

Gross Anatomy Review

Winter Practical Exam

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List of Structures and Concepts

Thoracic Wall

Arteries / Veins

- ♦ Intercostal aa.
- ♦ Intercostal vv.
- ♦ Supreme intercostal a.
- ♦ Anterior intercostal aa.
- ♦ Posterior intercostal aa.
- ♦ Internal thoracic a.
- ♦ Superior epigastric a.
- ♦ Musculophrenic a.

Nerves

- ♦ Intercostal nn.
- ♦ Anterior cutaneous intercostal nn.
- ♦ Lateral cutaneous intercostal nn.

Muscles

- ♦ External intercostal mm.
- ♦ Internal intercostal mm.
- ♦ Innermost intercostal mm.
- ♦ Transversus thoracis m.

Bones / Cartilage

- ♦ Thoracic vertebrae (12)
- ♦ Manubrium
- ♦ Body of the rib cage
- ♦ Sternum
- ♦ Ribs (12)
- ♦ Xiphoid process
- ♦ Costal cartilages
- ♦ Intercostal cartilages

Membranes

- ♦ External intercostal membrane
- ♦ Internal intercostal membrane

Thoracic Cavity

Apertures / Cavities

- ♦ Thoracic cavity
- ♦ Thoracic wall
- ♦ Superior thoracic aperture
- ♦ Inferior thoracic aperture
- ♦ Thoracic inlet
- ♦ Thoracic outlet
- ♦ Abdominal cavity
- ♦ Pleural cavity
- ♦ Mediastinum

Pleura / Fascia

- ♦ Parietal pleura
 - Costal parietal pleura
 - Mediastinal parietal pleura
 - Diaphragmatic parietal pleura
 - Cervical parietal pleura
- ♦ Visceral pleura
- ♦ Endothoracic fascia

Structures / Vessels

- ♦ Diaphragm
- ♦ Pleural sacs
- ♦ Root of lung
- ♦ Internal thoracic a.

Pleura

Regions / Recesses

- ♦ Superior mediastinum
- ♦ Inferior mediastinum
- ♦ Pleural margins
- ♦ Bare area of the pericardium
- ♦ Costodiaphragmatic recess
- ♦ Costomediastinal recess
- ♦ Sternal angle (TV4 / TV5)

Pleura / Fascia

- ♦ Visceral pleura
- ♦ Cupola / Cervical pleura
- ♦ Pericardium
- ♦ Serous pericardium
- ♦ Visceral portion of the serous pericardium
- ♦ Fibrous pericardium
- ♦ Parietal pericardium
- ♦ Deep fascia of the neck

Structures

- ♦ Pulmonary ligament
- ♦ Heart
- ♦ Trachea
- ♦ Esophagus
- ♦ Conus arteriosus

Vessels / Nerves

- ♦ Arch of the aorta
- ♦ Descending aorta
- ♦ Subclavian a.
- ♦ Superior vena cava
- ♦ Right brachiocephalic v.
- ♦ Arch of the azygos v.

- ♦ Azygos v.
 - Hemiazygos v.
 - Accessory hemiazygos v.
- ♦ Right phrenic n.
- ♦ Left phrenic n.

Mediastinum

Regions

- ♦ Superior mediastinum
- ♦ Inferior mediastinum
 - Anterior mediastinum
 - Middle mediastinum
 - Posterior mediastinum

Structures

- ♦ Thymus gland
- ♦ Right bronchus
- ♦ Left bronchus
- ♦ Ligamentum arteriosum
- ♦ Ductus arteriosus
- ♦ Anterior scalene m.

Arteries / Veins

- ♦ Pulmonary trunk
- ♦ Ascending aorta
- ♦ Arch of aorta
 - Brachiocephalic a.
 - Right subclavian a.
 - Right common carotid a.
 - Left common carotid a.
 - Left subclavian a.
- ♦ Lowest thyroid a.
- ♦ Descending aorta
- ♦ Thoracic aorta
- ♦ Pericardiophrenic aa.
- ♦ Superior vena cava
- ♦ Right brachiocephalic v.
 - Right internal jugular v.
 - Right subclavian v.
- ♦ Left brachiocephalic v.
 - Left internal jugular v.
 - Left subclavian v.
- ♦ Internal thoracic v.
- ♦ Inferior thyroid v.
- ♦ Right superior intercostal v.
- ♦ Left superior intercostal v.
- ♦ Azygos v.

Nerves

- ♦ Right phrenic n.
- ♦ Left phrenic n.
- ♦ Superior cervical cardiac branch
- ♦ Inferior cervical cardiac branch

- ♦ Right sympathetic trunk
- ♦ Left sympathetic trunk
- ♦ Right vagus n.
 - Recurrent laryngeal nn.
- ♦ Left vagus n.
 - Recurrent laryngeal nn.
- ♦ Cardiac plexus
 - Superficial cardiac plexus
 - Deep cardiac plexus
- ♦ Coronary plexus
- ♦ Pulmonary plexus

Pericardium

Pericardium / Regions

- ♦ Pericardial cavity
- ♦ Parietal pericardium
- ♦ Visceral pericardium
- ♦ Transverse sinus
- ♦ Oblique sinus
- ♦ Arterial reflection of pericardium
- ♦ Venous reflection of pericardium
- ♦ Dorsal mesocardium

Heart

Surfaces / Regions

- ♦ Sternocostal surface of heart
- ♦ Diaphragmatic surface of heart
- ♦ Right lateral surface of heart
- ♦ Acute margin of heart
- ♦ Obtuse margin of heart
- ♦ Base of heart
- ♦ Transverse sinus
- ♦ Oblique sinus
- ♦ Right aortic sinus
- ♦ Left aortic sinus
- ♦ Posterior sinus

Pericardium

- ♦ Epicardium
- ♦ Myocardium
- ♦ Endocardium

Structures

- ♦ Epicardial fat
- ♦ Right auricle
- ♦ Right atrium
- ♦ Right ventricle
- ♦ Left auricle
- ♦ Left atrium
- ♦ Left ventricle
- ♦ Coronary sulcus

- ♦ Anterior interventricular sulcus
- ♦ Posterior interventricular sulcus
- ♦ Sinus venarum
- ♦ Crista terminalis
- ♦ Musculi pectinati
- ♦ Right atrioventricular orifice
- ♦ Interatrial septum
- ♦ Fossa ovalis
- ♦ Foramen ovale
- ♦ Limbus fossae ovalis
- ♦ Pericardial reflection
- ♦ Interventricular septum
- ♦ Trabeculae carneae
- ♦ Anulus fibrosus
- ♦ Tricuspid valve
 - Anterior cusp
 - Posterior cusp
 - Septal cusp
- ♦ Chordae tendineae
- ♦ Papillary mm.
- ♦ Nodule
- ♦ Atrial septum
- ♦ Aortic vestibule
- ♦ Bicuspid valve / Mitral valve
 - Anterior cusp
 - Posterior cusp
- ♦ Semilunar valve
- ♦ Pulmonary valve
- ♦ Atrioventricular bundle
- ♦ False chordae tendineae
- ♦ Sinoatrial node
- ♦ Bundle of His
- ♦ Purkinje fibers

Arteries / Veins

- ♦ Right coronary a.
 - Posterior interventricular a.
 - Right marginal a.
- ♦ Left coronary a.
 - Circumflex a.
 - Anterior interventricular a.
 - Left marginal a.
- ♦ Cardiac vv.
- ♦ Coronary sinus
 - Great cardiac v.
 - Middle cardiac v.
 - Small cardiac v.
 - Anterior cardiac vv.
 - Oblique v.
 - Left common cardinal v.
- ♦ Venae cordis minimae

Trachea, Bronchi, and Lungs

Regions of the Lungs

- ♦ Eparterial bronchus
- ♦ Hyparterial bronchi
- ♦ Principal bronchi
- ♦ Secondary (lobar) branches
- ♦ Tertiary (segmental) bronchi
- ♦ Bronchopulmonary segment
- ♦ Costal surface of lung
- ♦ Mediastinal surface of lung
- ♦ Diaphragmatic surface of lung
- ♦ Anterior border of lung
- ♦ Cardiac notch of left lung
- ♦ Interlobar fissures
- ♦ Oblique fissure
- ♦ Horizontal fissure
- ♦ Hilum of lung
- ♦ Root of lung

Structures

- ♦ Lingula of lung
- ♦ Trachea
- ♦ Carina

Lymphatics

- ♦ Bronchial lymph nodes
- ♦ Tracheal lymph nodes

Posterior Mediastinum

Structures

- ♦ Esophagus
- ♦ Esophageal hiatus of diaphragm
- ♦ Aortic hiatus of diaphragm
- ♦ Caval hiatus of diaphragm
- ♦ Intercostal space
- ♦ Thoracic duct

Arteries / Veins

- ♦ Bronchial aa.
- ♦ Esophageal aa.
- ♦ Mediastinal aa.
- ♦ Posterior intercostals aa.
- ♦ Subcostal aa.
- ♦ Azygos v.
- ♦ Hemiazygos v.
- ♦ Accessory hemiazygos v.
- ♦ Ascending lumbar vv.

Nerves

- ♦ Esophageal plexus
- ♦ Sympathetic trunk

- ♦ Stellate ganglion
- ♦ Greater splanchnic n.
- ♦ Lesser splanchnic n.
- ♦ Least splanchnic n.
- ♦ Gray rami communicantes
- ♦ White rami communicantes
- ♦ Thoracic ganglia
- ♦ Intercostal nn.

Abdominal Wall

Regions

- ♦ Hypochondriac region
- ♦ Epigastric region
- ♦ Umbilical region
- ♦ Inguinal region
- ♦ Pubic region
- ♦ Subcostal plane
- ♦ Intertubercular plane
- ♦ Infrasternal angle

Bones

- ♦ Ribs
- ♦ Coxal bones
- ♦ Costal arch
- ♦ Xiphoid process
- ♦ Sternum
- ♦ Anterior superior iliac spine
- ♦ Pubic symphysis
- ♦ Pubic tubercle
- ♦ Iliac crest
- ♦ Pecten of pubis

Structures

- ♦ Inguinal ligament
- ♦ Umbilicus
- ♦ Linea semilunaris
- ♦ Superficial inguinal ring
- ♦ Spermatic cord
- ♦ Round ligament
- ♦ Linea alba
- ♦ Linea semilunaris
- ♦ Inguinal canal
- ♦ Arcuate line
- ♦ Testis
- ♦ Lacunar ligament
- ♦ Falx inguinalis
- ♦ Conjoint tendon
- ♦ Deep inguinal ring

Fascia

- ♦ Aponeurosis of the external abdominal oblique m.
- ♦ Sheath of the rectus abdominis m.

- ♦ Camper's fascia
- ♦ Scarpa's fascia
- ♦ Transversalis fascia
- ♦ External oblique aponeurosis
- ♦ Internal oblique aponeurosis
- ♦ Thoracolumbar fascia
- ♦ Cremasteric fascia
- ♦ Internal spermatic fascia

Muscles

- ♦ External abdominal oblique m.
- ♦ Internal abdominal oblique m.
- ♦ Transversus abdominis m.
- ♦ Pyramidalis m.
- ♦ Rectus abdominis m.
- ♦ Cremaster m.

Arteries / Veins

- ♦ Superior epigastric a.
- ♦ Inferior epigastric a.
- ♦ Internal thoracic a.
- ♦ External iliac a.
- ♦ Deep circumflex iliac a.
- ♦ Superficial epigastric v.
- ♦ Superficial circumflex iliac v.
- ♦ Umbilical v.
- ♦ Thoracoepigastric v.

Nerves

- ♦ Thoracoabdominal nn.
- ♦ Anterior cutaneous nn.
- ♦ Lateral cutaneous nn.
- ♦ Subcostal n.
- ♦ Iliohypogastric n.
- ♦ Ilioinguinal n.

Penis, Scrotum, and Testes

Structures

- ♦ Root of penis
- ♦ Body of penis
- ♦ Prepuce
- ♦ Glans penis
- ♦ Frenulum
- ♦ Fundiform ligament of penis
- ♦ Suspensory ligament of penis
- ♦ Corpora cavernosa penis
- ♦ Corpus spongiosum penis
- ♦ Scrotum
- ♦ Median scrotal septum
- ♦ Scrotal ligament
- ♦ Ductus deferens
- ♦ Testis
- ♦ Epididymis

- Head of epididymis
- Body of epididymis
- Tail of epididymis
- Sinus of epididymis
- ♦ Duct of epididymis
- ♦ Seminiferous tubules

Fascia

- ♦ Deep fascia
- ♦ Tunica albuginea
- ♦ Tunica vaginalis
- ♦ Superficial fascia of scrotum
- ♦ Dartos tunic
- ♦ External spermatic fascia
- ♦ Internal spermatic fascia
- ♦ Tunica vaginalis
- ♦ Visceral tunica vaginalis
- ♦ Parietal tunica vaginalis
- ♦ Tunica albuginea

Arteries / Veins / Nerves

- ♦ Testicular aa
- ♦ Dorsal aa.
- ♦ Testicular v.
- ♦ Superficial dorsal v.
- ♦ Deep dorsal v.
- ♦ Pampiniform plexus of vv.
- ♦ Dorsal n.
- ♦ Genital n.

Inguinal Region

Regions / Folds

- ♦ Median umbilical fold
- ♦ Medial umbilical fold
- ♦ Lateral umbilical fold
- ♦ Supravesical fossa
- ♦ Medial inguinal fossa
- ♦ Lateral inguinal fossa
- ♦ Inguinal triangle
- ♦ Inguinal hernia
- ♦ Direct inguinal hernia
- ♦ Indirect inguinal hernia

Structures

- ♦ Urachus
- ♦ Iliac fascia
- ♦ Psoas major m.
- ♦ Iliacus m.

Arteries / Veins / Nerves

- ♦ Obturator a.
- ♦ Testicular a.
- ♦ Fetal umbilical a.
- ♦ Inferior epigastric a.

- ♦ Testicular v.
- ♦ Genital branch of genitofemoral n.

Abdominal Cavity

Regions / Cavities

- ♦ Peritoneal cavity
- ♦ Abdominal cavity
- ♦ Peritoneal
- ♦ Primarily retroperitoneal
- ♦ Secondarily retroperitoneal
- ♦ Intraperitoneal
- ♦ Omental bursa
- ♦ Greater sac
- ♦ Epiploic foramen/Formn. of Winslow

Structures

- ♦ Peritoneum
- ♦ Serous membrane
- ♦ Partial peritoneum
- ♦ Visceral peritoneum
- ♦ Mesentery
- ♦ Lesser omentum
- ♦ Greater omentum
- ♦ Ventral mesentery
- ♦ Dorsal mesentery
- ♦ Portal canal
- ♦ Teniae coli
- ♦ Epiploic appendages
- ♦ Haustra
- ♦ Greater duodenal papilla
- ♦ Plica longitudinalis
- ♦ Ureter
- ♦ Aortic plexus
- ♦ Celiac plexus
- ♦ Celiac ganglia
- ♦ Superior hypogastric plexus
- ♦ Inferior hypogastric plexus
- ♦ Aortic hiatus of diaphragm
- ♦ Esophageal hiatus of diaphragm
- ♦ Caval hiatus of diaphragm

Organs

Liver

- ♦ Falciform ligament
- ♦ Round ligament
- ♦ Obliterated umbilical v.
- ♦ Coronary ligament
- Right triangular ligament
- Left triangular ligament
- ♦ Right lobe
- ♦ Left lobe
- ♦ Quadrate lobe
- ♦ Caudate lobe
- ♦ Bare area of liver
- ♦ Porta hepatis

Gallbladder

- ♦ Spiral valve
- ♦ Bile

Spleen

- ♦ Hilum of spleen

Pancreas

- ♦ Head of pancreas
- ♦ Uncinate lobe of pancreas
- ♦ Body of pancreas
- ♦ Tail of pancreas

Stomach

- ♦ Cardiac sphincter
- ♦ Cardia of stomach
- ♦ Fundus of stomach
- ♦ Body of stomach
- ♦ Pylorus of stomach
- ♦ Pyloric antrum
- ♦ Pyloric canal
- ♦ Pyloric orifice
- ♦ Pyloric sphincter
- ♦ Greater curvature of stomach
- ♦ Lesser curvature of stomach
- ♦ Rugae

Suprarenal glands

- ♦ Cortex
- ♦ Medulla

Kidney

- ♦ Cortex
- ♦ Medulla
- ♦ Renal pyramids
- ♦ Renal papillae
- ♦ Minor calyces
- ♦ Major calyces
- ♦ Renal pelvis
- ♦ Renal sinus
- ♦ Hilum

Duodenum

- ♦ Superior part
- ♦ Descending part
- ♦ Horizontal part
- ♦ Ascending part
- ♦ Ligament of Treitz
- ♦ Duodenojejunal flexure

Jejunum

Ileum

Appendix

Cecum

- ♦ Ileocecal valve
- ♦ Ileocecal orifice

Colon

- ♦ Ascending colon
- ♦ Right colic flexure
- ♦ Transverse colon
- ♦ Left colic flexure
- ♦ Descending colon
- ♦ Sigmoid colon

Rectum

Anus

Ligaments

- ♦ Falciform ligament of liver
- ♦ Round ligament of liver
- ♦ Coronary ligament of liver
- ♦ Right triangular ligament of liver
- ♦ Left triangular ligament of liver
- ♦ Gastrophrenic ligament
- ♦ Gastrolial ligament
- ♦ Lienorenal ligament
- ♦ Transverse mesocolon
- ♦ Mesocecum
- ♦ Mesoappendix
- ♦ Sigmoid mesocolon
- ♦ Phrenicocolic ligament
- ♦ Ligament of Treitz
- ♦ Hepatogastric ligament
- ♦ Hepatoduodenal ligament

Arteries / Veins / Ducts

Abdominal aorta

Inferior phrenic a.

- Superior suprarenal a.

Celiac trunk

- ♦ Left gastric a.
- ♦ Splenic a.
- Left gastroepiploic a.
- Short gastric aa.
- ♦ Common hepatic a.
- ♦ Gastroduodenal a.
- Right gastroepiploic a.
- Superior pancreaticoduodenal aa.
- ♦ Proper hepatic a.
- Right gastric a.
- Right hepatic a.
- Cystic a.
- Left hepatic a.

Superior mesenteric a.

- ♦ Inferior pancreaticoduodenal aa.
- ♦ Middle colic a.
- Right branch of middle colic a.
- Left branch of middle colic a.
- ♦ Right colic a.
- Ascending branch of right colic a.
- Descending branch of right colic a.
- ♦ Ileocolic a.
- Cecal branch of ileocolic a.
- Appendicular branch of ileocolic a.
- Ileal branch of ileocolic a.
- ♦ Intestinal aa.
- Jejunal branches of intestinal aa.
- Arcades
- Ileal branches of intestinal aa.
- Arcades

Middle suprarenal a.

Renal a.

- Inferior suprarenal a.

Testicular aa.

Ovarian aa.

Inferior mesenteric a.

- ♦ Sigmoid branches
- ♦ Superior rectal a.
- ♦ Left colic a.
 - Ascending branch of left colic a.
 - Descending branch of left colic a.
- ♦ Marginal a.

Lumbar aa.

Median sacral a.

Common iliac aa.

- ♦ External iliac aa.
- ♦ Internal iliac aa.
- ♦ Femoral aa.
- ♦ Portal v.
- ♦ Inferior vena cava
- ♦ Inferior phrenic vv.
- ♦ Suprarenal vv.
- ♦ Renal vv.
- ♦ Testicular vv.
- ♦ Ovarian vv.
- ♦ Hepatic vv.
- ♦ Lumbar vv.
- ♦ Common iliac vv.
- ♦ Right lobar v.
- ♦ Left lobar v.
- ♦ Hepatic vv.
- ♦ Superior mesenteric v.
- ♦ Renal vv.
- ♦ Superior mesenteric v.
- ♦ Inferior mesenteric v.
- ♦ Common bile duct
 - Cystic duct
 - Hepatic duct
 - Right hepatic duct
 - Left hepatic duct
- ♦ Main pancreatic duct
- ♦ Accessory pancreatic duct
- ♦ Celiac plexus

Diaphragm and Posterior Abdominal Wall

Structures

- ♦ Diaphragm
 - Central tendinous portion of diaphragm
 - Peripheral muscular portion of diaphragm
- ♦ Lateral arcuate ligament
- ♦ Medial arcuate ligament
- ♦ Median arcuate ligament
- ♦ Right crura
- ♦ Left crura
- ♦ Iliolumbar ligament
- ♦ Thoracolumbar fascia

- ♦ Thoracic duct
 - Cisterna chyli
- ♦ Deep circumflex iliac a.

Muscles

- ♦ Psoas major m.
- ♦ Psoas minor m.
- ♦ Iliacus m.
- ♦ Quadratus lumborum m.

Nerves

- ♦ Genitofemoral n.
- ♦ Subcostal n.
- ♦ Iliohypogastric n.
- ♦ Ilioinguinal n.
- ♦ Lateral femoral cutaneous n.
- ♦ Femoral n.
- ♦ Sympathetic trunk
- ♦ Lumbar ganglia (4)
- ♦ Lumbar nn.
- ♦ Obturator n.
- ♦ Accessory obturator n. to pectineus m.
- ♦ Lumbar plexus

Perineum

Regions

- ♦ Inferior pelvis aperture
- ♦ Urogenital triangle
- ♦ Anal triangle
- ♦ Vaginal orifice
- ♦ Vestibule
- ♦ Urethral orifice
- ♦ Ischiorectal fossa

Structures

- ♦ Pelvic diaphragm
- ♦ Urogenital diaphragm
- ♦ Arcuate pubic ligament
- ♦ Sacrospinous ligament
- ♦ Sacrotuberous ligament
- ♦ Mons pubis
- ♦ Labia majora
- ♦ Posterior commissure
- ♦ Urogenital fissure
- ♦ Labia minora
- ♦ Clitoris
- ♦ Frenulum of clitoris
- ♦ Prepuce of clitoris
- ♦ Glans of clitoris
- ♦ Hymen
- ♦ Greater vestibular gland
- ♦ Colles' fascia
- ♦ Superficial perineal pouch

- ♦ Perineal body / Central tendon of perineum
- ♦ Pudendal canal / Alcock's canal

Bones

- ♦ Pubic symphysis
- ♦ Ischial tuberosity
- ♦ Ischiopubic ramus

Muscles

- ♦ Gluteus maximus m.
- ♦ Gluteus medius m.
- ♦ Gluteus minimus m.
- ♦ Levator ani m.
- ♦ External anal sphincter m.

Arteries / Veins / Nerves

- ♦ Perineal a.
- ♦ Inferior rectal aa.
- ♦ Inferior rectal vv.
- ♦ Pudendal n.
- ♦ Perineal n.
- ♦ Dorsal nerve of penis
- ♦ Dorsal nerve of clitoris
- ♦ Inferior rectal nn.

Male Urogenital Triangle

Structures

- ♦ Bulb of penis
- ♦ Crus of penis
- ♦ Shaft of penis
- ♦ Transverse perineal ligament
- ♦ Arcuate pubic ligament
- ♦ Deep pouch of perineum
- ♦ Membranous urethra
- ♦ Bulbourethral glands

Fascia

- ♦ Deep fascia of penis
- ♦ Perineal membrane

Muscles

- ♦ Sphincter urethrae
- ♦ Ischiocavernosus m.
- ♦ Bulbospongiosus m.
- ♦ Corpora cavernosa penis mm.
- ♦ Corpus spongiosum penis m.
- ♦ Deep transverse perineal mm.

Arteries / Veins / Nerves

- ♦ Internal pudendal a.
- ♦ Deep a. of penis

- ♦ Dorsal a. of penis
- ♦ Artery to the bulb
- ♦ Posterior scrotal aa.
- ♦ Posterior scrotal vv.
- ♦ Superficial dorsal vein of penis
- ♦ Deep dorsal vein of penis
- ♦ Perineal n.
 - Superficial branches of perineal n.
 - Deep branches of perineal n.
- ♦ Posterior scrotal nn.
- ♦ Dorsal n. of penis

Female Urogenital Triangle

Structures

- ♦ Clitoris
- ♦ Body of clitoris
- ♦ Crura of corpora cavernosa of clitoris
- ♦ Glans clitoridis
- ♦ Bulb of vestibule
- ♦ Commisure
- ♦ Greater vestibular gland
- ♦ Arcuate pubic ligament
- ♦ Deep pouch of perineum

Fascia

- ♦ Inferior fascial layer/perineal membr.
- ♦ Urogenital diaphragm

Muscles

- ♦ Superficial transverse perineal m.
- ♦ Deep transverse perineal m.
- ♦ Bulbospongiosus m.
- ♦ Ischiocavernosus m.
- ♦ Corpora cavernosa of clitoris
- ♦ Sphincter urethrae m.

Arteries / Veins / Nerves

- ♦ Internal pudendal a.
- ♦ Artery to the bulb
- ♦ Deep a. of clitoris
- ♦ Dorsal a. of clitoris
- ♦ Posterior labial aa.
- ♦ Posterior labial vv.
- ♦ Perineal n.
 - Superficial branches of perineal n.
 - Deep branches of perineal n.
- ♦ Dorsal nerve of clitoris
- ♦ Posterior labial nn.

Pelvis Minor

Structures

- ♦ Major pelvis
- ♦ Minor pelvis
- ♦ Inferior pelvic aperture
- ♦ Pelvic brim
- ♦ Pelvic diaphragm
- ♦ Levator ani
- ♦ Coccygeus
- ♦ Parietal pelvic fascia
- ♦ Visceral pelvic fascia
- ♦ Obturator fascia
- ♦ Extraperitoneal fascia

Male Pelvis

Regions / Spaces

- ♦ Pararectal fossa
- ♦ Paravesical peritoneal fossa
- ♦ Obturator canal
- ♦ Rectovesical peritoneal pouch
- ♦ Fossa navicularis

Ligaments / Fascia / Folds

- ♦ Pelvic diaphragm
- ♦ Median umbilical ligament
- ♦ Medial umbilical ligament
- ♦ Lateral umbilical ligament
- ♦ Lateral false ligament of bladder
- ♦ Transverse rectal folds
- ♦ Peritoneum
- ♦ Sigmoid mesocolon
- ♦ Arcus tendineus
- ♦ Obturator internus fascia
- ♦ Levator ani m.
- ♦ Coccygeus m.

Structures / Organs

Ureter

Bladder

- ♦ Superior surface of bladder
- ♦ Apex of bladder
- ♦ Neck of bladder
- ♦ Posterior surface of bladder
- ♦ Inferolateral surfaces of bladder
- ♦ Retropubic space
- ♦ Anterior true ligaments of bladder
- ♦ Puboprostatic ligaments
- ♦ Vesical trigone
- ♦ Ureteral orifice

- ♦ Internal urethral orifice

Sigmoid colon

Rectum

Anus

- ♦ Rectoanal junction
- ♦ Anal canal
- ♦ Anal valves
- ♦ Anal columns
- ♦ Anal sinuses
- ♦ Pectinate line
- ♦ Anal orifice

Prostate gland

- ♦ Visceral fascia of prostate
- ♦ Prostatic utricle

Seminal vesicles

- ♦ Excretory duct of seminal vesicles
- ♦ Seminal colliculus

Ductus deferens

- ♦ Ampulla of ductus deferens
- ♦ Ejaculatory duct of ductus deferens

Urethra

- ♦ Prostatic part of urethra
- ♦ Membranous part of urethra
- ♦ Spongy part of urethra
- ♦ Urethral crest

Arteries / Veins / Nerves

- ♦ Internal iliac a.
- ♦ Middle sacral a.
- ♦ Superior vesical aa.
- ♦ Inferior vesical a.
- ♦ Superior rectal a.
- ♦ Middle rectal a.
- ♦ Obturator a.
- ♦ Superior gluteal a.
- ♦ Inferior gluteal a.
- ♦ Internal pudendal a.
- ♦ Umbilical a.
- ♦ Iliolumbar a.
- ♦ Lateral sacral a.
- ♦ Internal iliac v.
- ♦ Middle sacral v.
- ♦ Superior rectal v.
- ♦ Obturator v.
- ♦ Prostatic plexus of veins
- ♦ Pelvic nerve plexus
- ♦ Inferior hypogastric plexus
- ♦ Rectal venous plexus
- ♦ Pelvic splanchnic nerves
- ♦ Lumbar splanchnic nerves
- ♦ Sacral splanchnic nerves
- ♦ Hypogastric nn.
- ♦ Obturator n.

Female Pelvis

Regions / Spaces

- ♦ Vesicouterine pouch
- ♦ Pararectal fossa
- ♦ Rectouterine peritoneal pouch
- ♦ Paravesical peritoneal fossa
- ♦ Obturator canal
- ♦ Retropubic space

Ligaments / Fascia / Folds

- ♦ Peritoneum
- ♦ Median umbilical ligament
- ♦ Medial umbilical ligament
- ♦ Lateral umbilical fold
- ♦ Lateral false ligament of bladder
- ♦ Round ligament of uterus
- ♦ Broad ligament
- ♦ Suspensory ligament of ovary
- ♦ Ligament of ovary
- ♦ Interureteric fold
- ♦ Transverse rectal folds
- ♦ Rectouterine folds
- ♦ Rectovesical folds
- ♦ Sigmoid mesocolon
- ♦ Arcus tendineus
- ♦ Pelvic diaphragm
- ♦ Obturator internus fascia
- ♦ Levator ani m.
- ♦ Coccygeus m.
- ♦ Obturator fascia
- ♦ Rectovaginal fascial septum

Structures / Organs

Ureter

Bladder

- ♦ Superior surface of bladder
- ♦ Apex of bladder
- ♦ Neck of bladder
- ♦ Posterior surface of bladder
- ♦ Inferolateral surfaces of bladder
- ♦ Retropubic space
- ♦ Anterior true ligaments of bladder
- ♦ Puboprostatic ligaments
- ♦ Vesical trigone
- ♦ Internal urethral orifice
- ♦ Ureteral orifice

Sigmoid colon

Rectum

Anus

- ♦ Rectoanal junction
- ♦ Anal canal
- ♦ Anal valves

- ♦ Anal columns
- ♦ Anal sinuses
- ♦ Pectinate line
- ♦ Anal orifice

Vagina

- ♦ Rugae vaginales
- ♦ Cervix
- ♦ Uterine ostium
- ♦ Anterior fornix of vagina
- ♦ Posterior fornix of vagina

Uterus

- ♦ Uterine tube / Fallopian tube
 - Fimbriated end of fallopian tube
 - Infundibulum of fallopian tube
 - Ampulla of fallopian tube
 - Isthmus of uterus
- ♦ Fundus of uterus
- ♦ Body of uterus

Ovary

- ♦ Mesoalpinx
- ♦ Mesometrium
- ♦ Mesovarium
- ♦ Epophoron

Arteries / Veins / Nerves

- ♦ Internal iliac a.
- ♦ Middle sacral a.
- ♦ Lateral sacral a.
- ♦ Obturator a.
- ♦ Ovarian a.
- ♦ Uterine a.
- ♦ Umbilical a.
- ♦ Superior vesical aa.
- ♦ Superior rectal a.
- ♦ Middle rectal a.
- ♦ Iliolumbar a.
- ♦ Superior gluteal a.
- ♦ Inferior gluteal a.
- ♦ Internal pudendal a.
- ♦ Inferior vesical a.
- ♦ Internal iliac v.
- ♦ Superior rectal v.
- ♦ Middle sacral v.
- ♦ Rectal venous plexus
- ♦ Pelvis nerve plexus
- ♦ Inferior hypogastric plexus
- ♦ Pelvic splanchnic nerves
- ♦ Lumbar splanchnic nerves
- ♦ Sacral splanchnic nerves
- ♦ Hypogastric nerves
- ♦ Obturator n.

Clinical Correlations

Shearer's Manual of Human Dissection, 7th edition

The intercostal vein, artery, and nerve, in their course in the costal groove, cause the deeper portions of the internal intercostal muscles to split off as separate layers known as the innermost intercostal muscles (98).

When a needle is inserted into the thoracic cavity to remove excess fluid (thoracentesis), it should be guided through the intercostal space along the superior border of the rib, thus ensuring the safety of the nerves and vessels that are lodged in the costal groove (98).

The pleural cavities are maintained under a negative pressure, which keeps the lungs inflated and functional. When, however, a pleural cavity is punctured, such as with a knife or a broken rib, the pressure in the cavity is equalized with atmospheric pressure and the lung is collapsed; this is called "pneumothorax" (102).

Some forms of pleurisy (inflammation of the pleura) are accompanied by fluid accumulation in the pleural cavity. The fluid settles in the lowest part of the cavity, the costodiaphragmatic recess, from which it can be safely removed with a needle or cannula (103).

In many cases, a valvular passageway (patent foramen ovale) through the interarterial septum persists in the adult, running from the upper part of the fossa ovalis behind the limbus to open into the left atrium (113).

When blood enters the ventricle from the atrium, the valve is forced open against the ventricular wall. During ventricular contraction (systole), blood attempts to flow back through this opening, but the pressure forces the free edges of the three cusps together, closing the atrioventricular orifice. Simultaneous contraction of the papillary muscles maintains tension on the chordae tendineae to keep the cusps of the tricuspid valve from being forced backward into the atrium during the ventricular contraction (117).

When blood flows from the ventricle into the artery, the cusps are forced upward against the walls of the vessel. During ventricular relaxation, blood attempts to flow back from the artery into the ventricle, but the valves bulge into the lumen of the pulmonary trunk, and the three free margins meet, closing the orifice. When the valve is closed, the three nodules meet at the center of the lumen (117).

In about 25 percent of cases, a narrow passageway remains anatomically patent in this location in the adult, a remnant of the foramen ovale of the fetus. Such a passageway is not necessarily physiologically patent or attended by any symptoms of disease during life, since the pressure of the blood in the two atria keeps its walls in apposition (117).

They are the smallest entities that can be surgically dissected from the lung. The names and locations of bronchopulmonary segments should be studied, since they are of importance in diagnosis and surgery of various diseases of the lungs (122).

An appendectomy scar will typically be located at McBurney's point, one-third of the distance from the anterior superior iliac spine to the umbilicus (129).

If the main venous channels within the abdomen are occluded, some or all of these veins become enlarged to serve as collateral pathways for the return of venous blood around the site of occlusion. Varicose umbilical veins radiating from the umbilicus create a characteristic sign (referred to as "caput medusa" after the mythological Medusa), which is sometimes associated with portal hypertension (131).

The dermatome pattern of the abdominal wall is easy to learn if you remember that the belt of skin at the level of the umbilicus is innervated by the tenth thoracoabdominal nerve and that others are evenly distributed above and below it down to the suprapubic region, which is innervated by the first lumbar segment (132).

The lateral border of the external oblique helps form the lumbar triangle along with the iliac crest and the latissimus dorsi muscle (133).

Surgical incisions through the anterior abdominal wall in the region of the rectus muscles are usually made in the midline or to its immediate right or left (paramedian) to preserve the nerve and blood supply to the rectus muscles, which enter laterally (134).

Many cadavers will have been circumcised; this operation, which removes the prepuce, is usually done when the baby is two or three days old (140).

Elective sterilization of the male is accomplished by bilateral ligation of the ductus deferens in the upper lateral area of the scrotum (141).

The pampiniform plexus and testicular vein do not contain valves; this fact at times contributes to the engorgement of the plexus with blood. The tortuous varicosities, called a "varicocele," are painful and easily palpable in the scrotum, more frequently on the left (141-142).

Metastasis of testicular carcinoma is difficult to detect at its onset because the lymph channels and nodes involved are deeply hidden in the abdomen (142).

Excessive accumulation of serous fluid in the cavity is called a "hydrocele." It is usually drained with a needle passed through the wall of the scrotum (142).

Sometimes during development the testis fails to descend into the scrotum and is found in the abdominal cavity or the inguinal canal. The condition is known as cryptorchidism. The testis must then be placed (by hormonal management or surgery) in the scrotum early in life if sterility is to be prevented (142).

Inguinal hernia is more common in men than in women. Due in part to a partial or total persisting processus vaginalis, the indirect type occurs more frequently than the direct type. Standard repairs for inguinal hernia consist of reducing the abdominal wall defect by suturing the lower edge of the muscle and fasciae to the pectineal ligament, which runs along the superior ramus of the pubis (146).

Peritonitis, inflammation of the peritoneum, is a very serious disease and is often fatal. Perforated ulcers, a ruptured appendix, penetrating wounds of the abdomen, and bacterial infections are common causes of peritonitis (147).

The complex arrangement of peritoneal reflections and folds sometimes creates fossae or blind peritoneal pouches. Peritoneal fossae are common near the duodenojejunal and ileocecal junctions. They are potential sites of intraperitoneal hernias because a segment of intestine can become lodged in them (152).

Rupture of the spleen, with intraabdominal hemorrhage, is one of the most common injuries to the intraabdominal organs. It is usually caused by blunt trauma to the lower left rib cage as would occur in automobile, bicycle, or motorcycle accidents (157).

Gallstones may be present; their major constituents are bile pigments, calcium, and cholesterol. Today, gallstones, like bladder stones, can be reduced and removed by a nonsurgical method called lithotripsy, which uses ultrasound waves to pulverize gallstones into particles that can be eliminated by normal physiological processes (159).

Portal hypertension as seen in cirrhosis of the liver is an excessive elevation of the portal venous blood pressure. The objective of surgical intervention is to divert portal blood flow away from the liver; such operations are referred to as portal-systemic shunts. One major type of shunt is the portacaval anastomosis, in which the portal vein at its origin is sutured into the inferior vena cava. In another approach, the splenorenal anastomosis, the spleen is removed and the splenic vein is united to the left renal vein. These operations have numerous variations, but all are aimed at reducing portal venous flow (164).

The series of anastomoses between the colic branches of the superior and inferior mesenteric arteries forms a distinct arcade, referred to as the "marginal artery," around the edge of the large intestine from the ileum to the sigmoid colon. It provides an important collateral source of blood to a section of the colon whose main blood supply may be occluded (164-165).

Because of the deep, inaccessible disposition of the posterior abdominal lymph system, the extent to which a primary cancerous tumor may have metastasized is difficult to assess. Early detection of cancer, especially in those organs that drain into the deep abdominal system (e.g., the testes) is of paramount importance (171).

Clinically, the pouch and its boundaries are important because the spread of urine extravasated through a perforation in the ventral wall of the penile urethra will be limited to the urogenital triangle, but may extend upward into the abdominal wall (175).

The central tendon marks the point at which surgical entrance (perineal approach) to the pelvic cavity is made (176).

In order to prevent vaginal or perineal tear during childbirth, the vaginal orifice is enlarged by a midline or a mediolateral diagonal incision (i.e., episiotomy) through the posterior vaginal wall and vulva. Following delivery the incision is sutured (177).

The "pudendal nerve block" is one type of obstetrical anesthesia. It is done where the nerve courses through the pudendal canal. The resultant perineal analgesia allows for delivery by forceps but does not interfere with the sensations of uterine contraction (177).

The surgical approach used in treatment of some of the pelvic viscera (e.g., prostatectomy) is through the anterior abdominal wall just superior to the pubic symphysis. By this route the peritoneum is not invaded; therefore, postoperative complications due to peritoneal infection are lessened (183).

Its importance lies in the fact that an effusion of fluid into the retropubic space, as rupture of the bladder, can spread laterally as far as the internal iliac arteries and upward into the extraperitoneal space at the sides of the pelvic and abdominal cavities (187).

A periodic rectal examination is essential in preventive and diagnostic medical care. A knowledge of the normal relationships of the pelvic viscera to the rectum is essential; only then can one identify pelvic abnormalities (189).

Hemorrhoids (piles) are masses of the rectal venous plexus. Internal hemorrhoids lie superior to the pectinate line, are covered by mucous membrane, and involve the superior rectal veins. External hemorrhoids lie below the pectinate line, involve the middle and inferior rectal veins, and are covered by skin. Anal infections are thought to be the primary cause of hemorrhoids. Poor venous return due to portal hypertension is also cited as a cause (189).

As the bladder wall stretches with filling or contracts when emptying, the ureteral orifices are compressed and closed, thus preventing reflux of urine (189).

Enlargement of the prostate (median and lateral lobes) is common in older men. Compression of the urethra may cause difficulty in urinating, in which case the enlarged portion is removed (190).

Prostatic carcinoma is a leading cause of death in older men as well. Lymphatic drainage from the prostate is particularly relevant, as is the prostate's spatial relationship to the rectum; the digital rectal examination is of utmost importance, especially when problematic urination is present (190).

The parasympathetic components are particularly important in that they mediate the functions of urination, defecation, and erection. Besides their vasomotor effects, the sympathetics are thought to play a role in ejaculation (191).

The digital vaginal examination is important in identifying pelvic visceral abnormalities. Through the vagina, one can palpate the bladder, rectum, ureters, and cervix. With the other hand on the abdominal wall (bimanual palpation), the uterus and sometimes the ovaries can also be felt (198).

The parasympathetic components are particularly important in that they mediate the functions of urination, defecation, and erection (198).

The Nervous System

(adapted from Clinically Oriented Anatomy, 4th ed. by Moore and Dalley)

The autonomic nervous system is divided into the sympathetic division and parasympathetic division. The sympathetic nerve fibers and ganglia are referred to as the thoracolumbar effectors, since they are found flanking the thoracic and lumbar vertebrae. The parasympathetic are referred to as the craniosacral effectors, since they flank the cervical and sacral vertebrae.

Generally speaking, there are two neurons involved in the conduction of impulses from the central nervous system (i.e. brain, spinal cord) to the target (i.e. organ, smooth muscle). The first neuron is known as a preganglionic neuron, and it is located in the gray matter of the CNS. This neuron sends an axon that synapses on a second neuron. This second neuron is known as the postganglionic neuron, and it is located in a ganglion outside the CNS. This ganglion is referred to as an autonomic ganglion. The fibers from the autonomic ganglion terminate on the target, such as an organ, smooth muscle, or gland.

That aside, we return to the discussion of the sympathetic and parasympathetic nervous systems. In the sympathetic nervous system (or the thoracolumbar effectors), there are paravertebral ganglia, and prevertebral ganglia. The distinction is important: paravertebral ganglia are linked to form the right and left sympathetic trunks. Remember that the sympathetic trunks were what you dissected after you finished working on the heart; they dorsal and lateral to the azygos vein and thoracic duct, in the region of the thoracic aorta. Also, remember that the greater thoracic splanchnic nerve, lesser thoracic splanchnic nerve, and least thoracic splanchnic nerves emanate from the sympathetic trunks. These thoracic splanchnic nerves supply most of the abdominal organs (you need to know the exceptions). Prevertebral ganglia are located in the plexuses around the celiac trunk, and other major branches of the abdominal aorta. The ganglion around the celiac trunk is aptly known as the celiac ganglion.

When all fibers leave the spinal cord at the ventral primary rami, they are white rami communicantes. They can follow one of three courses. 1) The white presynaptic fibers can enter and synapse immediately with a postsynaptic neuron of the paravertebral ganglion at that vertebral level. They can then go on to supply autonomic innervation to a certain part of the body. 2) They can ascend or descend in the sympathetic trunk to synapse with a postsynaptic neuron of a higher or lower paravertebral ganglion. They have the same effect as in (1). After the fibers in (1) and (2) synapse, they become gray rami communicantes. 3) They can pass through the sympathetic trunk without synapsing, continue on through a splanchnic nerve, and reach a prevertebral ganglion, such as the celiac ganglion.

That should buy you a few points on the exam... (\$0.02 per point... please send donations to Edelstone mailbox 370).

Diaphragm

The muscles that control inspiration / expiration are listed in the muscle table. The diaphragm is the chief muscle in inspiration. It has a complex blood supply and innervation. The superior surface of the diaphragm receives the superior phrenic arteries from the thoracic aorta, along with the musculophrenic and pericardiophrenic arteries from the internal thoracic artery. The inferior surface of the diaphragm receives the inferior phrenic arteries from the abdominal aorta.

The innervation to the diaphragm is also important. The motor supply to the entire diaphragm is done by the phrenic nn. (C3, C4, C5). The sensory supply is more complicated: the central portion of the diaphragm is innervated by the phrenic nerves, but the peripheral portion of the diaphragm is innervated by the intercostal nerves (T5-T11) and the subcostal nerves (T12).

The diaphragm also provides several landmarks. The caval opening of the diaphragm is located at TV8 (in other words, at the level of the 8th thoracic vertebra). Passing through the caval opening are the inferior vena cava, terminal branches of the right phrenic nerve, and lymph nodes. The esophageal hiatus is located at TV10, and transmits the esophagus, the anterior and posterior vagal trunks, esophageal branches of the left gastric vessels, and more lymphatic vessels. Finally, the aortic hiatus, which lies at TV12, allows the aorta to pass between the crura of the diaphragm. The thoracic duct and azygos vein also pass through this opening.

The Intestines, A Primer

There are obviously two kinds of intestines, the small intestines and large intestines. The small intestines are generally broken up into three portions: the duodenum, the jejunum, and the ileum. The duodenum is small, about 25 cm is length, and is broken into four parts: the superior segment, the descending segment, the horizontal segment, and the ascending segment.

The first part of the duodenum has the hepatoduodenal ligament. The second part of the duodenum receives the common bile and pancreatic ducts at the posteromedial wall. These ducts usually come together to form a hepatopancreatic ampulla, which opens into an eminence known as the major duodenal papilla. This second part of the duodenum is retroperitoneal. The third part of the duodenum is crossed by the superior mesenteric artery and vein. The final part of the duodenum terminates at the duodenojejunal junction, and forms the duodenojejunal flexure supported by the ligament of Treitz.

The jejunum and ileum are about 6-7 meters in length, total. The mesentery attaches to these two parts of the small intestine. As you move from the jejunum to the ileum, there are five major characteristics that you can use to determine what part of the small intestine you are in. There are more arcades towards the ileum, more fat in the mesentery towards the ileum, and more Peyer's patches towards the ileum. The jejunum has more branches, and more plicae circulares (circular folds).

In order to distinguish the small intestine from the large intestine, there are three important characteristics. This becomes important in surgery, where the surgeon has a small field of view and must rapidly determine the organ s/he is working with. The large intestine has epiploic appendages, which are 1-2 inch outcroppings of fat. The large intestine also has three longitudinal bands of muscle known as the teniae coli, and haustra (sacculations of the colon between the teniae).

Spermatic Cord

Briefly, there are five major structures located inside the spermatic cord. These include the ductus deferens, testicular a., pampiniform venous plexus, nerves from the autonomic nervous system, and lymph vessels. These structures have all of the coverings of the spermatic cord.

Layers of the Wall

	Layers of Anterior Abdominal Wall	Scrotum and Coverings of Testis	Coverings of Spermatic Cord	Perineum
1	Skin	Skin		Skin
2	Camper's fascia (superficial layer of superficial fascia)	Tunica dartos scroti and dartos m.	Scrotum (and scrotal septum)	Subcutaneous fat
3	Scarpa's fascia (deep layer of superficial fascia)			Colles' fascia (superficial perineal fascia)
4	External oblique aponeurosis / fascia	External spermatic fascia	External spermatic fascia	
5	Internal oblique muscle / aponeurosis / fascia	Cremaster m. / cremasteric fascia	Cremaster m. / cremasteric fascia	
6	Transversus abdominis m.			
7	Transversalis fascia	Internal spermatic fascia	Internal spermatic fascia	
8	Extraperitoneal fat / connective tissue			
9	Parietal peritoneum	Parietal tunica vaginalis	Obliterated processus vaginalis	
10	Visceral peritoneum	Visceral tunica vaginalis		Superficial perineal membrane
11				Deep perineal membrane
12				Sphincter urethrae / tunica albuginea / dorsal and deep aa. of penis / clitoris
13				Bulbourethral glands (Cowper's glands)

Table of Muscles

Muscle	Innervation	Main Action	Muscle	Innervation	Main Action
Serratus posterior superior m.	2 nd – 5 th intercostal nn.	Elevate ribs	Serratus posterior inferior m.	Ventral rami of 9 th – 12 th thoracic spinal nerves	Depress ribs
Levator costarum m.	Dorsal primary rami of C8 – T11	Elevate ribs	External intercostal m.	Intercostal nn.	Elevate ribs
Internal intercostal m.	Intercostal nn.	Depress ribs	Innermost intercostal m.	Intercostal nn.	Elevate ribs
Transversus thoracis m.	Intercostal nn.	Depress ribs	Subcostal m.	Intercostal nn.	Elevate ribs
External oblique m.	Thoracoabdominal nn., subcostal n.	Support abdominal viscera, flex and rotate trunk	Internal oblique m.	Thoracoabdominal nn, first lumbar nn.	Support abdominal viscera, flex and rotate trunk
Transverse abdominis m.	Thoracoabdominal nn., subcostal n.	Support abdominal viscera	Rectus abdominis m.	Thoracoabdominal nn.	Flexes trunk, supports abdominal viscera
Psoas major m.	Lumbar plexus via L2-L4 ventral branches	Flexes thigh, allows lateral flexion of vertebral column, helps flex trunk while sitting	Iliacus m.	Femoral n. (L2-L4)	Flexes thigh, stabilizes hip joint; acts with psoas major m.
Quadratus lumborum m.	Ventral branches of T12 and L1-L4	Extends and laterally flexes vertebral column, flexes 12 th rib during inspiration	Obturator internus m.	Nerve to obturator internus (L5, S1, S2)	Rotates thigh laterally, helps hold head of femur in acetabulum
Piriformis m.	Ventral rami of S1, S2	Rotates thigh laterally, abducts thigh, helps hold head of femur in acetabulum	Levator ani m. (pubococcygeus, puborectalis, iliococcygeus mm.)	Nerve to levator ani (S4 branches) and inferior rectal / anal n., coccygeal plexus	Helps support pelvic viscera; resists increase in intra-abdominal pressure
Coccygeus m.	S4, S5 branches	Forms small part of pelvic diaphragm that supports viscera; flexes coccyx	External anal sphincter m.	Inferior anal n.	Closes anal canal, works with bulbospongiosus to support and fix perineal body
Bulbospongiosus m.	Deep branch of perineal n.	Male: compresses bulb of penis to expel last drops of urine / semen, assists erection by pushing blood into body of penis and compressing outflow veins Female: sphincter of vagina and assists in erection of clitoris	Ischiocavernosus m.	Deep branch of perineal n.	Maintains erection of penis / clitoris by compressing outflow veins and pushing blood into body of penis or clitoris
Superficial transverse perineal m.	Deep branch of perineal n.	Support and fix perineal body (pelvic floor) to support abdominopelvic viscera and resist increased intra-abdominal pressure	Deep transverse perineal m.	Deep branch of perineal n.	Support and fix perineal body (pelvic floor) to support abdominopelvic viscera and resist increased intra-abdominal pressure
External urethral sphincter m.	Deep branch of perineal n.	Compresses urethra to maintain urinary continence; in females, urethrovaginal sphincter portion also compresses vagina			

Table of Arteries

Artery	Origin	Course	Distribution
Posterior intercostal aa.	Superior intercostal a. (for intercostal spaces 1 and 2), thoracic aorta (for remaining spaces)	Pass between internal and innermost intercostal muscles	Intercostal muscles and overlying skin, parietal pleura
Anterior intercostal aa.	Internal thoracic (intercostal spaces 1-6) and musculophrenic aa. (intercostal spaces 7-9)	Pass between internal and innermost intercostal muscles	Intercostal muscles and overlying skin, parietal pleura
Internal thoracic a.	Subclavian a.	Passes inferiorly and lateral to sternum between costal cartilages and internal intercostal muscles to divide into the superior epigastric a. and musculophrenic a.	By way of anterior intercostal arteries to intercostal spaces 1-6
Subcostal a.	Thoracic aorta	Courses along inferior border of 12 th rib	Muscles of anterolateral abdominal wall
Right Coronary A.	Right aortic sinus	Follows coronary groove between the atria and ventricles; anastomoses with circumflex and anterior IV branches of left coronary a.	Right atrium, SA and AV nodes, posterior part of IV septum
SA nodal branch	Right coronary a. near its origin (60%)	Ascends to SA node	Pulmonary trunk and SA node
Right marginal branch	Right coronary a.	Passes to inferior margin of heart and apex; anastomoses with IV branches	Right ventricle and apex of heart
Posterior IV branch	Right coronary a.	Runs from posterior IV groove to apex of heart; anastomoses with circumflex and anterior IV branches of left coronary a.	Right and left ventricles and IV septum
AV nodal branch	Right coronary a. near origin of posterior IV artery	Passes to AV node	AV node
Left Coronary A.	Left aortic sinus	Runs in AV groove and gives off anterior interventricular and circumflex branches; anastomoses with right coronary a.	Most of left atrium and ventricle, IV septum, and AV bundles; may supply AV node
SA nodal branch	Circumflex branch (40%)	Ascends on posterior surface of left atrium to SA node	Left atrium and SA node
Anterior interventricular branch	Left coronary a.	Passes along anterior IV groove to apex of heart; anastomoses with posterior IV branch of right coronary a.	Right and left ventricles and IV septum
Circumflex branch	Left coronary a.	Passes to left in AV groove and runs to posterior surface of heart; anastomoses with right coronary a.	Left atrium and left ventricle
Left marginal branch	Circumflex branch	Follows left border of heart; anastomoses with IV branches	Left ventricle
Ascending aorta	Aortic orifice of left ventricle	Ascends to sternal angle to become arch of aorta	Gives off right and left coronary aa.
Arch of aorta	Continuation of ascending aorta	Arches posteriorly on left side of trachea and esophagus and superior to left main bronchus	Gives off brachiocephalic, left common carotid, and left subclavian; occasionally gives off lowest thyroid a.
Thoracic aorta	Continuation of arch of aorta	Descends in posterior mediastinum to left of vertebral column; gradually shifts to right to lie in median plane at aortic hiatus	Gives off posterior intercostal aa, subcostal a., some phrenic aa., esophageal aa.
Posterior intercostal a.	Posterior aspect of thoracic aorta	Pass laterally, and then anteriorly parallel to ribs	Gives off lateral and anterior cutaneous branches

Artery	Origin	Course	Distribution
Bronchial aa. (1-2)	Anterior aspect of aorta or posterior intercostal a.	Run with the tracheobronchial tree	Supplies bronchial and peribronchial tissue branches, visceral pleura
Esophageal aa. (4-5)	Anterior aspect of thoracic aorta	Run anteriorly to esophagus	Supply esophagus
Superior phrenic aa.	Anterior aspects of thoracic aorta	Arise at aortic hiatus and pass to superior aspect of diaphragm	Supply diaphragm
Superior epigastric a.	Internal thoracic a.	Descends in rectus sheath deep to rectus abdominis m.	Rectus abdominis m., superior part of anterolateral abdominal wall
Inferior epigastric a.	External iliac a.	Runs superiorly and enters rectus sheath; runs deep to rectus abdominis m.	Rectus abdominis m., medial part of anterolateral abdominal wall
Deep circumflex iliac a.	External iliac a.	Runs on deep aspect of anterior abdominal wall, parallel to inguinal ligament	Iliacus muscle and inferior part of anterolateral abdominal wall
Superficial circumflex iliac a.	Femoral a.	Runs in superficial fascia along inguinal ligament	Subcutaneous tissue and skin over inferior part of anterolateral abdominal wall
Superficial epigastric a.	Femoral a.	Runs in superficial fascia towards umbilicus	Subcutaneous tissue and skin over suprapubic region
Inferior phrenic a.	Abdominal aorta	Gives off the suprarenal a. to the adrenal gland	Supplies diaphragm
Superior suprarenal a.	Inferior phrenic a.	Comes from inferior phrenic a.	Supplies adrenal gland
Celiac a.	Abdominal aorta (TV12)	Soon divides into left gastric a., splenic a., and common hepatic aa.	Supplies esophagus, stomach, duodenum (proximal to bile duct), liver and biliary apparatus, and pancreas
Left gastric a.	Celiac trunk	Ascends retroperitoneally to esophageal hiatus, where it passes between layers of hepatogastric ligament	Distal portion of esophagus and lesser curvature of stomach
Splenic a.	Celiac trunk	Runs retroperitoneally along superior border of pancreas; it then passes between layers of splenorenal ligament to hilum of spleen	Body of pancreas, spleen, and greater curvature of stomach
Left gastroepiploic a.	Splenic a.	Passes between layers of gastrosplenic ligament to greater curvature of stomach	Left portion of greater curvature of stomach
Short gastric aa. (4-5)	Splenic a.	Passes between layers of gastrosplenic ligament to fundus of stomach	Fundus of stomach
Common hepatic a.	Celiac trunk	Passes retroperitoneally to reach hepatoduodenal ligament	Gallbladder, stomach, pancreas, duodenum, and respective lobes of liver
Proper hepatic a.	Common hepatic a.	Passes between the layers of the hepatoduodenal ligament to porta hepatis; divides into right and left hepatic aa.	Gallbladder, stomach, pancreas, duodenum, and respective lobes of liver
Right gastric a.	Proper hepatic a.	Runs between layers of hepatogastric ligament	Right portion of lesser curvature of stomach
Right hepatic a.	Proper hepatic a.	Goes to right lobe of liver	Supplies the right lobe of liver (the right side of the liver as demarcated by an imaginary line running through the gallbladder fossa to the inferior vena cava)
Cystic a.	Right hepatic a.	Arises within hepatoduodenal ligament	Gallbladder and cystic duct
Left hepatic a.	Proper hepatic a.	Goes to left lobe of liver	Supplies the left lobe of liver
Gastroduodenal a.	Common hepatic a.	Descends retroperitoneally, posterior to gastroduodenal junction	Stomach, pancreas, first part of duodenum, distal part of bile duct
Right gastroepiploic a.	Gastroduodenal a.	Passes between layers of greater omentum to greater curvature of stomach	Right portion of greater curvature of stomach
Anterior and posterior superior pancreaticoduodenal aa.	Gastroduodenal a.	Descends on head of pancreas	Proximal portion of duodenum and head of pancreas
Superior mesenteric a.	Abdominal aorta (LV1)	Runs in root of mesentery to ileocecal junction	Part of gastrointestinal tract derived from midgut

Artery	Origin	Course	Distribution
Anterior and posterior inferior pancreaticoduodenal aa.	Superior mesenteric a.	Ascends retroperitoneally on head of pancreas	Distal portion of duodenum and head of pancreas
Intestinal aa. (15-18)	Superior mesenteric a.	Passes between the two layers of mesentery	Jejunum and ileum
Middle colic a.	Superior mesenteric a.	Ascends retroperitoneally and passes between layers of transverse mesocolon	Transverse colon
Right colic a.	Superior mesenteric a.	Passes retroperitoneally to reach ascending colon	Ascending colon
Ileocolic a.	Superior mesenteric a.	Runs along root of mesentery and divides into ileal and cecal branches	Ileum, cecum, and ascending colon
Appendicular a.	Ileocolic a.	Passes between layers of mesoappendix	Vermiform appendix
Ileal a.	Ileocolic a.	Branches from ileocolic a.	Ileum
Cecal a.	Ileocolic a.	Branches from ileocolic a.	Cecum
Middle suprarenal aa.	Abdominal aorta	Run towards the adrenal gland	Adrenal gland
Renal aa.	Abdominal aorta (LV2)	Passes retroperitoneally to the kidney	Kidney
Inferior suprarenal aa.	Renal a.	Branches of the renal aa.	Adrenal gland
Testicular / Ovarian aa.	Abdominal aorta	Descends retroperitoneally; testicular artery passes through inguinal canal into scrotum; ovary artery crosses pelvic brim, coursing medially in suspensory ligament to ovary	Testis / Ovary
Lumbar aa. (4)	Abdominal aorta	Four branches that come out the posterior surface of the abdominal aorta	Upper lumbar vertebrae
Inferior mesenteric a.	Abdominal aorta (LV3)	Descends retroperitoneally to left of abdominal aorta	Supplies part of gastrointestinal tract derived from hindgut
Left colic a.	Inferior mesenteric a.	Passes retroperitoneally toward left to descending colon	Descending colon
Sigmoid aa. (3-4)	Inferior mesenteric a.	Passes retroperitoneally toward left to descending colon / sigmoid colon	Descending and sigmoid colon
Superior rectal a.	Inferior mesenteric a.	Descends retroperitoneally to rectum	Proximal part of rectum; anastomoses with middle and inferior rectal arteries
Marginal a.	Anastomoses with branches from superior and inferior mesenteric aa.	Follows inner border of large intestines	Supplies large intestines; large anastomoses between the superior and inferior mesenteric aa.
Median sacral a.	Abdominal aorta	Descends in median line over L4 and L5 vertebrae and the sacrum and coccyx	Lower lumbar vertebrae, sacrum, and coccyx
Common iliac aa.	Terminal branches of abdominal aorta	Travel laterally, split into the internal and external iliac aa.	Supply many structures in the pelvic / perineal region
Internal iliac a.	Common iliac a.	Passes over pelvic brim to reach pelvic cavity	Main blood supply to pelvic organs, gluteal muscles, and perineum
Anterior division of internal iliac a.	Internal iliac a.	Passes anteriorly and divides into visceral branches and obturator artery	Pelvis viscera and muscles in medial compartment of thigh
Umbilical a.	Anterior division of internal iliac a.	Obliterates becoming medial umbilical ligament after running a short pelvic course during which it gives rise to superior vesical arteries	Superior aspect of urinary bladder, occasionally artery to ductus deferens
Superior vesical a.	Patent part of umbilical a.	Usually multiple, these arteries pass to the superior aspect of the urinary bladder	Superior aspect of urinary bladder, pelvis portion of ureter
Obturator a.	Anterior division of internal iliac a.	Runs anteroinferiorly on lateral pelvic wall to exit pelvis via obturator canal	Pelvis muscles, nutrient artery to ilium, head of femur, muscles of medial compartment of thigh
Inferior vesical a.	Anterior division of internal iliac a.	Passes retroperitoneally to inferior aspect of male urinary bladder	Inferior aspect of urinary bladder, ductus deferens, seminal vesicle, and prostate

Artery	Origin	Course	Distribution
Artery to ductus deferens	Inferior vesical a.	Runs retroperitoneally to ductus deferens	Ductus deferens
Prostatic branches	Inferior vesical a.	Descends on posterolateral aspect of prostate	Prostate
Uterine a.	Anterior division of internal iliac a.	Runs medially in base of broad ligament superior to cardinal ligament, crossing superior to ureter, to sides of uterus	Uterus, ligaments of uterus, uterine tube, and vagina
Vaginal a.	Uterine a.	Arises lateral to ureter and descends inferior to it to lateral aspect of vagina	Vagina, branches to inferior part of urinary bladder and termination of ureter
Internal pudendal a.	Anterior division of internal iliac a.	Leaves pelvis through greater sciatic foramen and enters perineum (ischioanal fossa) by passing through lesser sciatic foramen	Main artery to perineum, including muscles and skin of anal and urogenital triangles, erectile bodies
Middle rectal a.	Anterior division of internal iliac a.	Passes retroperitoneally to rectum	Midpart of rectum
Inferior gluteal a.	Anterior division of internal iliac a.	Exits pelvis via greater sciatic foramen, passing inferior to piriformis	Pelvic diaphragm (coccygeus and levator ani), piriformis, quadratus femoris, uppermost hamstrings, gluteus maximus, sciatic nerve
Posterior division of internal iliac a.	Internal iliac a.	Passes posteriorly and gives rise to parietal branches	Pelvic wall and gluteal region
Iliolumbar a.	Posterior division of internal iliac a.	Ascends anterior to sacroiliac joint and posterior to common iliac vessels and psoas major	Psoas major, iliacus and quadratus lumborum muscles, cauda equina in vertebral canal
Lateral sacral a. (superior and inferior branches)	Posterior division of internal iliac a.	Runs on anteromedial aspect of piriformis to send branches into pelvic sacral foramina	Piriformis, structures in sacral canal, erector spinae and overlying skin
Superior gluteal a.	Posterior division of internal iliac a.	Exits pelvis via greater sciatic foramen, passing superior to piriformis	Piriformis, all 3 gluteal muscles, tensor fascia lata
Internal pudendal a.	Internal iliac a., anterior division	See above; passes to pudendal canal	See above; perineum and external genital organs
Inferior rectal a.	Internal pudendal a.	Crosses ischioanal fossa to reach rectum and anal canal	Distal part of rectum and anal canal
Perineal a.	Internal pudendal a.	Leaves pudendal canal and crosses ischioanal fossa to anal canal	Supplies superficial perineal muscles and scrotum
Posterior scrotal / labial a.	Terminal branch of internal pudendal a.	Runs in superficial fascia of posterior scrotum or labium majus	Skin of scrotum or labium majus
Artery of bulb of penis / vestibule of vagina	Internal pudendal a.	Pierces perineal membrane to reach bulb of penis or vestibule of vagina	Supplies bulb of penis or vestibule and bulbourethral gland (male) and greater vestibular gland (female)
Deep artery of penis / clitoris	Terminal branch of internal pudendal a.	Pierces perineal membrane to reach corpora cavernosa of penis or clitoris	Supplies erectile tissue of penis or clitoris
Dorsal artery of penis / clitoris	Terminal branch of internal pudendal a.	Pierces perineal membrane and passes through suspensory ligament of penis or clitoris to run on dorsum of penis or clitoris	Skin of penis and erectile tissue of penis or clitoris
External pudendal, superficial and deep branches	Femoral a.	Pass medially across the thigh to reach the scrotum or labia majora	External genitalia and superomedial part of the thigh

Table of Nerves

Nerve	Origin	Notes	Nerve	Origin	Notes
Vagus (CN X)	Brainstem	Enters superior mediastinum, gives rise to recurrent laryngeal nn., and continues into abdomen	Phrenic n.	Ventral rami from C3-C5 (3,4,5 keep the diaphragm alive)	Runs between mediastinal pleura and pericardium; passes through superior thoracic aperture
Intercostal nn.	Ventral rami of T1 – T11	Run in intercostal spaces between internal and innermost layers of intercostal mm.	Subcostal n.	Ventral ramus of T12	Follows inferior border of 12 th rib and passes into abdominal wall
Recurrent laryngeal n.	Vagus n.	Loops around subclavian on right; loops around arch of aorta and ligamentum arteriosum on left; ascends in tracheoesophageal groove	Cardiac plexus	Parasympathetic: Vagus n. Sympathetic: Sympathetic trunk	Impulses to SA node; parasympathetic slow heart rate
Pulmonary plexus	Parasympathetic: Vagus n. Sympathetic: Sympathetic trunk	Forms on root of lung; parasympathetic constrict bronchioles	Esophageal plexus	Parasympathetic: Vagus n. Sympathetic: Sympathetic trunk	Go to inferior 2/3s of esophagus
Thoracoabdominal n.	T7 – T11; continuation of lower intercostal nn.	Run between 2 nd and 3 rd layers of abdominal mm.; goes to the periphery of the diaphragm	Subcostal n.	T12	Runs along inferior border of 12 th rib
Iliohypogastric n.	L1	Pierces transverse abdominal m., pierce external oblique aponeurosis	Ilioinguinal n.	L1	Passes between 2 nd and 3 rd layers of abdominal muscles, and passes through inguinal canal
Genitofemoral n.	L1, L2	Pierces anterior surface of psoas major, divides into femoral and genital branches	Lateral femoral cutaneous n.	L2, L3	Enters thigh posterior the inguinal ligament, supplies skin on the anterolateral surface of thigh
Obturator n.	L2, L3, L4	Passes through the pelvis to the medial thigh, supplying the adductor muscles	Femoral n.	L2, L3, L4	Innervates the iliacus, passes deep to inguinal ligament to anterior thigh, and supplies flexors of hip and extensors of knee
Lumbosacral trunk	L4, L5	Descends into the pelvis to participate in the formation of the sacral plexus (S1-S4)	Lumbar plexus	L1-L4	Receive gray rami communicantes
Cardiopulmonary splanchnic nn.	From cervical and upper thoracic sympathetic trunk	Postsynaptic sympathetic fibers to thoracic cavity	Abdominopelvic splanchnic nn.	Lower thoracic and abdominal sympathetic trunk	Presynaptic sympathetic to abdominopelvic cavity
Greater thoracic splanchnic n.	T5-T9, thoracic sympathetic trunk	Presynaptic sympathetic	Lesser thoracic splanchnic n.	T10-T11, thoracic sympathetic trunk	Presynaptic sympathetic
Least thoracic splanchnic n.	T12, thoracic sympathetic trunk	Presynaptic sympathetic	Lumbar splanchnic n.	Abdominal sympathetic trunk	Presynaptic sympathetic
Pelvic splanchnic n.	Ventral rami of S2-S4 spinal nerves	Presynaptic parasympathetic to descending and sigmoid colon, rectum, and pelvic viscera	Sciatic n.	L4, L5, S1, S2, S3	Articular branches to hip joint and muscular branches to flexors of knee in thigh and all muscles in leg and foot

Nerve	Origin	Notes	Nerve	Origin	Notes
Superior gluteal n.	L4, L5, S1	Gluteus medius and gluteus minimis	Inferior gluteal n.	L5, S1, S2	Gluteus maximus
Nerve to piriformis	S1, S2	Piriformis muscle	Nerve to quadratus femoris	L4, L5, S1	Quadratus femoris and inferior gemellus muscles
Nerve to obturator internus	L5, S1, S2	Obturator internus and superior gemellus muscles	Pudendal n.	S2, S3, S4	Structures in perineum: sensory to genitalia, muscular branches to perineal muscles, external urethral sphincter, external anal sphincter
Nerves to levator ani and coccygeus	S3, S4	Levator ani and coccygeus muscles	Posterior femoral cutaneous n.	S2, S3	Cutaneous branches to buttock and uppermost medial and posterior surfaces of thigh
Perforating cutaneous n.	S2, S3	Cutaneous branches to medial part of buttock			

Table of Innervation to Organs

Organ	Parasympathetic	Sympathetic
Stomach	Anterior and posterior vagal trunks	Celiac ganglion through greater thoracic splanchnic nn.
Duodenum	Vagus nn.	Celiac ganglion, superior mesenteric ganglion through greater thoracic splanchnic nn.
Head of Pancreas	Vagus n.	Thoracic splanchnic nn.
Jejunum, Ileum	Posterior vagal trunks	Celiac ganglion through greater thoracic splanchnic nn.
First 2/3s of colon (proximal colon)	Vagus nn.	Celiac ganglion, superior mesenteric ganglion, inferior mesenteric ganglion through greater thoracic splanchnic nn.
Last 1/3 of colon (distal colon)	Pelvic splanchnic nn. through hypogastric nn. and inferior hypogastric plexus	Celiac ganglion, superior mesenteric ganglion, inferior mesenteric ganglion through greater thoracic splanchnic nn.
Spleen	Celiac plexus	Celiac plexus, through greater thoracic splanchnic nn.
Appendix	Superior mesenteric plexus	Superior mesenteric plexus
Gallbladder	Vagus n. through celiac plexus	Celiac plexus; right phrenic n. does some sensory
Liver	Vagus n. through celiac plexus	Celiac plexus; right phrenic n. does some sensory
Kidneys / Ureters	Renal plexus, vagus n.	Renal plexus through thoracic and lumbar splanchnic nn.

Odds and Ends

Inguinal Hernia

There are two types of inguinal hernias: indirect inguinal hernias and direct inguinal hernias. An inguinal hernia is a protrusion of a portion of the abdominal contents, specifically a loop of intestine or fat. An indirect inguinal hernia does not pass through the abdominal wall, while a direct inguinal hernia pushes through the posterior wall of the inguinal canal. A direct inguinal hernia will do this medial to the inferior epigastric a., which makes it within the inguinal triangle. Remember that the coverings of a direct inguinal hernia will depend on what part of the inguinal triangle the hernia passes through. The coverings of an indirect inguinal hernia are always the same, as it passes into the deep inguinal ring, goes through the inguinal canal, and emerges at the superficial ring, just like the spermatic cord. Specifically, the covers of an indirect inguinal hernia are the same as that for the spermatic cord (refer to the paragraph on the coverings of the spermatic cord for more information). It is covered externally by the internal spermatic fascia, cremaster muscle and fascia, and external spermatic fascia. If it continues through the superficial ring and goes to the scrotum (as some indirect inguinal hernias will do), it will appear between the internal spermatic fascia and parietal tunica vaginalis (refer to the layers of the wall table above for clarification if you are confused).

Let's tie up the loose ends. What are the coverings of a direct inguinal hernia? If a direct inguinal hernia enters the posterior wall medial to the inferior epigastric a., or in the lateral part of the inguinal triangle, and if it enters the superficial inguinal ring, it will be covered with transversalis fascia, internal abdominal oblique muscle, aponeurosis, and fascia, subcutaneous tissue, and skin. If a direct inguinal hernia enters the medial part of the inguinal triangle, and if it enters the superficial inguinal ring, it will be covered with the transversalis fascia, conjoint tendon, subcutaneous fat, and skin. Direct inguinal hernias rarely enter the scrotum, but if they do, their coverings vary according to where they entered the inguinal triangle. Covering that is beyond this handout.

Structures Tagged on Weekend Exams

These structures are in order of number of times tagged on the weekend practice exams over the past several years. Please remember that this is a very incomplete list, and that many other structures will appear on the actual exam. I included this in the packet to give you an idea of some of the structures that are tagged. Remember, even though a structure easy to identify may appear on the exam, the question associated with it may be difficult.

Very common

- spermatic cord
- ilioinguinal n.
- round ligament of uterus

Common

- celiac trunk
- epiploic foramen
- falx inguinalis
- greater thoracic splanchnic n.
- inferior mesenteric a.
- omental apron
- spleen
- superficial inguinal ring
- tunica vaginalis testis
- arcuate line
- celiac ganglion
- cisterna chyli
- coccygeus m.
- corpus cavernosum penis
- deep dorsal v. of penis
- deep inguinal ring
- descending colon
- ductus deferens
- hypogastric n.
- left coronary a.
- left gastric a.
- ligamentum teres hepatis
- linea alba
- lumbar sympathetic trunk
- lumbosacral trunk
- main pancreatic duct
- obliterated umbilical a.
- obturator fascia
- obturator n.
- ovary
- pancreas
- phrenicocolic ligament
- piriformis m.
- portal triad
- prostate gland
- pyloric antrum
- pylorus of stomach
- rectus sheath
- right coronary a.
- right gastroepiploic a.
- seminal vesicle

- splenic a.
- subcostal n.
- superior gluteal a.
- thoracic duct
- tunica dartos scroti
- umbilicus
- uterine tube
- uterus

Somewhat Common

- anal column
- anterior interventricular a.
- anterior leaflet of tricuspid valve
- aorta
- aortic arch
- aortic impression
- aortic valve cusps
- apex of heart
- arch of azygous v.
- articular facet on transv. process of thoracic vert.
- azygos v.
- bicuspid valve
- body of thoracic vertebrae
- brachiocephalic a.
- bronchial a.
- bulbospongiosus m.
- cervix
- coronary sinus
- cortex of kidney
- costal groove on rib
- ejaculatory duct
- eparterial bronchus
- epiploic appendages on tenia
- external intercostal m.
- gall bladder
- gastroduodenal a.
- genital branch of genitofemoral n.
- genitofemoral n.
- greater duodenal papilla
- hemiazygos v.
- hepatogastric ligament
- hilum of kidney
- iliac crest
- iliococcygeus m.
- inferior epigastric a.
- inferior pulmonary v.
- inferior thyroid vv.
- inguinal ligament
- intercostal n.

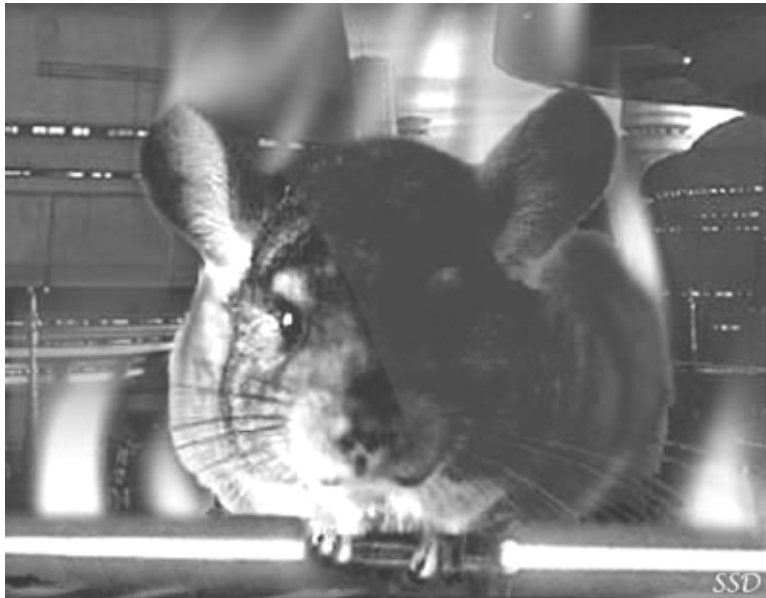
- ischiorectal fossa
- lacunar ligament
- lateral femoral cutaneous n.
- left margin of heart
- ligamentum arteriosum
- lumbar a.
- medulla of kidney
- moderator band
- obturator internus m.
- parietal peritoneum
- pectinate line of anal canal
- pectinate m.
- pericardium
- phrenic n.
- pleural surface of diaphragm
- portal v.
- posas minor m.
- posterior intercostal a.
- pulmonary a.
- quadrate lobe of liver
- quadratus lumborum m.
- recurrent laryngeal n.
- right crus of diaphragm
- right ventricle of heart
- root of lung
- Scarpa's fascia
- splenic v.
- sternal angle
- superficial epigastric v.
- superior epigastric a.
- superior intercostal v.
- superior mesenteric a.
- superior pancreaticoduodenal aa.
- suprarenal gland
- suprarenal v.
- suspensory ligament of duodenum
- testicular v.
- thoracic sympathetic trunk
- thymus gland
- trachea
- transverse mesocolon
- transverse sinus of heart
- transversus abdominis m.
- transversus thoracis m.
- trigone of urinary bladder
- ureter
- urogenital diaphragm
- vagus n.
- vermiform appendix

Disclaimer

The material in this handout is accurate to the best of my knowledge. I have reviewed several textbooks, the handouts from class, my own notes, and other sources. However, the greatest variation in anatomy is semantics – I may call a structure by one name, while another person calls it by a different name. There is also variation in where the structure may originate from, as is true with the multiple variations in the arteries coming from the internal iliac artery. As always, take all of the material in my handouts and review sessions with a grain of salt. Check the facts in Essentials of Clinical Anatomy by Moore and Agur, and your dissector. In the event of a discrepancy, go with what the professor says, or ask the course coordinator for clarification. You are ultimately responsible for this material. By opening this document, you understand and accept this disclaimer.

(And who said that I couldn't be a lawyer?)

Think Anatomy



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