal.

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Part 1: Abdomen

1.5 Celiac Trunk

Locate the arteries that supply the foregut.

- Celiac trunk

How does the arterial supply of the foregut anastomose with the midgut arterial supply? Which structures are part of the foregut?

1.6 Superior & Inferior Mesenteric aa.

Locate the arteries that supply the midgut and hindgut.

- Superior mesenteric a.
- Inferior mesenteric a.

How does the arterial supply of the midgut anastomose with the hindgut arterial supply? Which structures are part of the midgut and hindgut?

1.7 Biliary Tree

Locate the structures of the biliary tree.

- Common hepatic duct
- Cystic duct
- Common bile duct
- Major duodenal papilla
- Main pancreatic duct

Describe the flow of bile from the liver to the duodenum being sure to include the connection of the hepatic ductal system to the pancreatic ductal system.

1.8 Autonomics

Locate autonomic nerves that supply the foregut and midgut.

- Sympathetic trunk
- Sympathetic ganglion
- Thoracic splanchnic nn. (greater, lesser, least)
- Vagus n.

From which levels of the spinal cord do pre-ganglionic sympathetic neurons originate?

From which central nervous system structures do pre-ganglionic parasympathetic neurons originate?

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Part 2: Pelvis

2.1 Pelvic Organs

Locate the viscera of the pelvis and associated spaces.

- Bladder
- Uterus
- Vagina (anterior & posterior fornices)
- Rectum
- Vesicouterine pouch
- Rectouterine pouch
- Rectovesical pouch

Describe how the peritoneum drapes over the pelvic organs to form the various pouches.

2.2 Uterus

Locate the features of the uterus, uterine tube, and ovary.

- Uterus
- Uterine tube
- Ovary
- Ovarian a. & v. (suspensory ligament of ovary / IP ligament)
- Broad ligament
- Round ligament

What are the parts of the uterus and uterine tube?

2.3 Autonomics

Locate autonomic nerves that supply the hindgut and the pelvic structures.

- Sympathetic trunk
- Sympathetic ganglion
- Sacral splanchnic nerves
- Pelvic splanchnic nerves
- Pelvic pain line

Describe the sensory innervation of organs above and below the pelvic pain line.

2.4 Perineum

Locate the structures in the perineum.

- Glans (penis / clitoris)
- Crus (of penis / clitoris)
- Bulb of penis / Vestibular bulb
- Internal pudendal a.
- Pudendal n.

Describe the homologous structures.

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Part 3: Nasal & Oral Cavities

3.1 Osteology of Nasal Cavity

On a skull, locate the osteological features and spaces of the nasal cavity.

- Middle nasal concha
- Middle nasal meatus
- Inferior nasal concha
- Inferior nasal meatus
- Nasal septum

Describe the bones and cartilage that form the nasal septum and conchae.

3.4 Paranasal Sinuses

Locate or visualize the locations of the paranasal sinuses.

- Frontal sinus
- Ethmoidal air cells
- Sphenoid sinus
- Maxillary sinus

Describe the locations of the paranasal sinuses.

3.6 Hard Palate

On a skull, locate the osteological features of the hard palate.

- Maxilla
- Palatine bone
- Greater palatine foramen
- Lesser palatine foramen

From which nerve do the greater and lesser palatine nn. branch? From which artery do the aa. branch?

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Part 4: Ear

- Round window

4.1 Ear Model

Locate major structures on an ear model.

- Auricle (pinna)
- External acoustic meatus
- Auditory tube
- CN VIII: Vestibulocochlear n.

Identify the vestibulocochlear n. (CN VIII) and discuss its role in hearing and equilibrium.

4.2 Middle & Inner Ear

Using an ear model, identify the structures in the middle and inner ear.

- Ossicles
- Semicircular canals
- Cochlea
- CN VIII: Vestibulocochlear n.

Identify the external, middle, and inner divisions of the ear and discuss characteristics of each.

4.3 Middle Ear Walls

Using an ear model, identify the structures on the medial and lateral walls of the middle ear.

- Tympanic membrane
- Malleus
- Incus
- Stapes
- Oval window

4.4 Ossicles

Viewing isolated bones, differentiate the 3 ossicles.

- Malleus
- Incus
- Stapes

4.5 Tympanic Membrane

On a plastinated temporal bone section, identify the structures on the lateral wall of the middle ear.

- Tympanic membrane
- Malleus
- Incus
- Chorda tympani
- Opening to auditory tube

4.6 Cochlea & Semicircular Canals

On a plastinated temporal bone section, identify the structures on the structures of the inner ear.

- Semicircular canals
- Cochlea

Discuss inner ear structures involved in maintaining equilibrium