

Three Phase CEUs Presents:

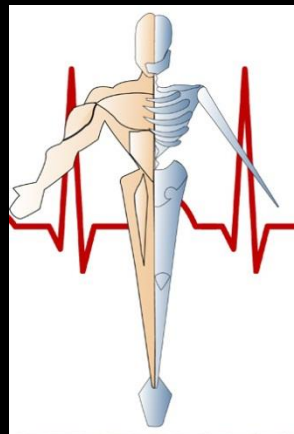
Topics in Radiography

Volume III ©

‘Mastery Test’

by

John Fleming, M.Ed., RT(R)(MR)(CT)



Please scroll down to proceed.

Forward:

The premise behind the creation of this tutorial is to provide imaging professionals with access to high quality yet affordable continuing education.

Our courses qualify as Category A (technical) points for the following: all ARRT recognized imaging modalities, ARRT-CQR, FDOH-Bureau of Radiation Control, NMTCB, and RCIS.

According to the ARRT, a current license as a general radiographer with the FDOH is required to qualify to complete this course.
This rule does not apply to either the NMTCB or RCIS credentials.

Please scroll down to proceed.

Payment Methods:

1. Venmo: @John-Fleming-Three-Phase-CEUs (press to copy & paste)
2. Cash App: \$ThreePhaseCEUs (press to copy & paste)
3. Zelle: (727) 744-7946
4. Apple Pay: (727) 744-7946
5. PayPal: (727) 744-7946
6. Check: please make your check payable to, “Three Phase CEUs” and return it along with your answer sheet to the address below.

Three Phase CEUs
c/o John Fleming
80 Bay Woods Drive
Safety Harbor, FL 34695

Text John Fleming at (727) 744-7946 for our current prices.

Please scroll down to proceed.

Mastery Test Instructions:

Please place an “X” over the correct response on your answer sheet. Feel free to write your answer down on a blank piece of paper if you do not have access to a printer. That is just as good.

After you complete your answer sheet, just snap a picture of it with your cell phone and text it to John Fleming at (727) 744-7946. The picture does not need to be perfect, only legible.

We will return your certificate of completion to you via e-mail after we receive your payment and completed answer sheet.

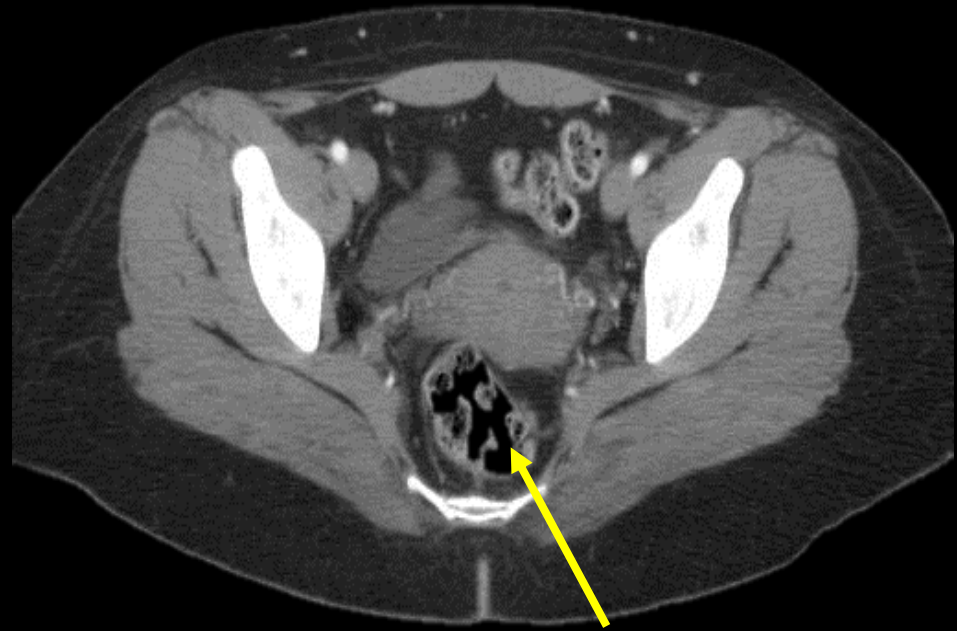
Thanks for your support and be sure to reach out via text message if you encounter any snags.

Please scroll down to proceed.

Question #1:

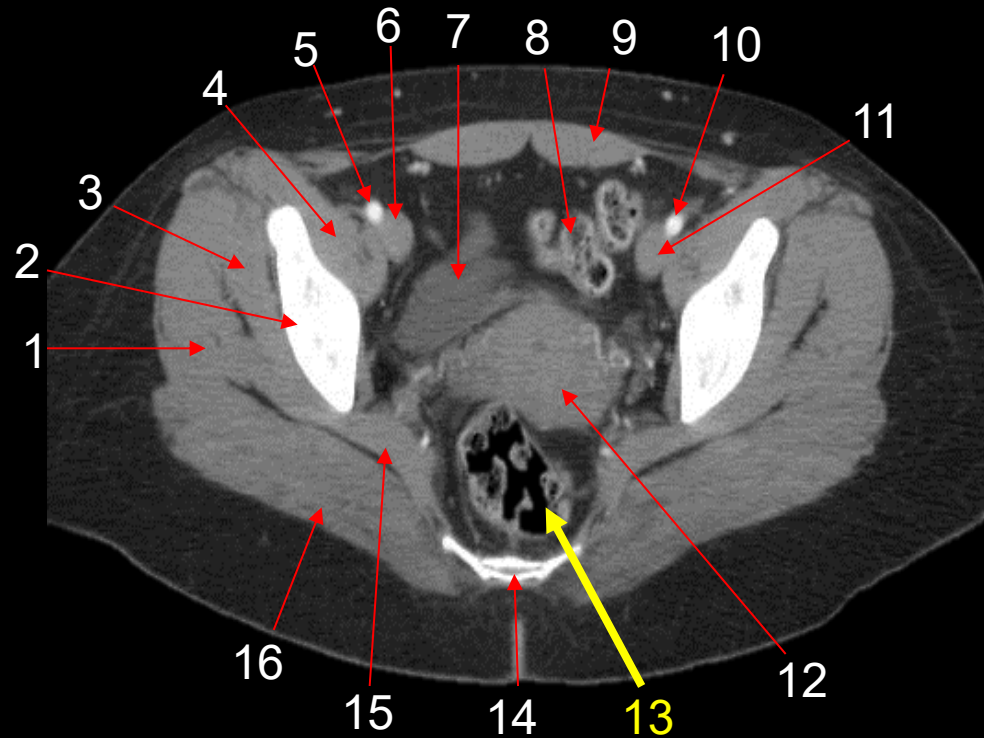
The arrow is pointing to the:

- a. rectum.
- b. urinary bladder.
- c. uterus.
- d. sigmoid colon.



Question #1: Review

1. Gluteus Medius Muscle
2. Ilium
3. Gluteus Minimus Muscle
4. Iliopsoas Muscle
5. Right External Iliac Artery
6. Right External Iliac Vein
7. Bladder
8. Sigmoid Colon
9. Rectus Abdominis Muscle
10. Left External Iliac Artery
11. Left External Iliac Vein
12. Uterus
13. Rectum
14. Coccyx
15. Piriformis Muscle
16. Gluteus Maximus Muscle

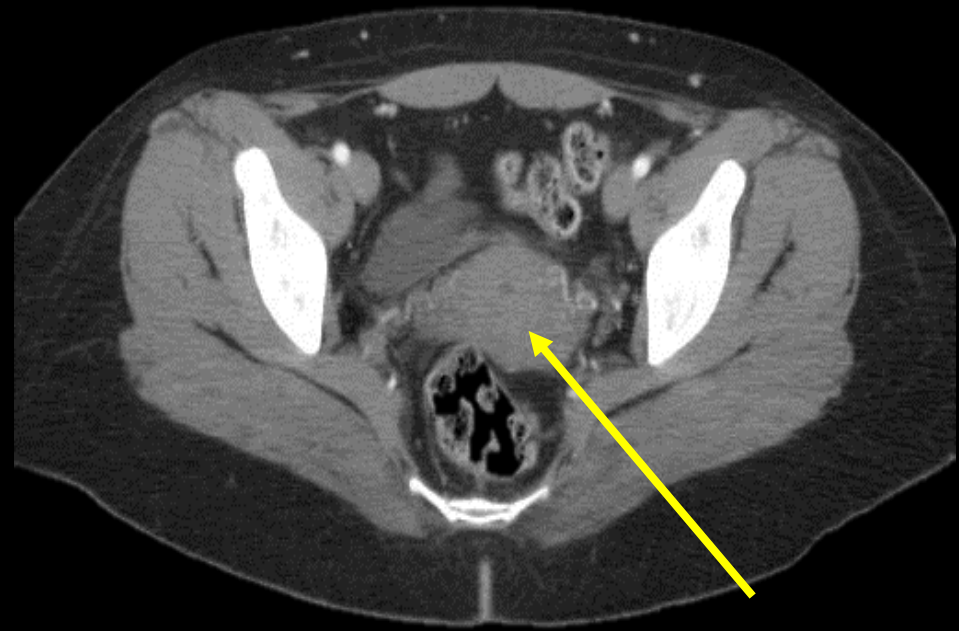


Axial Female Pelvis

Question #2:

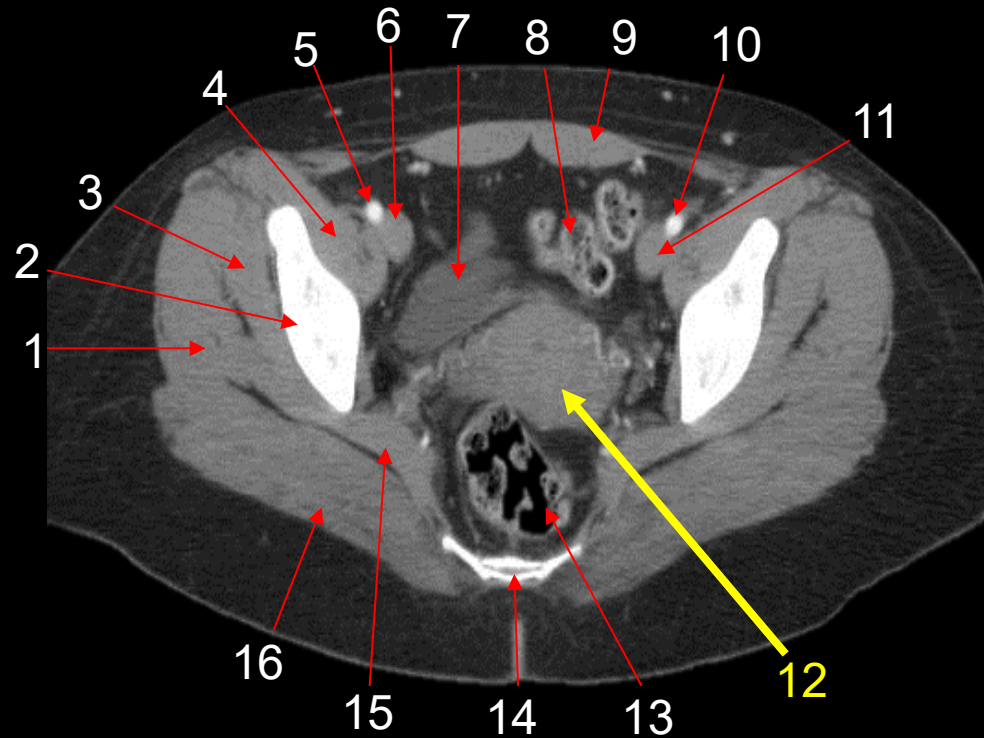
The arrow is pointing to the:

- a. urinary bladder.
- b. uterus.
- c. sigmoid colon.
- d. rectum.



Question #2: Review

1. Gluteus Medius Muscle
2. Ilium
3. Gluteus Minimus Muscle
4. Iliopsoas Muscle
5. Right External Iliac Artery
6. Right External Iliac Vein
7. Bladder
8. Sigmoid Colon
9. Rectus Abdominis Muscle
10. Left External Iliac Artery
11. Left External Iliac Vein
12. Uterus
13. Rectum
14. Coccyx
15. Piriformis Muscle
16. Gluteus Maximus Muscle



Axial Female Pelvis

Question #3:

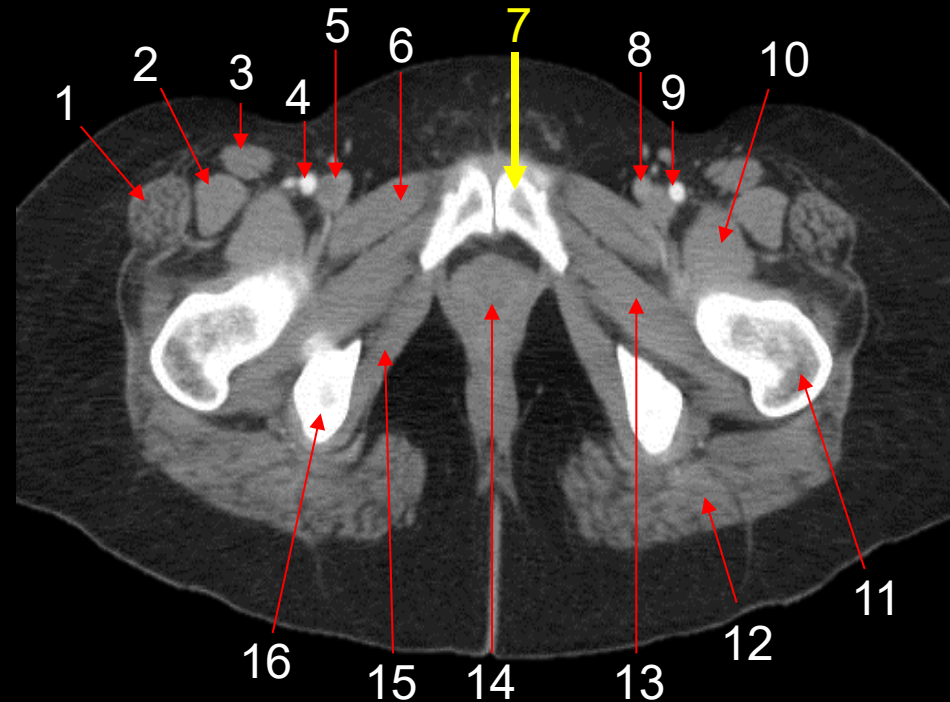
The arrow is pointing to the:

- a. obturator foramen.
- b. urinary bladder.
- c. symphysis pubis.
- d. ischium.



Question #3: Review

1. Tensor Fascia Lata Muscle
2. Rectus Femoris
3. Sartorius Muscle
4. Right Femoral Artery
5. Right Femoral Vein
6. Pectineus Muscle
7. Pubis
8. Left Femoral Vein
9. Left Femoral Artery
10. Iliopsoas Muscle
11. Femur
12. Gluteus Maximus Muscle
13. Obturator Externus Muscle
14. Vagina
15. Obturator Internus Muscle
16. Ischium

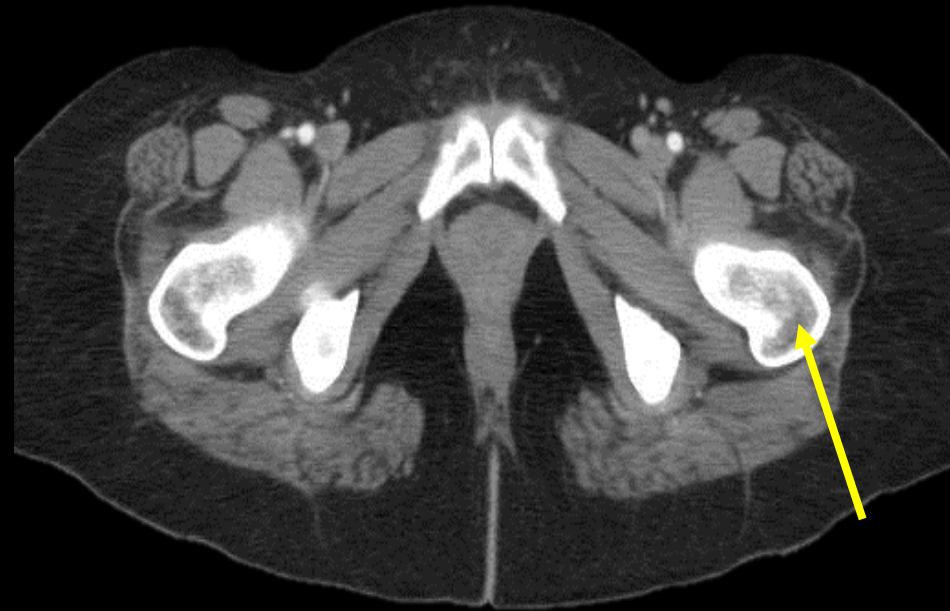


Axial Female Pelvis

Question #4:

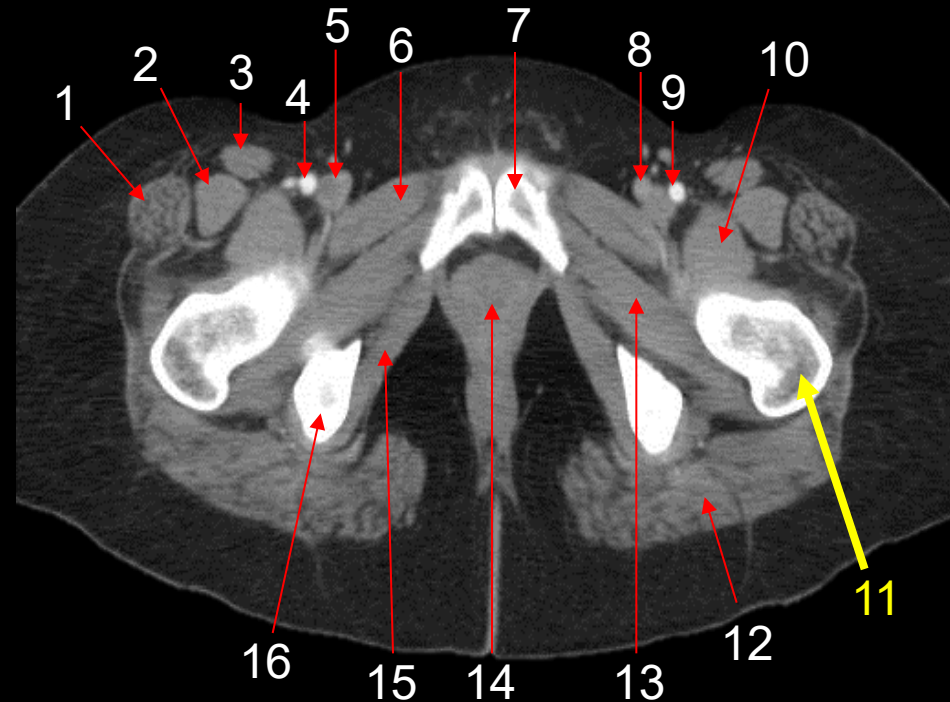
The arrow is pointing to the:

- a. femur.
- b. ischium.
- c. iliopsoas muscle.
- d. obturator foramen.



Question #4: Review

1. Tensor Fascia Lata Muscle
2. Rectus Femoris
3. Sartorius Muscle
4. Right Femoral Artery
5. Right Femoral Vein
6. Pectineus Muscle
7. Pubis
8. Left Femoral Vein
9. Left Femoral Artery
10. Iliopsoas Muscle
11. Femur
12. Gluteus Maximus Muscle
13. Obturator Externus Muscle
14. Vagina
15. Obturator Internus Muscle
16. Ischium

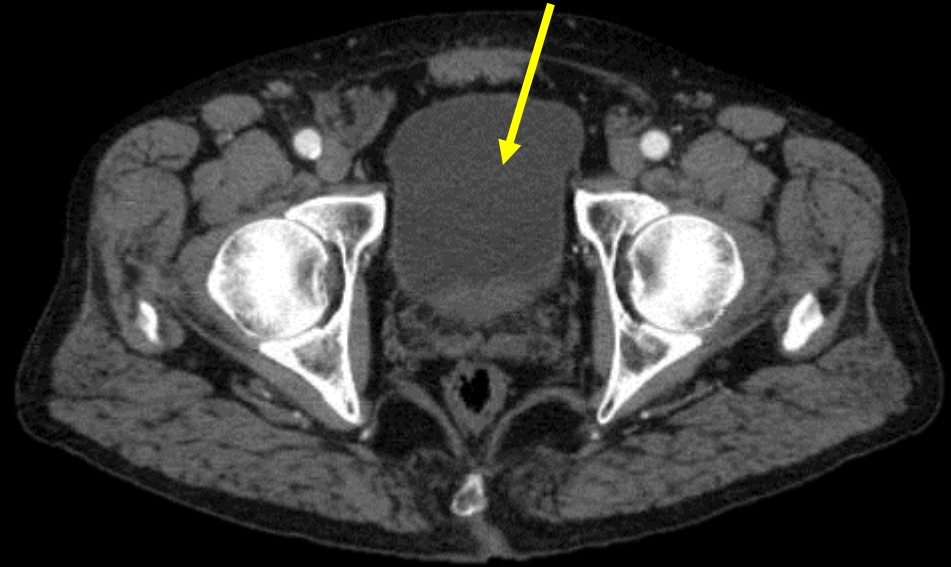


Axial Female Pelvis

Question #5:

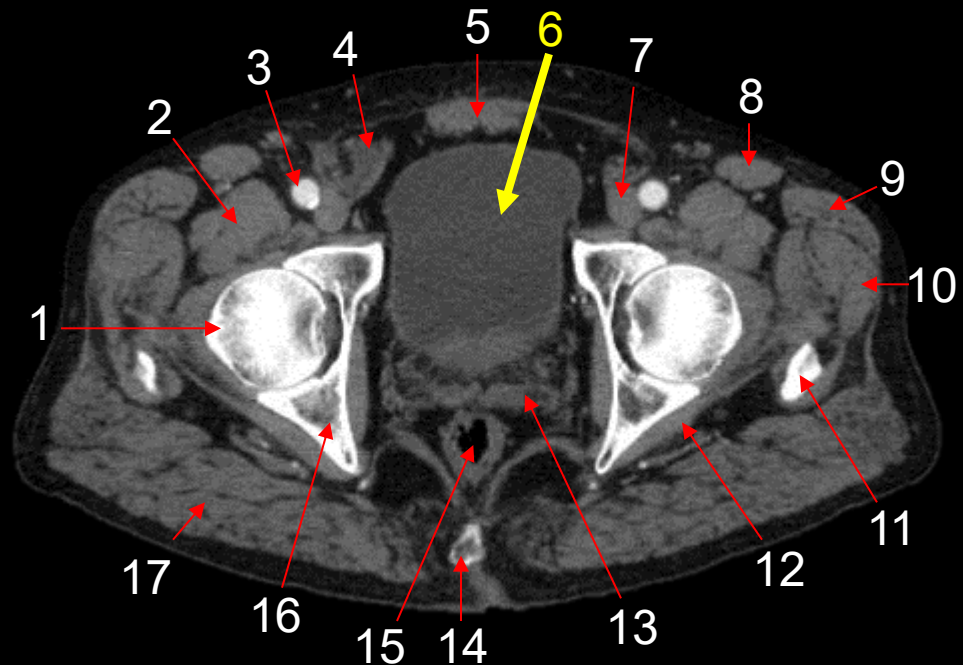
The arrow is pointing to the:

- a. rectus abdominis muscle.
- b. rectum.
- c. prostate gland.
- d. urinary bladder.



Question #5: Review

1. Femoral Head
2. Iliopsoas Muscle
3. Right External Iliac Artery
4. Spermatic Cord
5. Rectus Abdominis Muscle
6. Urinary Bladder
7. Left External Iliac Vein
8. Sartorius Muscle
9. Tensor Fasciae Latae Muscle
10. Gluteus Medius Muscle
11. Greater Trochanter
12. Obturator Internus Muscle
13. Seminal Vesicle
14. Coccyx
15. Rectum
16. Ischium
17. Gluteus Maximus Muscle

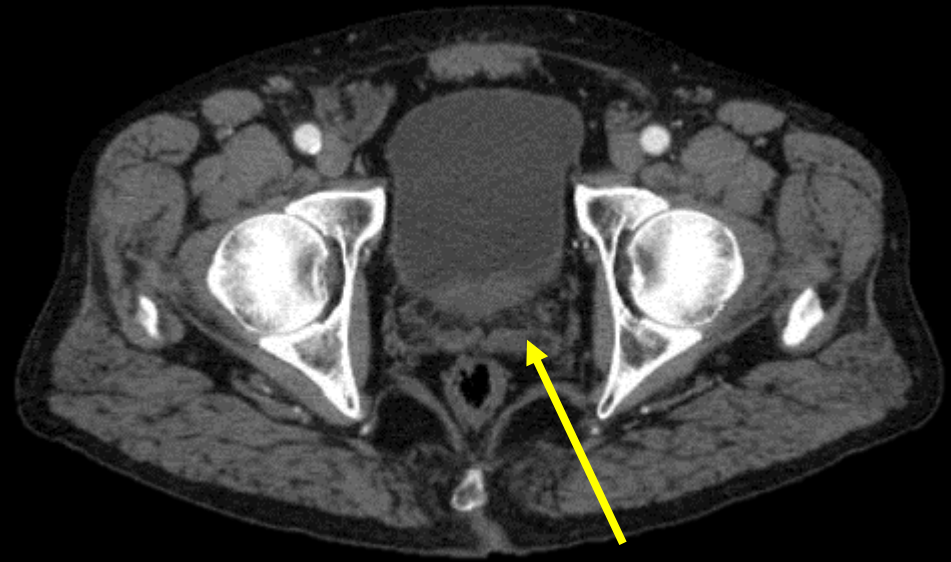


Axial Male Pelvis

Question #6:

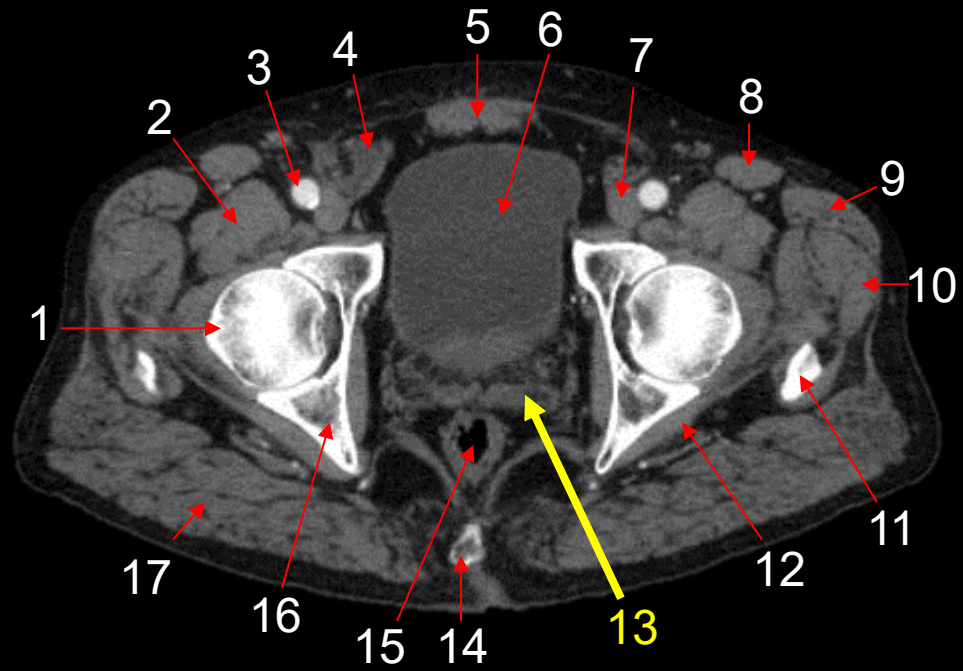
The arrow is pointing to the:

- a. urinary bladder.
- b. seminal vesicle.
- c. rectum.
- d. sigmoid colon.



Question #6: Review

1. Femoral Head
2. Iliopsoas Muscle
3. Right External Iliac Artery
4. Spermatic Cord
5. Rectus Abdominis Muscle
6. Bladder
7. Left External Iliac Vein
8. Sartorius Muscle
9. Tensor Fasciae Latae Muscle
10. Gluteus Medius Muscle
11. Greater Trochanter
12. Obturator Internus Muscle
13. Seminal Vesicle
14. Coccyx
15. Rectum
16. Ischium
17. Gluteus Maximus Muscle

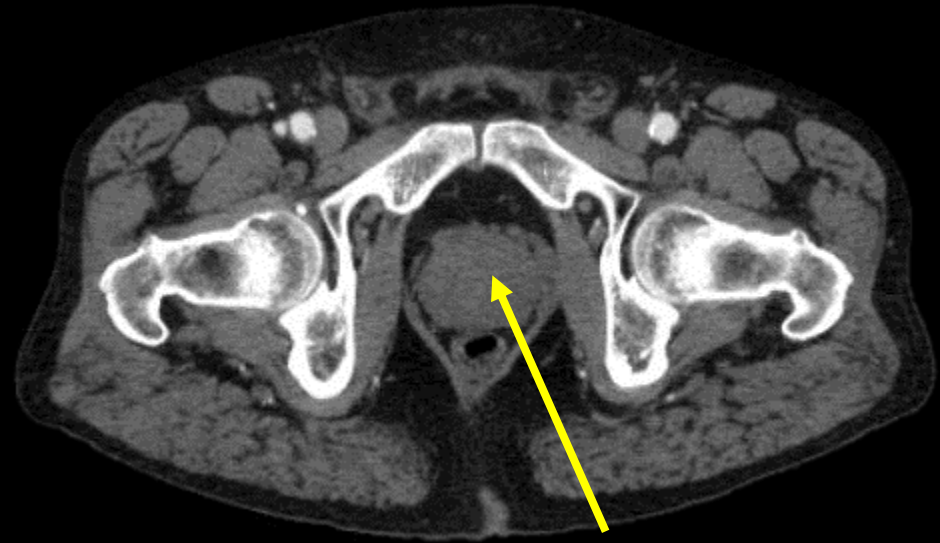


Axial Male Pelvis

Question #7:

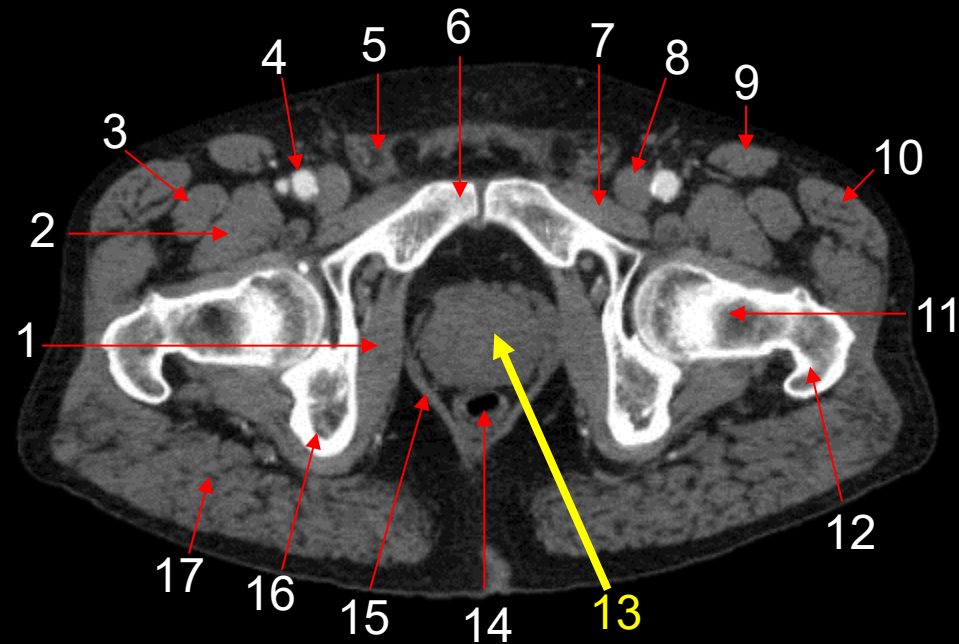
The arrow is pointing to the:

- a. prostate gland.
- b. rectum.
- c. seminal vesicle.
- d. urinary bladder.



Question #7: Review

1. Obturator Internus Muscle
2. Iliopsoas Muscle
3. Rectus Femoris Muscle
4. Right External Iliac Artery
5. Spermatic Cord
6. Pubis
7. Pectineus Muscle
8. Left External Iliac Vein
9. Sartorius Muscle
10. Tensor Fasciae Latae Muscle
11. Femoral Neck
12. Greater Trochanter
13. Prostate Gland
14. Rectum
15. Levator Ani Muscle
16. Ischium
17. Gluteus Maximus Muscle

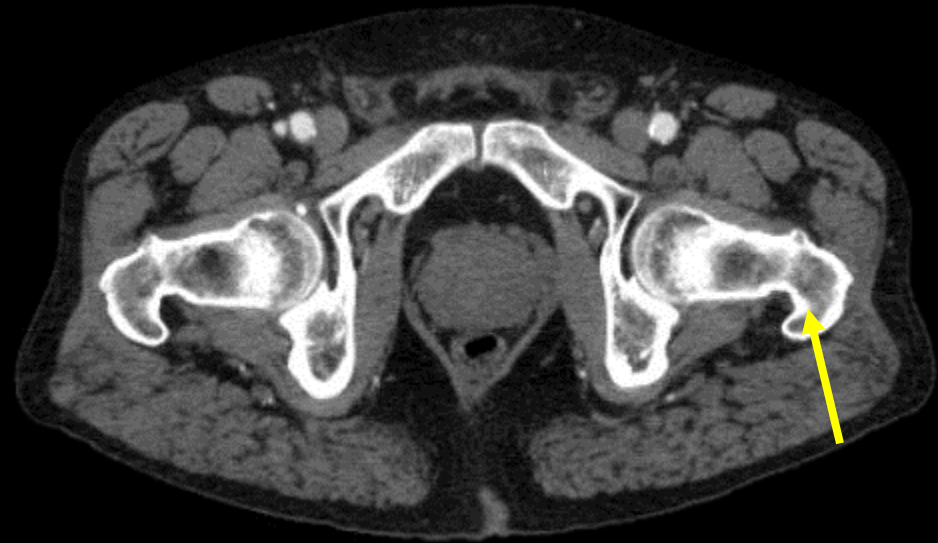


Axial Male Pelvis

Question #8:

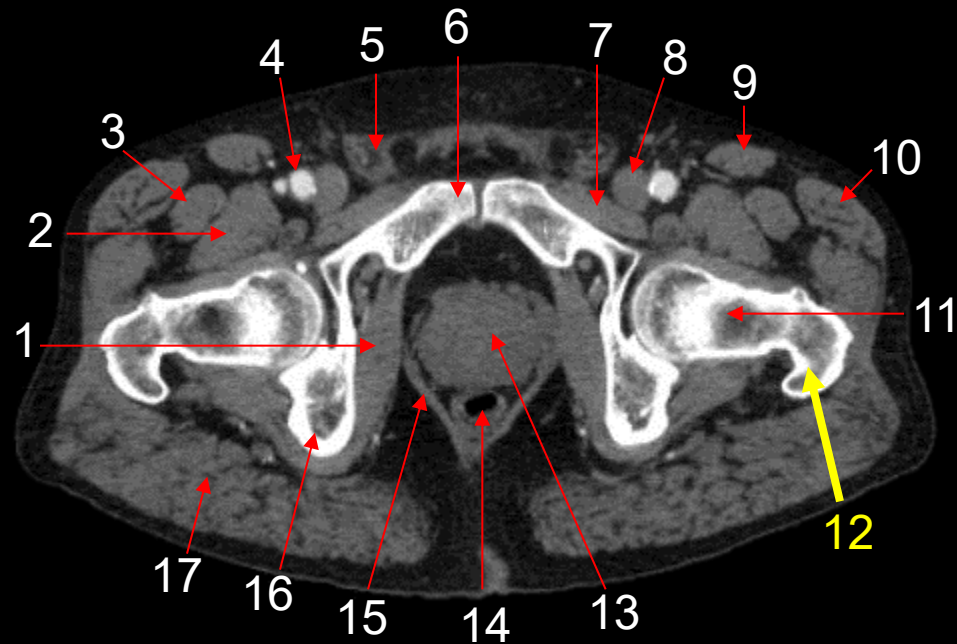
The arrow is pointing to the:

- a. intertrochanteric crest.
- b. head of the femur.
- c. neck of the femur.
- d. greater trochanter.



Question #8: Review

1. Obturator Internus Muscle
2. Iliopsoas Muscle
3. Rectus Femoris Muscle
4. Right External Iliac Artery
5. Spermatic Cord
6. Pubis
7. Pectineus Muscle
8. Left External Iliac Vein
9. Sartorius Muscle
10. Tensor Fasciae Latae Muscle
11. Femoral Neck
12. Greater Trochanter
13. Prostate Gland
14. Rectum
15. Levator Ani Muscle
16. Ischium
17. Gluteus Maximus Muscle



Axial Male Pelvis

Question #9:

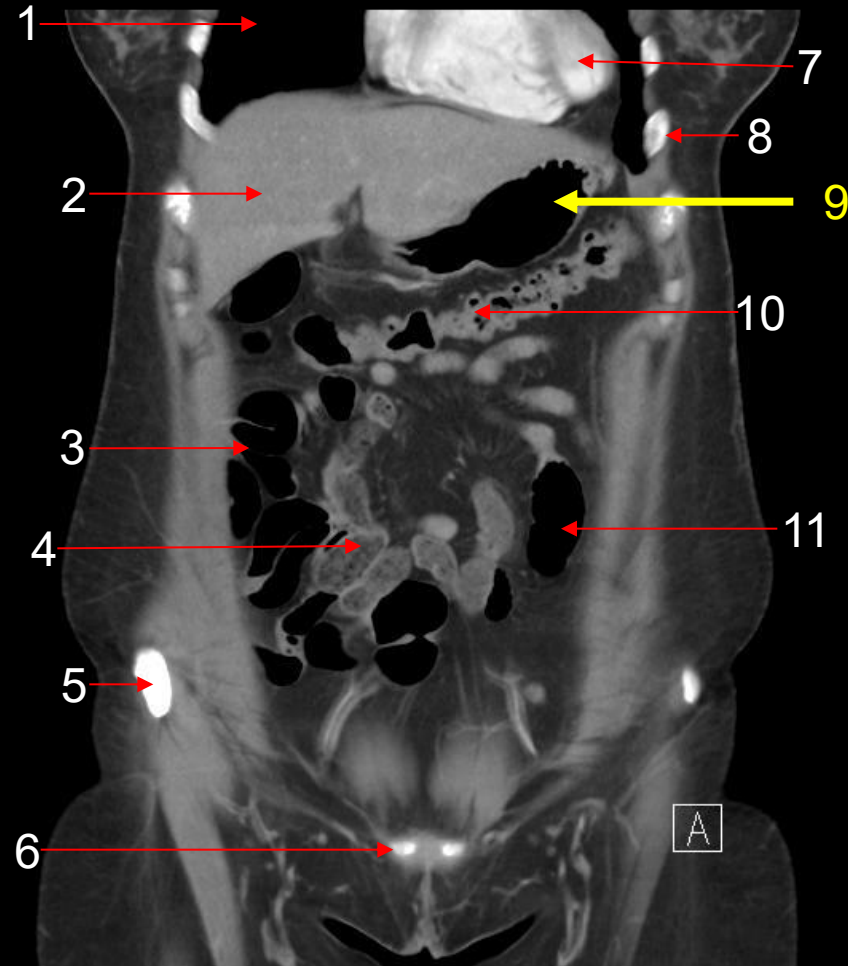
The arrow is pointing to the:

- a. transverse colon.
- b. duodenum.
- c. air in stomach.
- d. spleen.



Question #9: Review

1. Right Lung
2. Liver
3. Ascending Colon
4. Small Bowel
5. Ilium
6. Pubis
7. Heart
8. Rib
9. Air in Stomach
10. Transverse Colon
11. Descending Colon



Coronal Female Abdomen/Pelvis

Question #10:

The arrow is pointing to the:

- a. descending colon.
- b. cecum.
- c. ascending colon.
- d. duodenum.



Question #10: Review

1. Right Lung
2. Liver
3. Ascending Colon
4. Small Bowel
5. Ilium
6. Pubis
7. Heart
8. Rib
9. Air in Stomach
10. Transverse Colon
11. Descending Colon



Coronal Female Abdomen/Pelvis

Question #11:

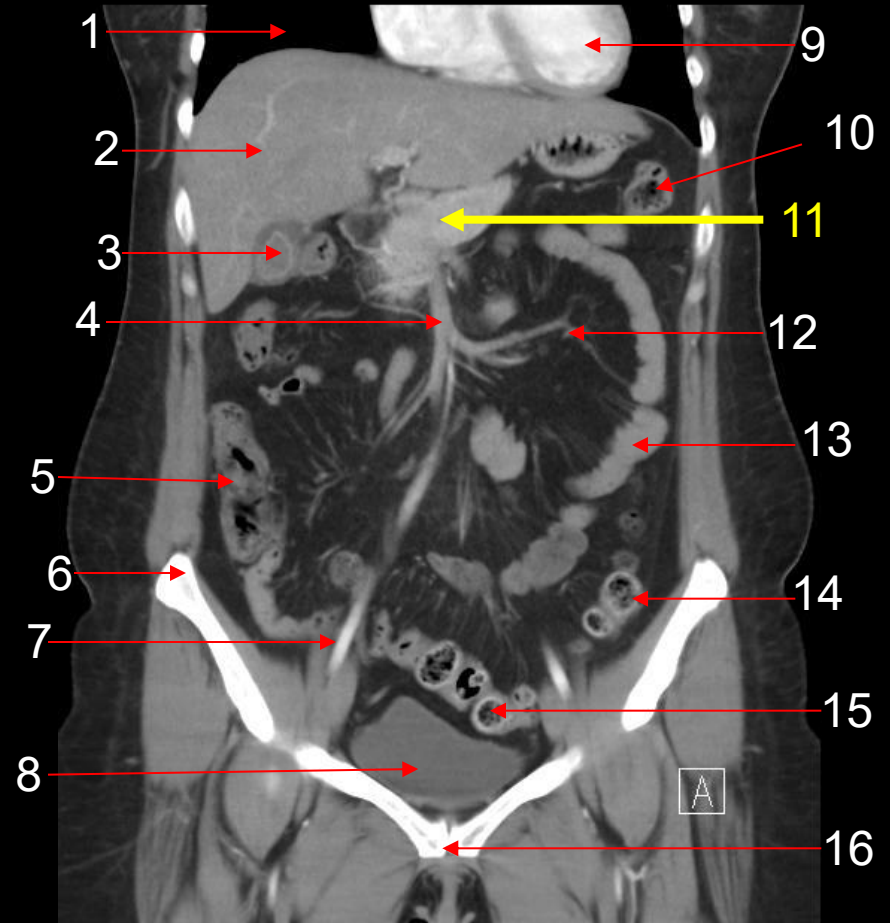
The arrow is pointing to the:

- a. pancreas.
- b. gallbladder.
- c. spleen.
- d. duodenum.



Question #11: Review

1. Right Lung
2. Liver
3. Gall Bladder
4. Superior Mesenteric Vein
5. Ascending Colon
6. Ilium
7. Right External Iliac Artery
8. Bladder
9. Heart
10. Left Colic Flexure, Colon
- 11. Pancreas**
12. Mesenteric Vessels
13. Small Bowel
14. Descending Colon
15. Sigmoid Colon
16. Symphysis Pubis



Coronal Female Abdomen/Pelvis

Question #12:

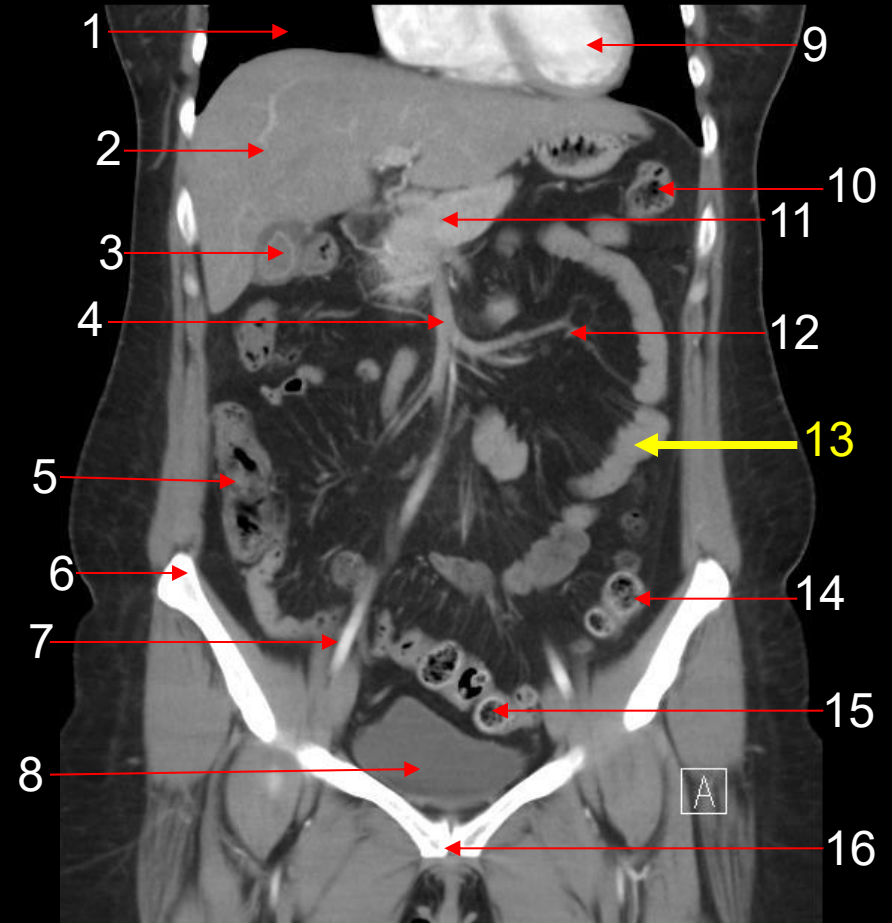
The arrow is pointing to the:

- a. descending colon.
- b. sigmoid colon.
- c. ascending colon.
- d. small intestine.



Question #12: Review

1. Right Lung
2. Liver
3. Gall Bladder
4. Superior Mesenteric Vein
5. Ascending Colon
6. Ilium
7. Right External Iliac Artery
8. Bladder
9. Heart
10. Left Colic Flexure, Colon
11. Pancreas
12. Mesenteric Vessels
13. Small Bowel
14. Descending Colon
15. Sigmoid Colon
16. Symphysis Pubis



Coronal Female Abdomen/Pelvis

Question #13:

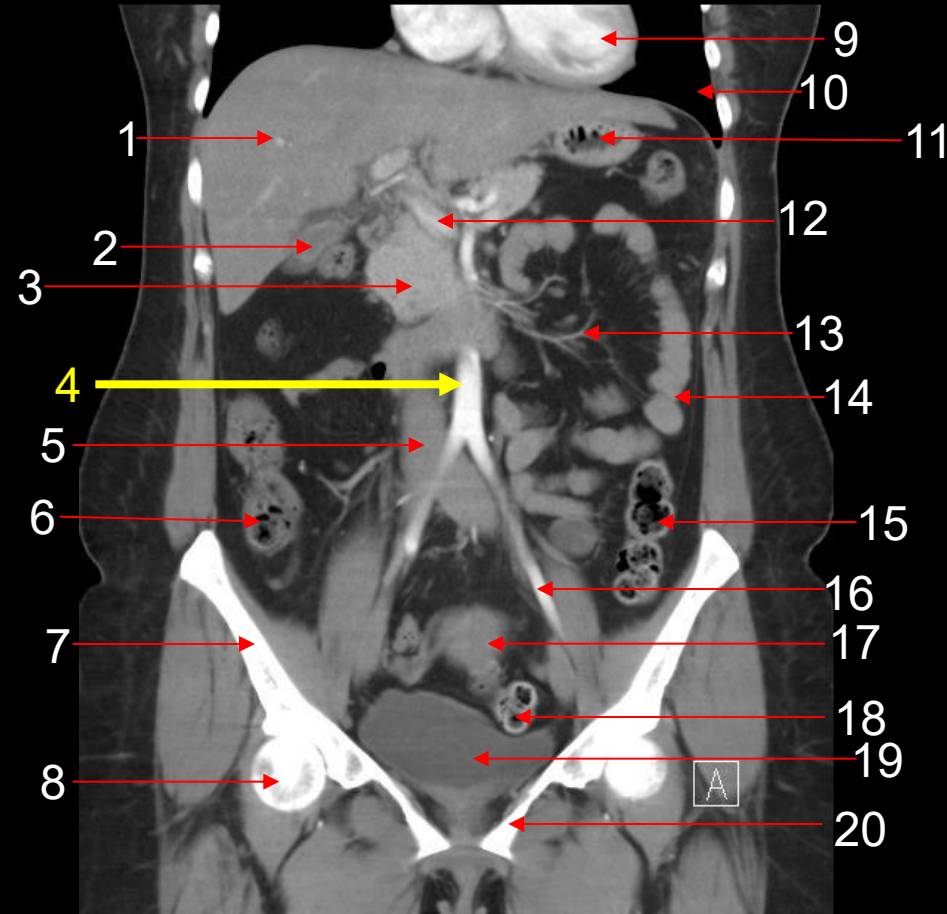
The arrow is pointing to the:

- a. inferior vena cava.
- b. abdominal aorta.
- c. common iliac artery.
- d. superior mesenteric vein.



Question #13: Review

1. Liver
2. Gall Bladder
3. Pancreas
4. Abdominal Aorta
5. Inferior Vena Cava
6. Ascending Colon
7. Ilium
8. Femoral Head
9. Heart
10. Left Lung
11. Stomach
12. Portal Vein
13. Mesenteric Vessels
14. Small Bowel
15. Descending Colon
16. Left Common Iliac Artery
17. Uterus
18. Sigmoid Colon
19. Bladder
20. Pubis

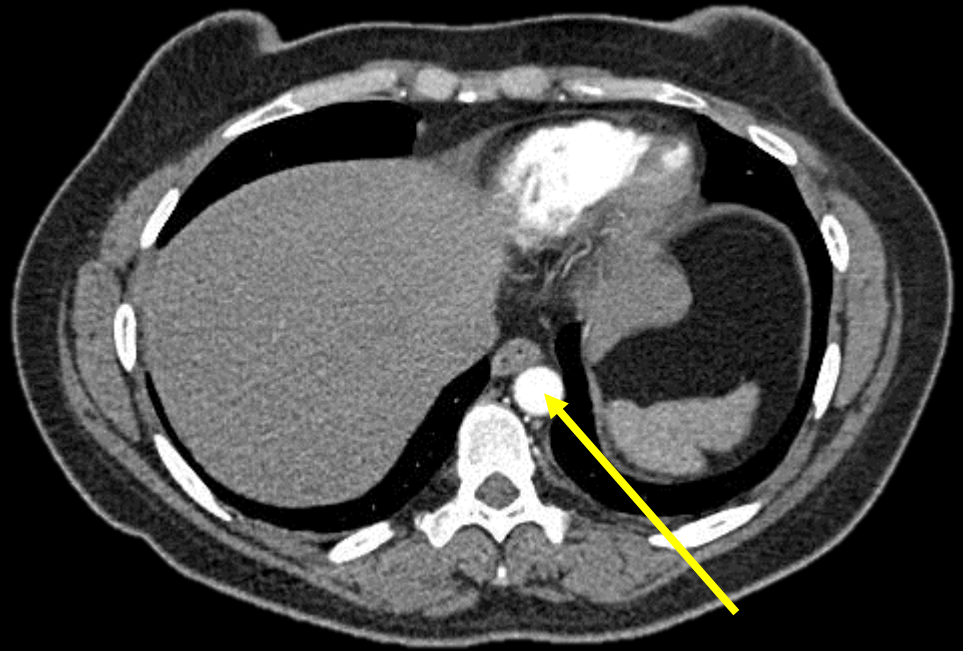


Coronal Female Abdomen/Pelvis

Question #14:

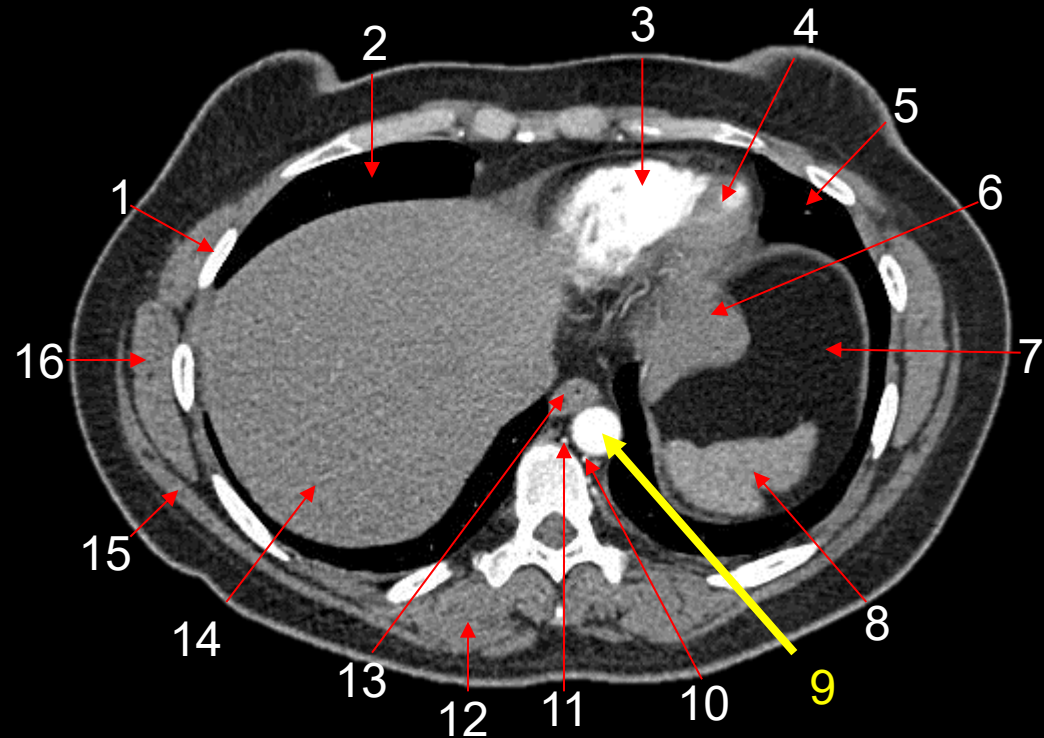
The arrow is pointing to the:

- a. aorta.
- b. esophagus.
- c. inferior vena cava.
- d. trachea.



Question #14: Review

1. Rib
2. Right Lung
3. Right Ventricle
4. Left Ventricle
5. Left Lung
6. Stomach
7. Fat
8. Spleen
9. Descending Aorta
10. Hemiazygos Vein
11. Azygos Vein
12. Erector Spinae Muscles
13. Esophagus
14. Liver
15. Latissimus Dorsi Muscle
16. Serratus Anterior Muscle



Axial Chest

Question #15:

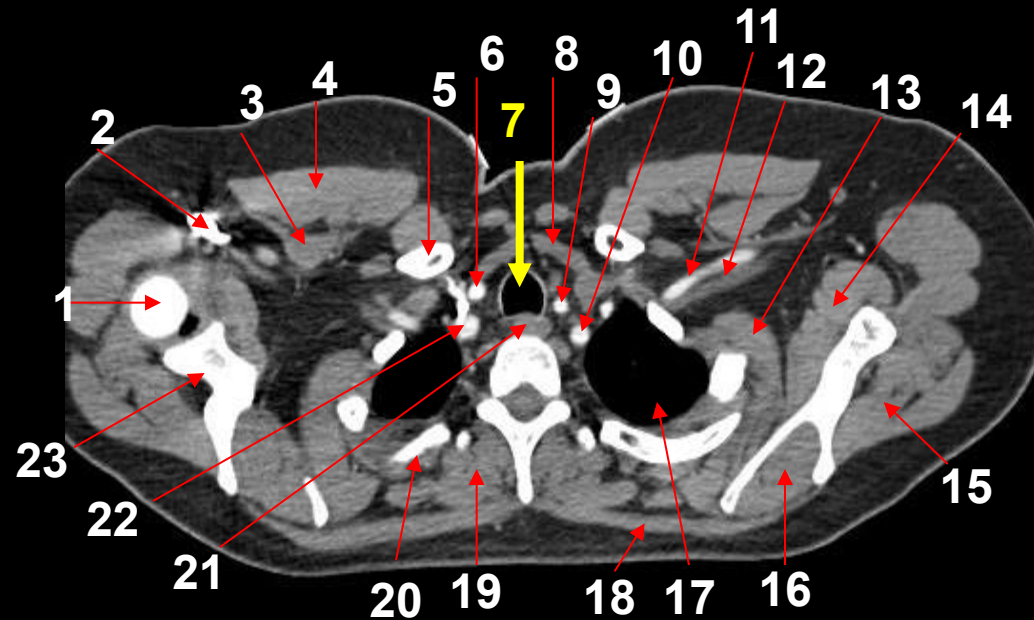
The arrow is pointing to the:

- a. lung.
- b. trachea.
- c. left subclavian artery.
- d. spine of the scapula.



Question #15: Review

1. Head of Humerus
2. Right Subclavian Vein
3. Pectoralis Minor Muscle
4. Pectoralis Major Muscle
5. Clavicle
6. Right Common Carotid Artery
7. Trachea
8. Thyroid
9. Left Common Carotid Artery
10. Left Subclavian Artery
11. Left Subclavian Artery (Lateral Portion)
12. Left Subclavian Vein
13. Serratus Anterior Muscle
14. Subscapularis Muscle
15. Infraspinatus Muscle
16. Supraspinatus Muscle
17. Left Lung
18. Trapezius Muscle
19. Erector Spinae Muscle
20. Rib
21. Esophagus
22. Right Subclavian Artery
23. Scapula



Axial Chest

Question #16:

The arrow is pointing to the:

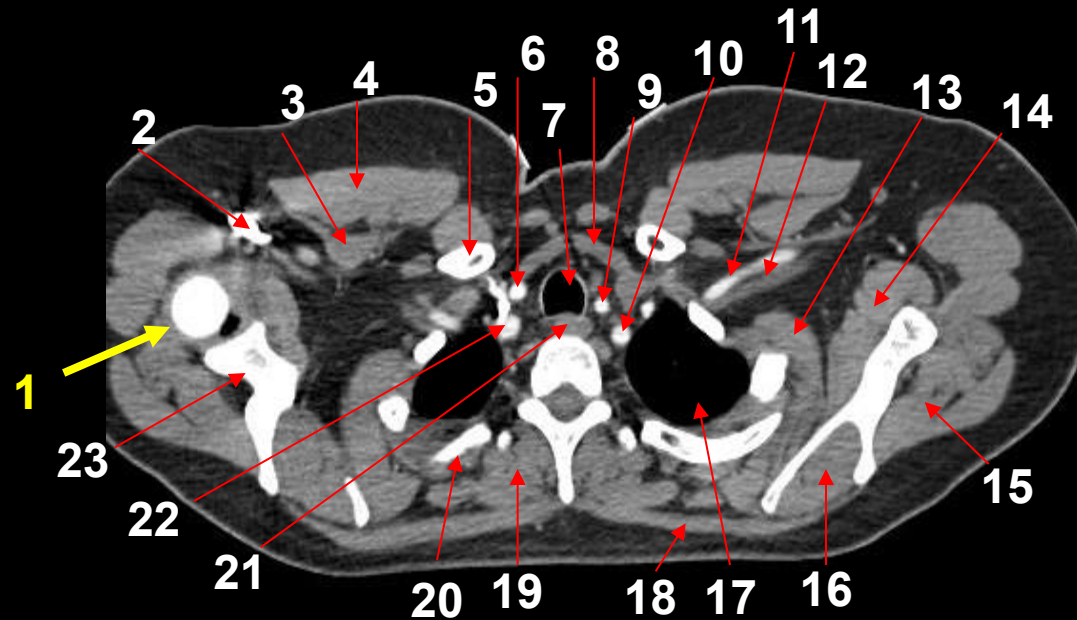
- a. scapula.
- b. clavicle.
- c. subscapularis muscle.
- d. head of the humerus.



Question #16: Review

1. Head of Humerus

2. Right Subclavian Vein
3. Pectoralis Minor Muscle
4. Pectoralis Major Muscle
5. Clavicle
6. Right Common Carotid Artery
7. Trachea
8. Thyroid
9. Left Common Carotid Artery
10. Left Subclavian Artery
11. Left Subclavian Artery (Lateral Portion)
12. Left Subclavian Vein
13. Serratus Anterior Muscle
14. Subscapularis Muscle
15. Infraspinatus Muscle
16. Supraspinatus Muscle
17. Left Lung
18. Trapezius Muscle
19. Erector Spinae Muscle
20. Rib
21. Esophagus
22. Right Subclavian Artery
23. Scapula



Axial Chest

Question #17:



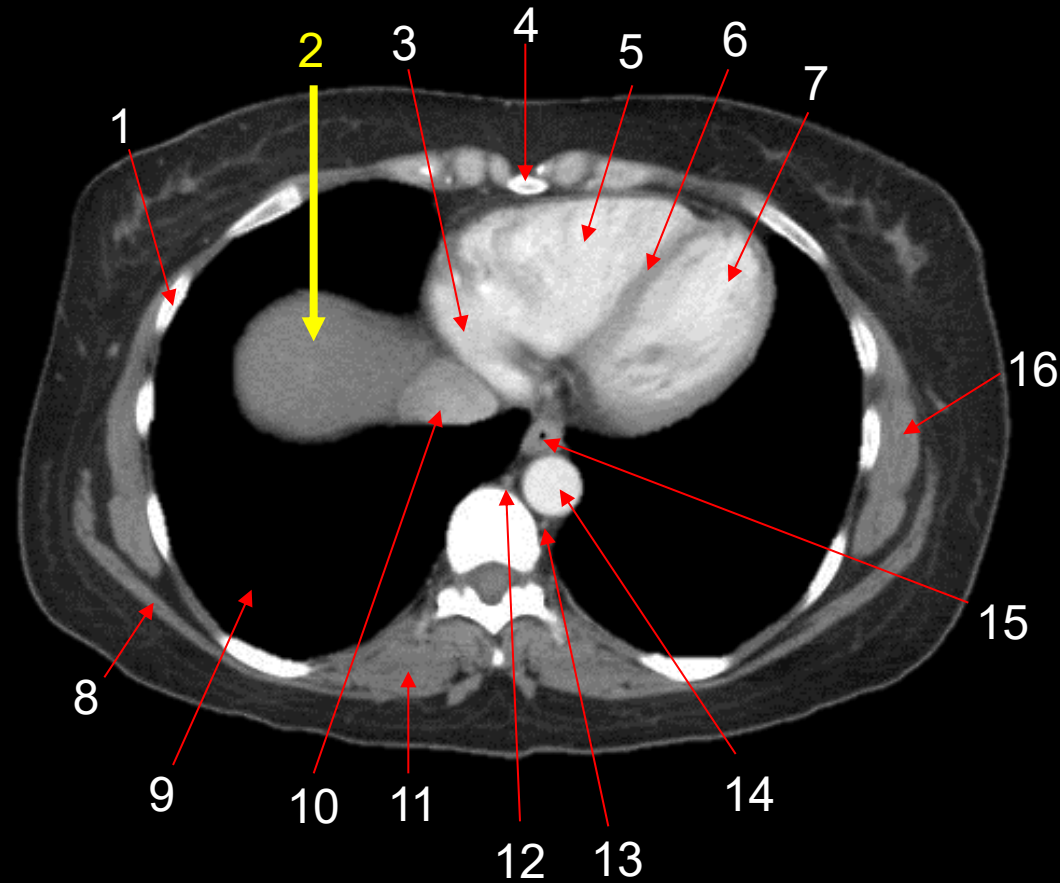
The arrow is pointing to the:

- a. liver.
- b. kidney.
- c. lung.
- d. heart.



Question #17: Review

1. Rib
2. Liver
3. Right Atrium
4. Sternum
5. Right Ventricle
6. Interventricular Septum
7. Left Ventricle
8. Latissimus Dorsi Muscle
9. Right Lung
10. Inferior Vena Cava
11. Erector Spinae Muscle
12. Azygos Vein
13. Hemiazygos Vein
14. Descending Aorta
15. Esophagus
16. Serratus Anterior Muscle



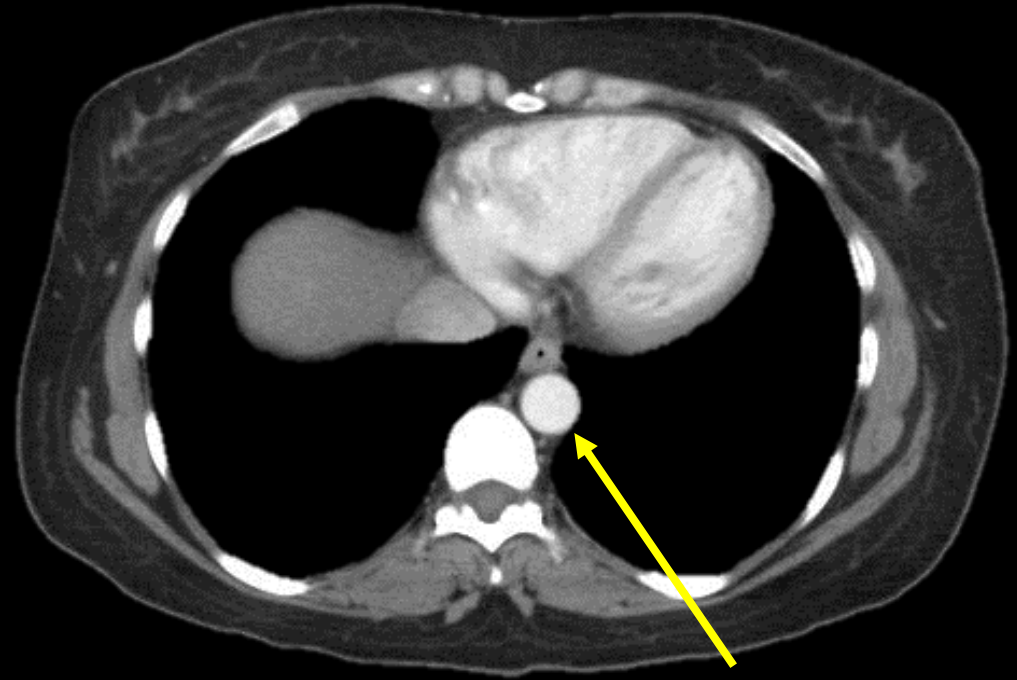
Axial Abdomen

Question #18:



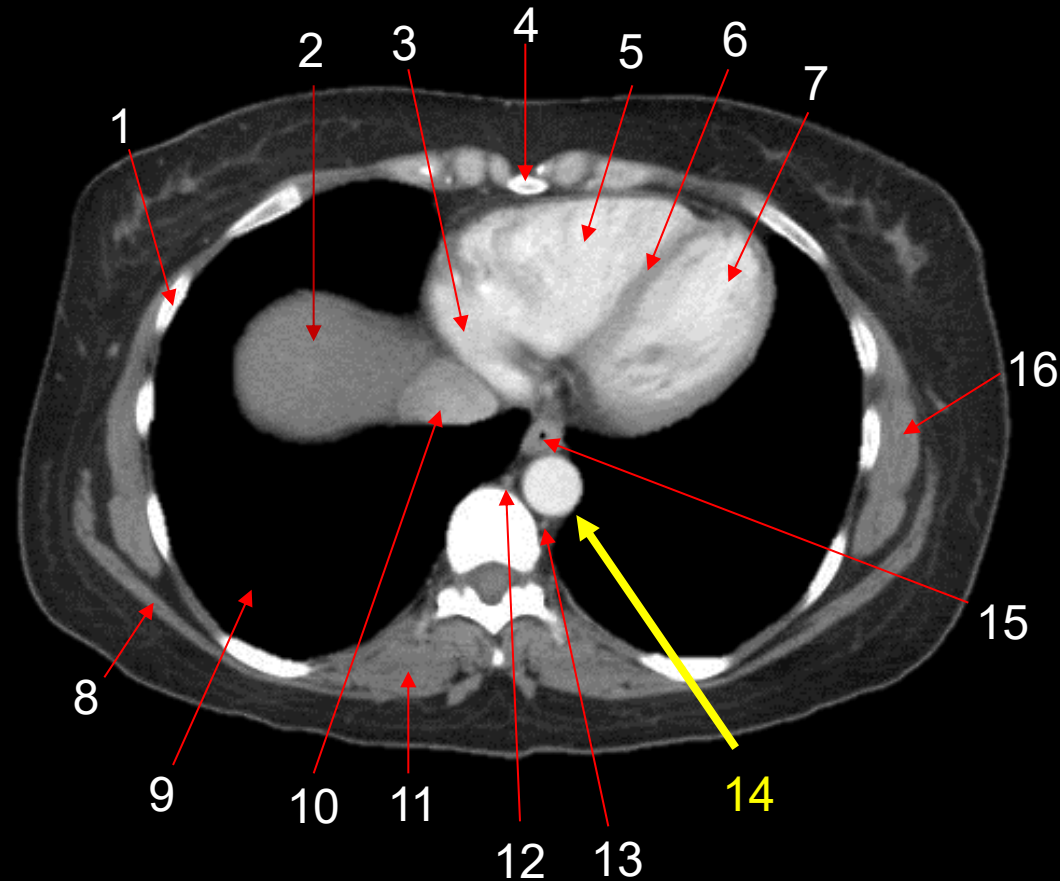
The arrow is pointing to the:

- a. esophagus.
- b. trachea.
- c. descending aorta.
- d. inferior vena cava.



Question #18: Review

1. Rib
2. Liver
3. Right Atrium
4. Sternum
5. Right Ventricle
6. Interventricular Septum
7. Left Ventricle
8. Latissimus Dorsi Muscle
9. Right Lung
10. Inferior Vena Cava
11. Erector Spinae Muscle
12. Azygos Vein
13. Hemiazygos Vein
14. Descending Aorta
15. Esophagus
16. Serratus Anterior Muscle

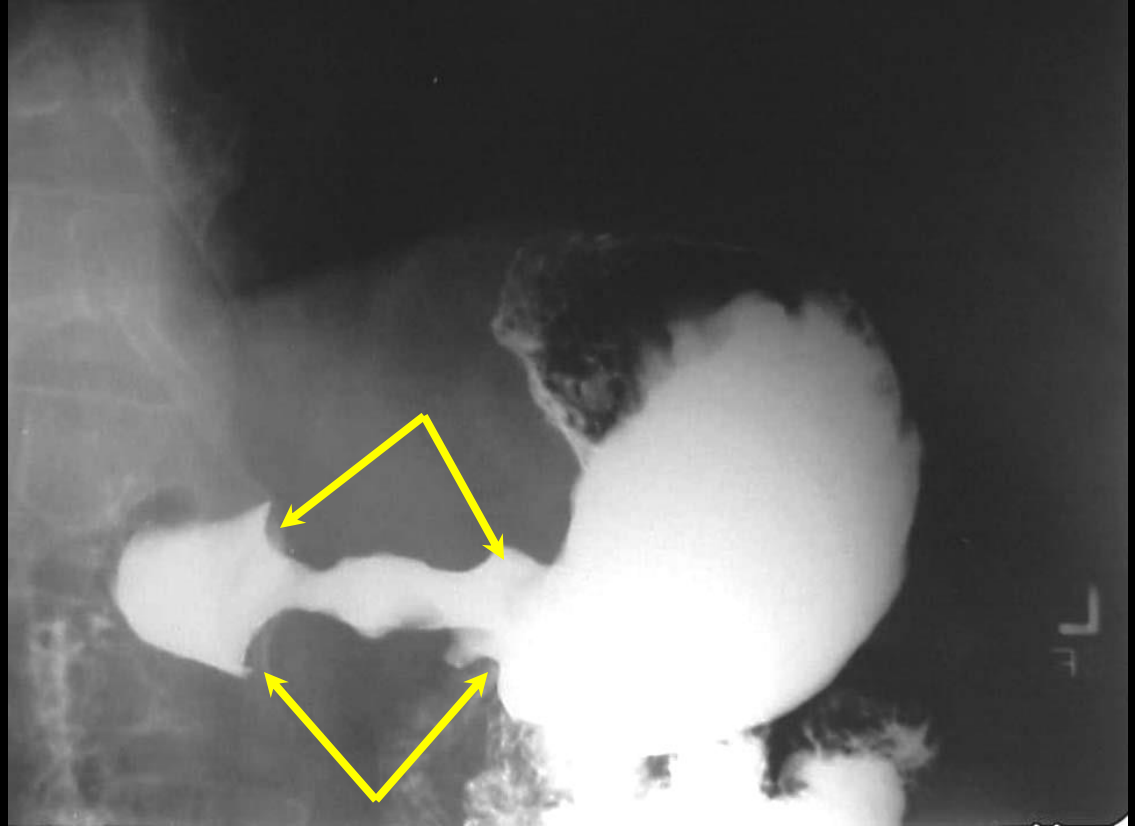


Axial Abdomen

Question #19:

The main abnormality depicted on the radiograph below (arrows) is a sessile polyp?

- a. true
- b. false



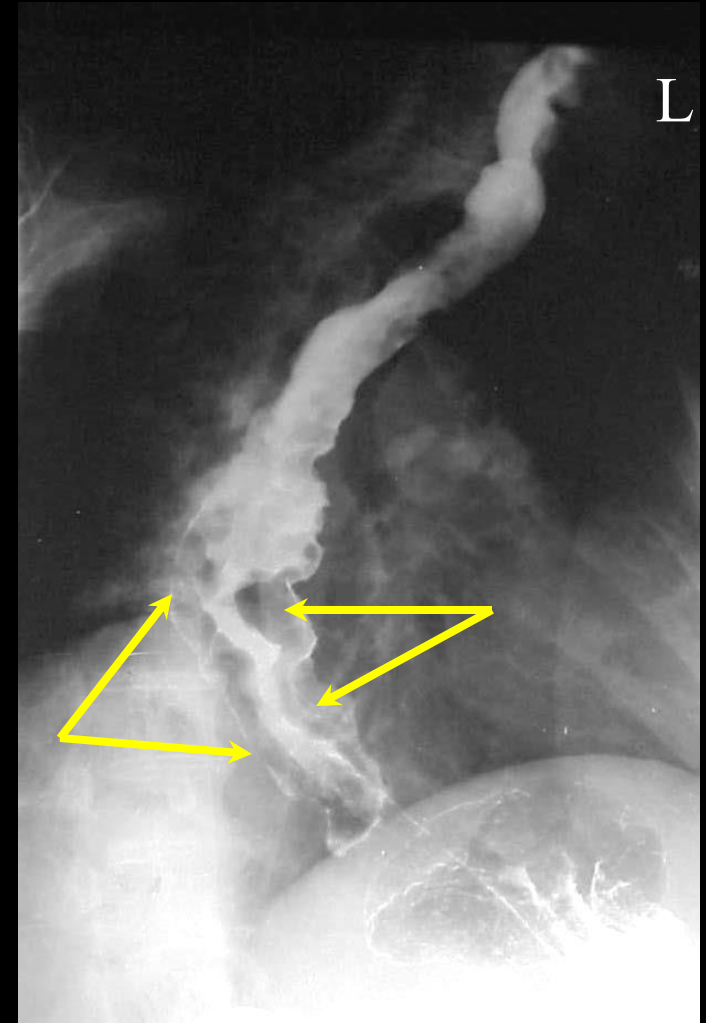
Question #19: Review

- Gastric Carcinoma is generally asymptomatic in the early stages and has generally metastasized to other areas of the body by the time it has been diagnosed.
- As a result, it has a poor prognosis.
- UGI studies present thick, irregular, and rigid (linitis plastica) folds.
- Treatment includes gastrectomy, chemotherapy, and radiation therapy.

Question #20:

The arrows on this radiograph of the esophagus are pointing to esophageal varices. Damage to which of the following organs is the likely etiology for this condition?

- a. liver
- b. kidneys
- c. pancreas
- d. adrenal glands



Question #20: Review

- Esophageal Varices are dilated, tortuous veins of the esophagus which may rupture.
- They are commonly a result of portal hypertension and/or liver cirrhosis.

Esophageal varices are often a complication of alcoholism.

Question #21:

The bowel pattern demonstrated on this radiograph is the result in the disruption of the normal peristaltic action of the intestines. Which of the following is the most likely etiology for this condition?

- a. adhesion
- b. adynamic ileus
- c. constipation
- d. intussusception



Question #21: Review

- An Adynamic or Paralytic Ileus is a type of bowel obstruction is caused by a reduction in the normal peristaltic action of the intestines.
- This loss of peristalsis will cause the lumen of both the small and large intestines to fill with air and fluid.
- Therefore, the radiographic appearance of air in both the small and large intestines is an indication of this condition.
- Some common causes of an adynamic ileus are as follows:
 - Anesthesia/Some Medications
 - Abdominal Surgery
 - Illness

Question #22:

The most likely etiology for the condition depicted on this radiograph would be which of the following?

- a. bowel adhesion
- b. Crohn's disease
- c. adenocarcinoma
- d. inguinal hernia



Question #22: Review

- A Hernia is a type of obstruction is caused by a weakening of the abdominal wall that allows a portion of the small and/or large intestine to protrude through it.
- A *reducible hernia* can be pushed back into the abdominal cavity while an *incarcerated hernia* cannot and could therefore lead to a bowel obstruction.
- A common hernia in men is called an inguinal hernia.

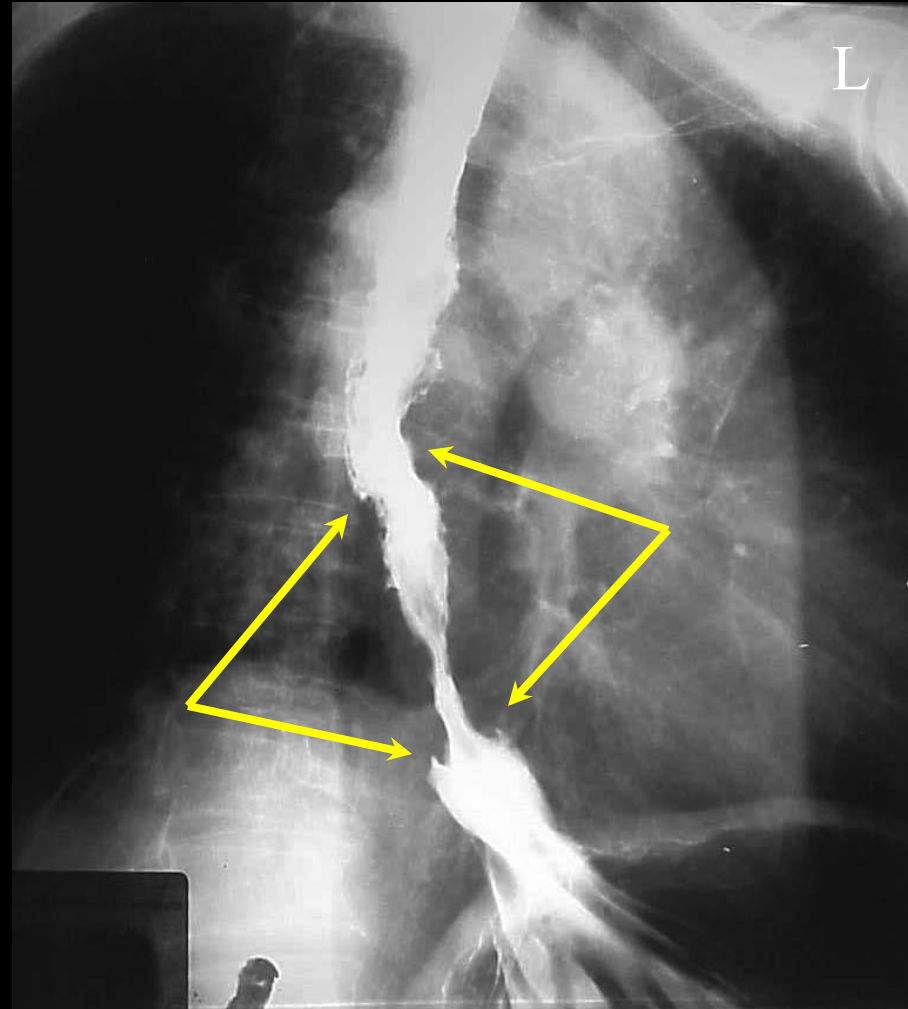
This condition occurs when the inguinal ring is compromised thus allowing a portion of the bowel to rupture through the abdominal wall.

In some instances, the bowel will descend into the scrotum.

Question #23:

Which of the following is the most likely etiology for the condition depicted (arrows) on this radiograph of the esophagus?

- a. esophagus cancer
- b. candida
- c. esophageal varices
- d. gastroesophageal reflux disease



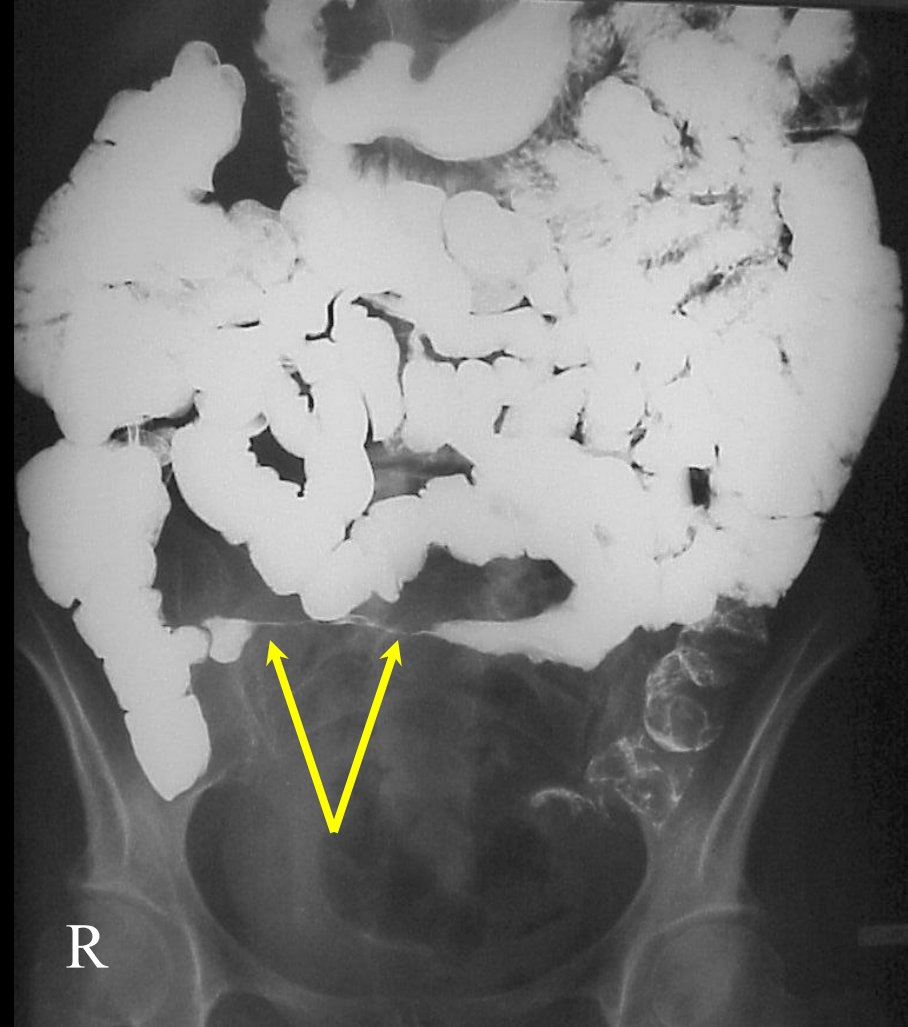
Question #23: Review

- Esophagus Cancer represents 2% of all cancers and there is a high incidence in smokers and alcoholics.
- The prognosis for this cancer is very poor as it has a 5-year survival rate of 25%.
- It presents with a very “ratty” radiographic appearance on a barium swallow.
- Treatment includes the following
 - Chemotherapy
 - Radiation Therapy
 - Esophagogastrectomy (gastric pull-up)
 - The affected portion of the esophagus is removed, and the stomach is pulled up into the thorax.

Question #24:

The arrows on this radiograph are pointing to a condition referred to as the “string sign.” This is a characteristic of which of the following diseases?

- a. Wilm’s tumor
- b. adenocarcinoma
- c. Crohn’s disease
- d. candida



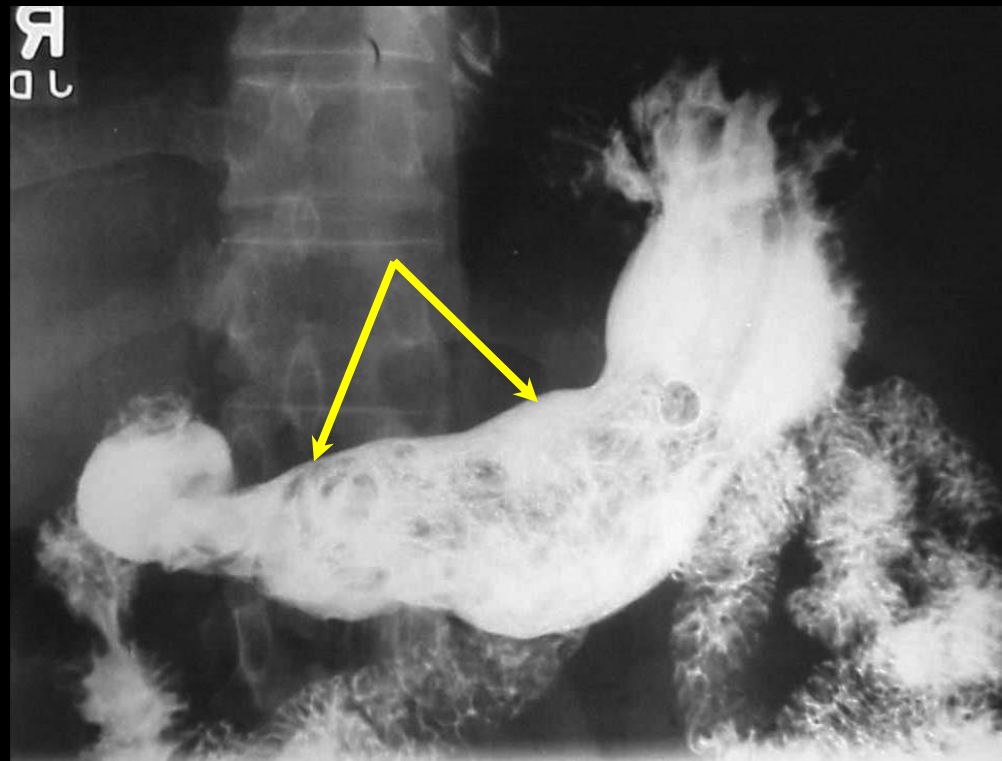
Question #24: Review

- Crohn's Disease or Regional Enteritis is characterized by a chronic inflammation of the bowel and has an unknown etiology.
- This is an example of a disease that may be the cause of a mechanical bowel obstruction.
- It is characterized by abdominal cramping, diarrhea, constipation, weight loss or gain, and vomiting.
- Fistulas may form in response to the chronic inflammation that characterizes this disease.
- There is no known cure for Crohn's disease.

Question #25:

The hard mass of entangled material found within the stomach (arrows) on the radiograph below is referred to as a bezoar.

- a. true
- b. false



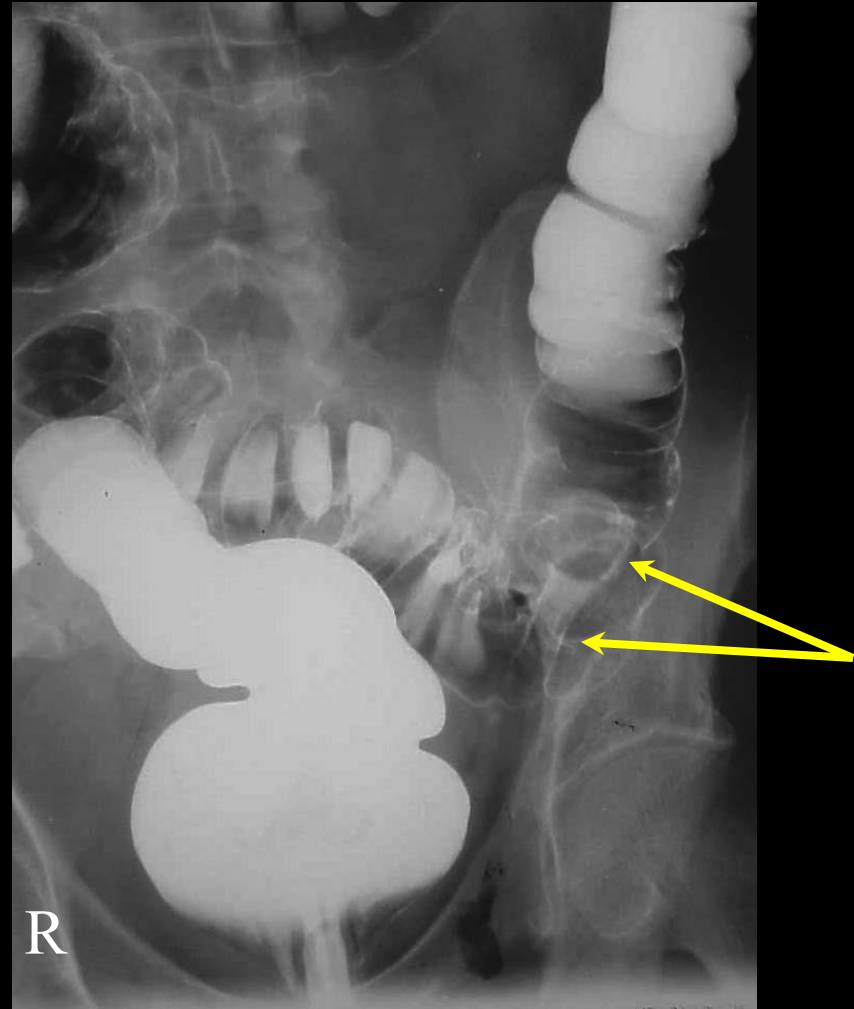
Question #25:

- A Bezoar is a hard mass of entangled material found within the stomach or intestines that cannot be digested.
- They are often made of hair and food fibers.

Question #26:

Which of the following is the most likely etiology for the condition depicted (arrows) on this radiograph of the large intestine?

- a. diverticulosis
- b. polyp
- c. Crohn's disease
- d. diverticulitis



Question #26: Review

- A neoplasm that grows into the lumen of the colon is called a polyp.
- A pedunculated polyp possess a stalk while a sessile (barnacle) polyp is attached directly to the bowel wall.
- Most polyps are benign, but an adenomatous polyp may transform into a malignancy and must be removed.

This is sometimes referred to as simply an adenoma.

- Colon polyps are generally asymptomatic, but some may cause rectal bleeding, pain, diarrhea, and/or constipation.

Question #27:

Which of the following is the most likely etiology for the grainy appearance on this radiograph of the abdomen?

- a. ascites
- b. constipation
- c. GI bleed
- d. paralytic ileus



Question #27: Review

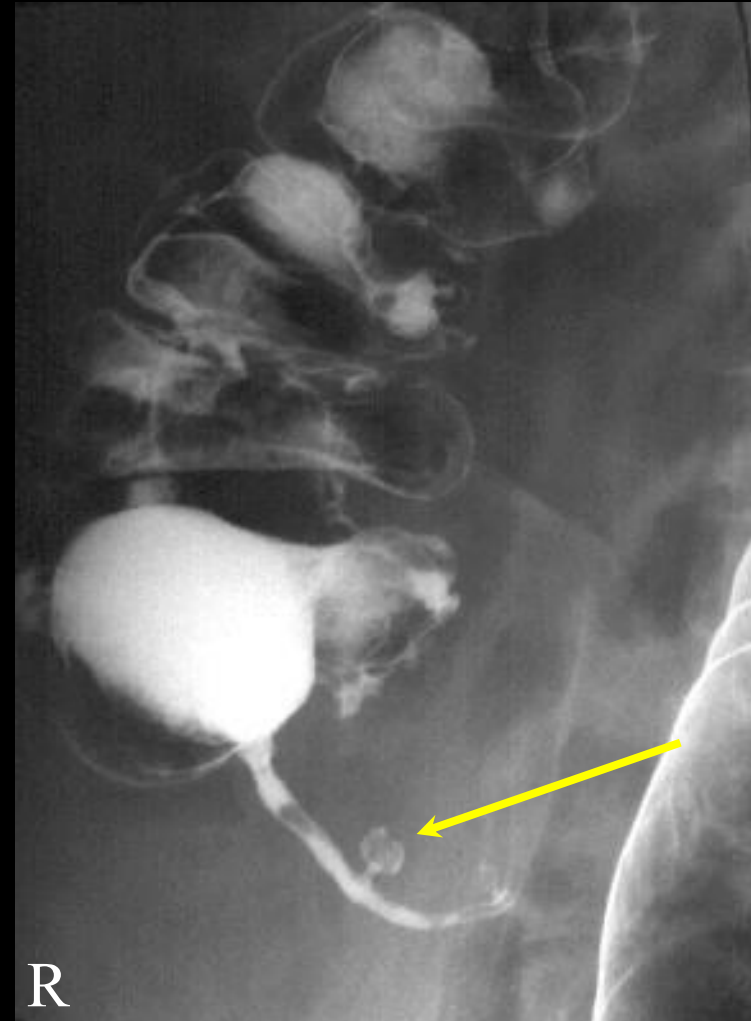
- Treatment for Constipation usually consists of an increased intake of fluid and dietary fibers and the use of laxatives.

In some instances, the impaction will require the use of enemas and/or manual removal.

Question #28:

Which of the following is the most likely etiology for the structure identified by the arrow on this BE radiograph?

- a. diverticula
- b. adenocarcinoma
- c. polyp
- d. appendicolith



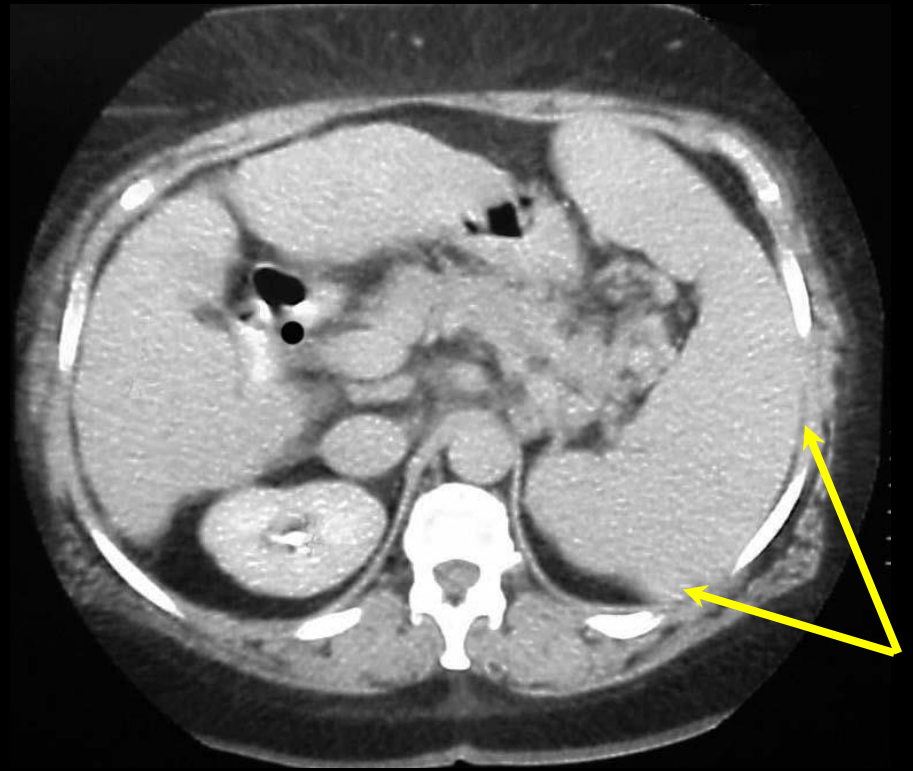
Question #28: Review

- Diverticula can form anywhere along the alimentary canal. In this instance, the lining of the appendix has weakened resulting in the formation of a small diverticula.

Question #29:

Which of the following would be the most likely condition for what the arrows on this CT image of the abdomen are pointing to?

- a. hepatomegaly
- b. kidney hyperplasia
- c. splenomegaly
- d. none of the above



R

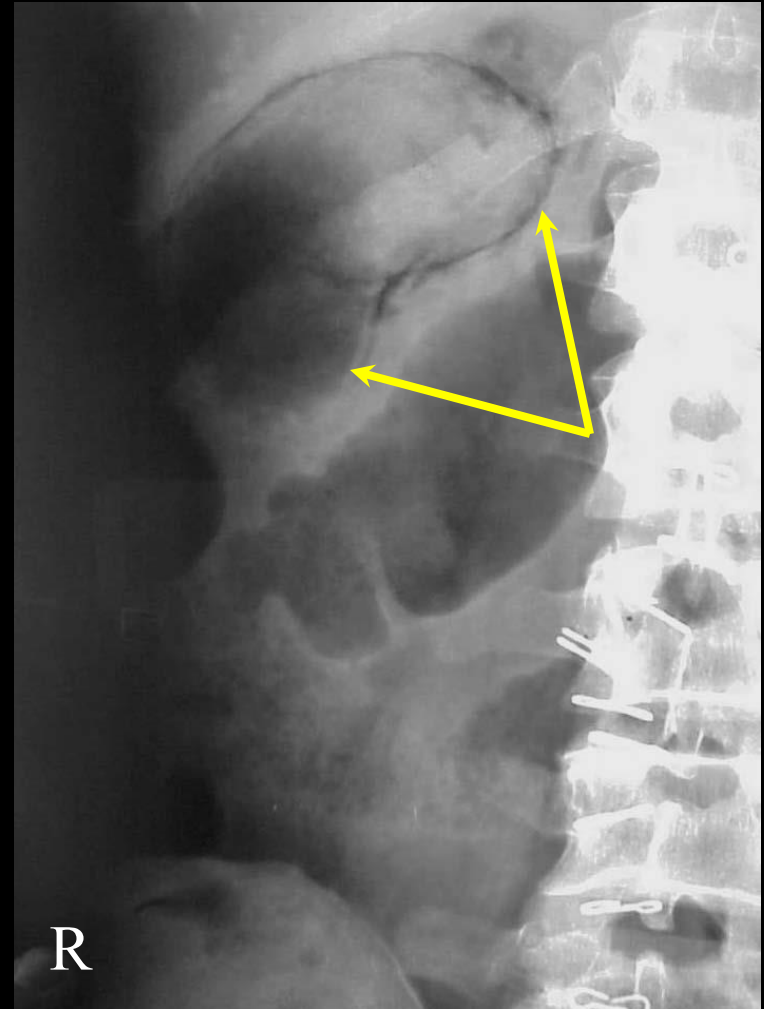
Question #29: Review

- Splenomegaly simply refers to an enlargement of the spleen.
- It is usually associated with any disease that involves the destruction of large quantities of defective red blood cells.
 - It is also linked to leukemia, lymphoma, and portal hypertension.
- Treatment for this condition usually includes a splenectomy.

Question #30:

The main abnormality on this radiograph (arrows) is an emphysematous gallbladder. This condition is caused by a bacterial infection.

- a. true
- b. false



Question #30: Review

- Emphysematous Cholecystitis is characterized by the presence of bacteria within the gallbladder.

In this instance, bacteria has managed to work their way from the small intestine, through the biliary tree, and finally into the gallbladder.

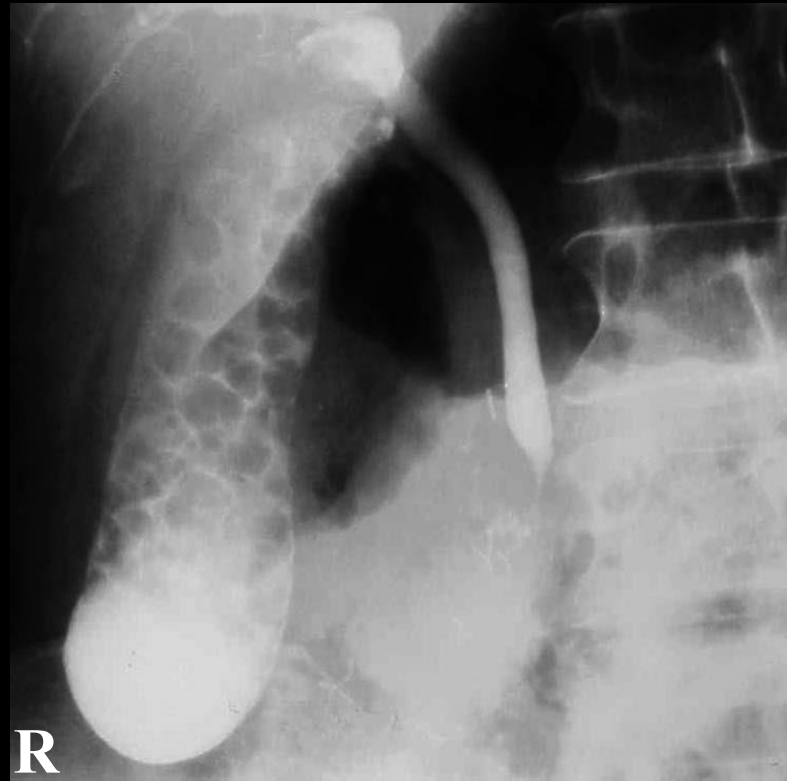
Bacteria produce gas as an excrement and as a result, the gallbladder will produce a distinct air-fluid level on an upright abdomen radiograph.

- Treatment involves cholecystectomy and broad-spectrum antibiotic coverage.

Question #31:

The main abnormality depicted on the radiograph below would be consistent with radiopaque choleliths.

- a. true
- b. false



Question #31: Review

- Cholelithiasis is the condition of having gallstones.
- This only becomes a problem if the stones cause an inflammation of the gallbladder which is called cholecystitis.

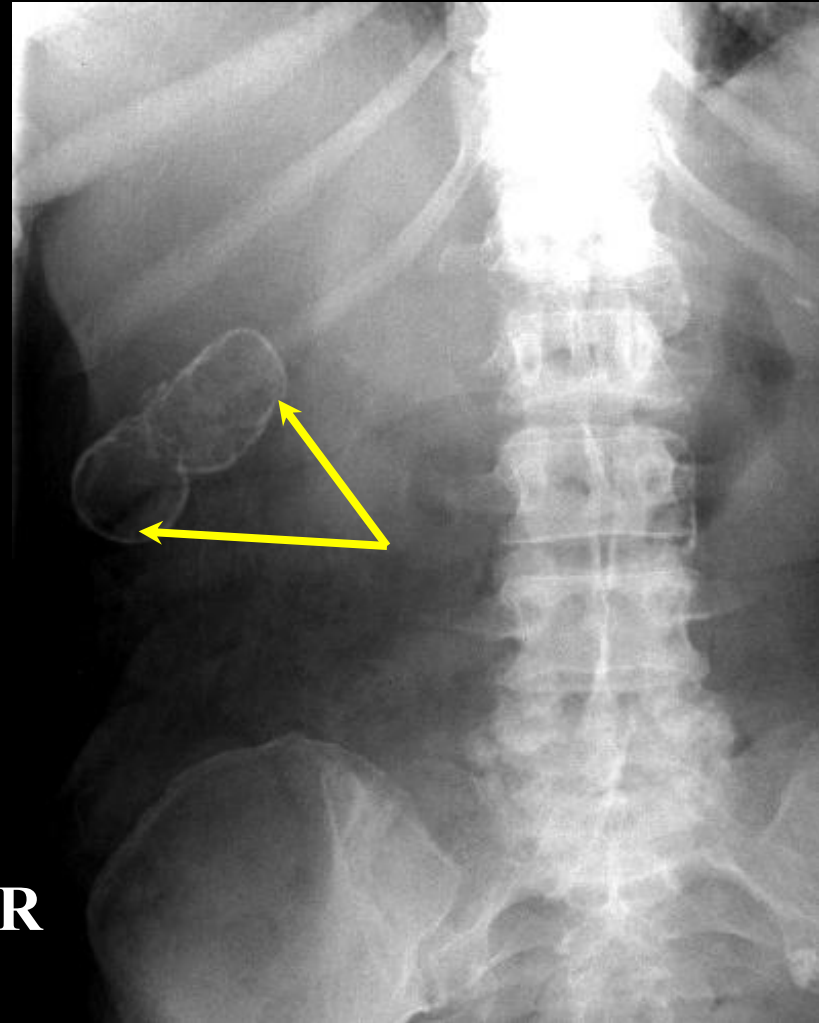
This is often secondary to cystic duct obstruction.

- Nuclear medicine and ultrasound are the imaging modalities of choice in the diagnosis of cholelithiasis although 15% of gallstones appear radiopaque on a KUB.

Question #32:

Which of the following is the most likely condition for the structure identified by the arrows on this abdominal radiograph?

- a. dermoid
- b. calcified renal cyst
- c. porcelain gallbladder
- d. calcified splenic cyst



Question #32: Review

- Calcification of the gallbladder is commonly referred to as a porcelain gallbladder.

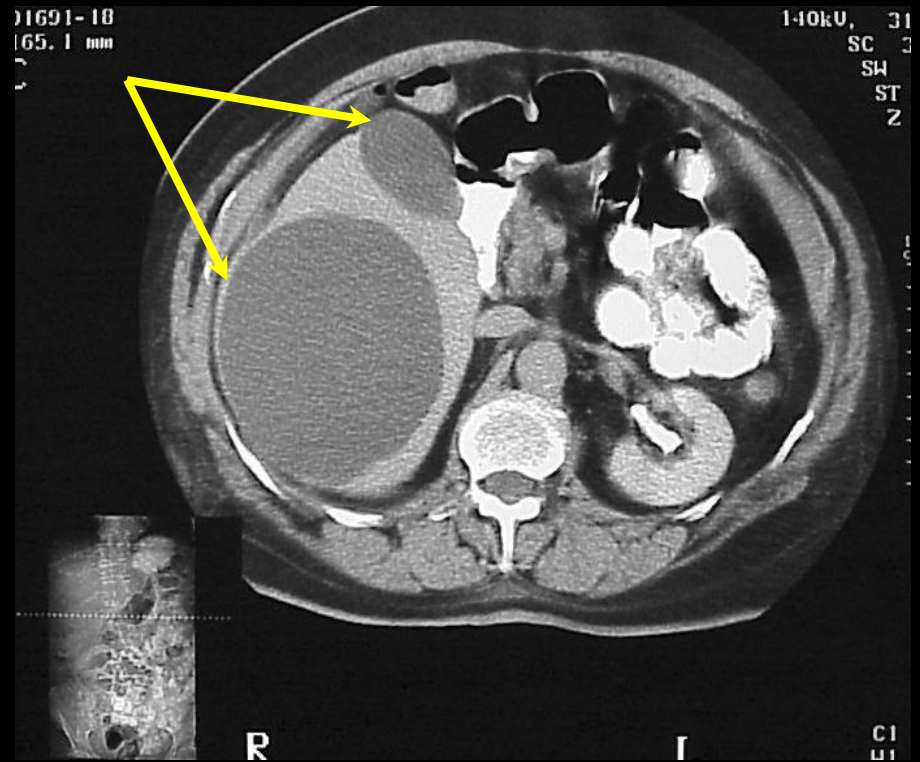
The walls of the gallbladder can calcify and form a hard, bluish color that resembles porcelain.

- It may be associated with gallbladder cancer which is very rare, or it may be brought on by excessive gallstone production.
- Treatment includes cholecystectomy.

Question #33:

Which of the following would be the most likely condition for what the arrows on this CT image of the abdomen are pointing to?

- a. hepatic cysts
- b. hepatic hemangioma
- c. hepatocellular carcinoma
- d. none of the above



Question #33: Review

- A hepatic cyst is a benign, thin-walled sac that may be either empty or full of fluid.
- They may be located within the liver or on its external surface.
- Hepatic cysts generally have no symptoms and are usually incidental findings on ultrasounds, CT scans and/or MRI scans of the abdomen.
- No treatment is usually required.

Question #34:

Which of the following terms is employed to describe an infection that was obtained from a health care environment?

- a. neoplasm
- b. nosocomial
- c. pathogenesis
- d. disease

Question #34: Review

- The study of disease and how it impacts the human body.
- The following is a partial list of sources for pathology:

Hereditary or Congenital

Tumors

Iatrogenic

- Any adverse conditions that results from medical treatment.
- An example would be a pneumothorax that occurs as the result of a thoracentesis.

Infections

- A nosocomial infection is acquired from a health care environment.

Question #35:

Which of the following terms is a group of signs and symptoms that characterize an abnormal disturbance?

- a. disease
- b. etiology
- c. pathogenesis
- d. syndrome

Question #35: Review

- A Syndrome is a group of signs and symptoms that characterize an abnormal disturbance.

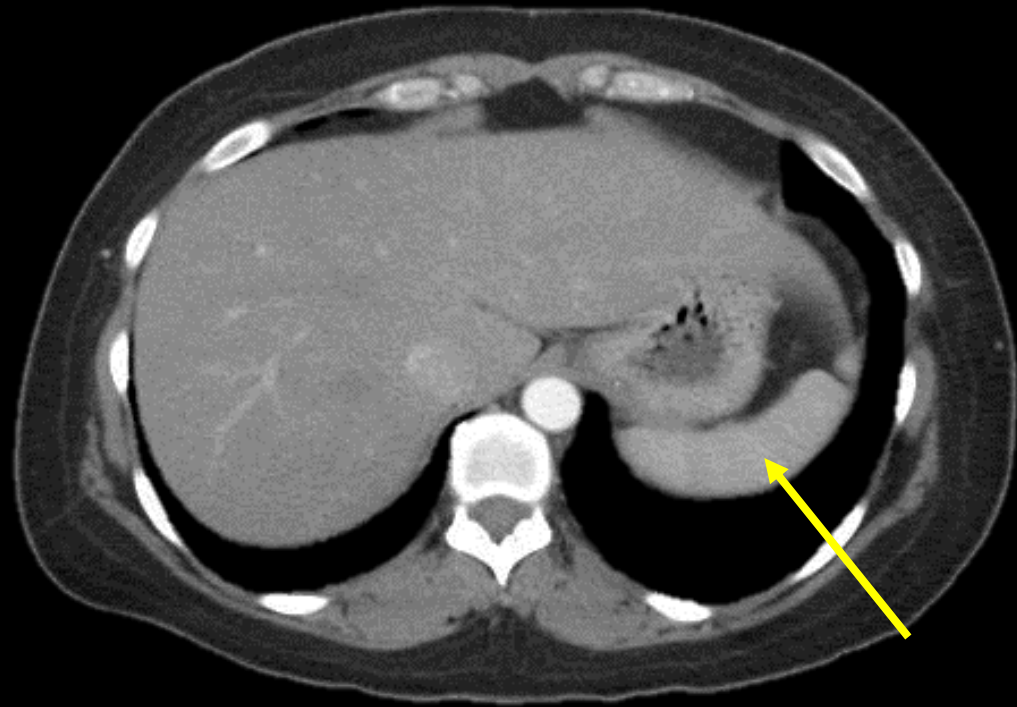
An example would be Marfan's Syndrome.

- This is a genetic disorder of connective tissue
- It is characterized by a predisposition to cardiac disorders, long limbs, long fingers, and a tall stature.
- Abraham Lincoln had Marfan's Syndrome.

Question #36:

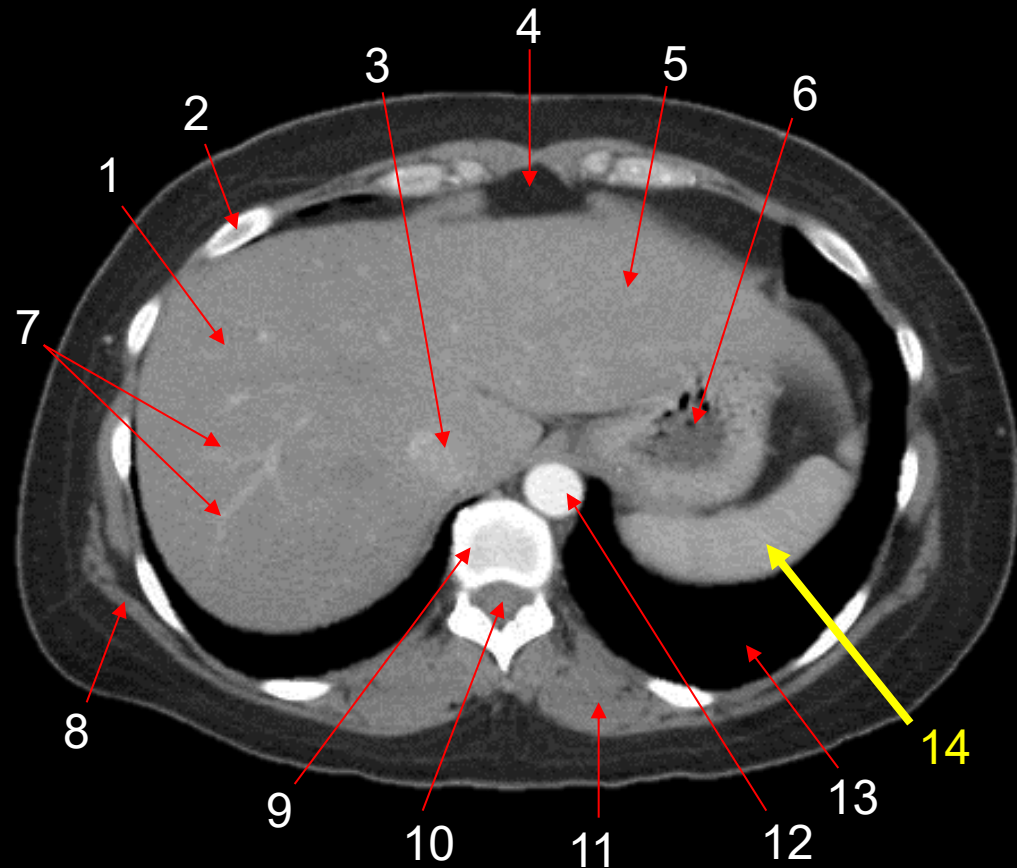
The arrow is pointing to the:

- a. stomach.
- b. lung.
- c. spleen.
- d. kidney.



Question #36: Review

1. Liver-Right Lobe
2. Rib
3. Inferior Vena Cava
4. Fat
5. Liver-Left Lobe
6. Stomach
7. Hepatic Veins
8. Latissimus Dorsi Muscle
9. Vertebral Body
10. Spinal Canal
11. Erector Spinae Muscle
12. Descending Aorta
13. Left Lung
14. Spleen

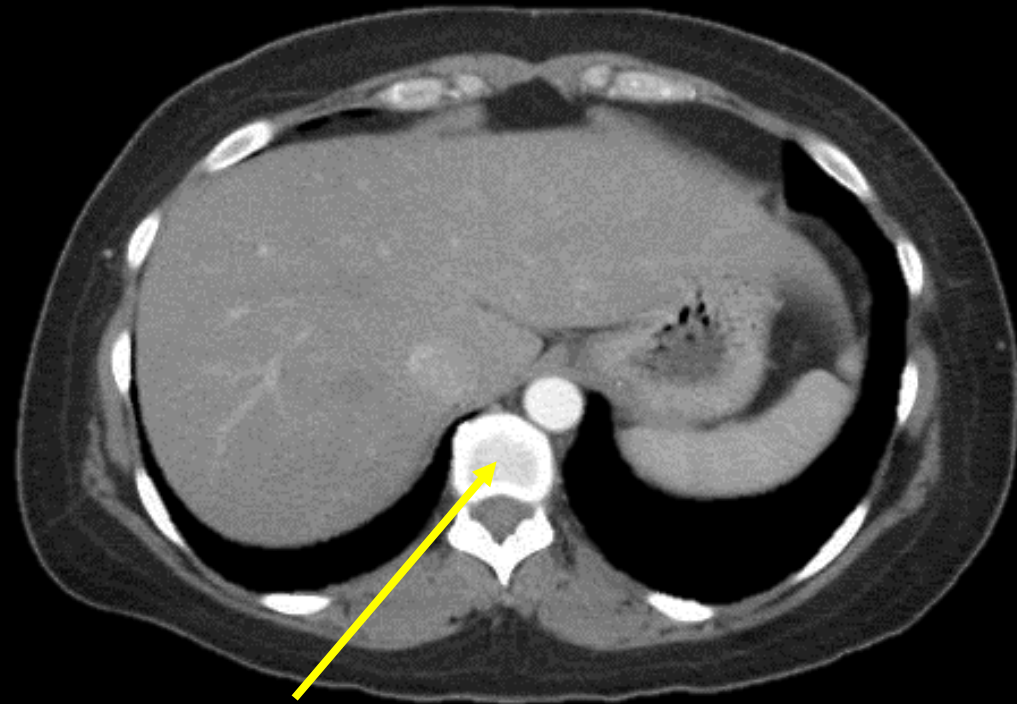
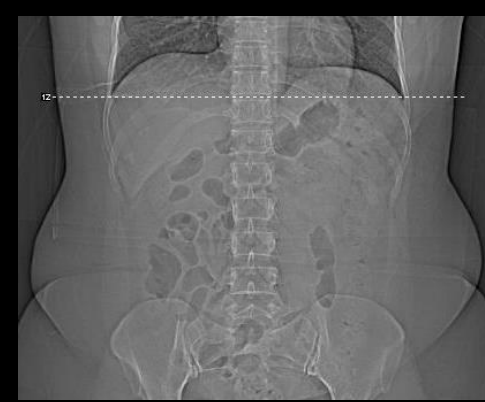


Axial Abdomen

Question #37:

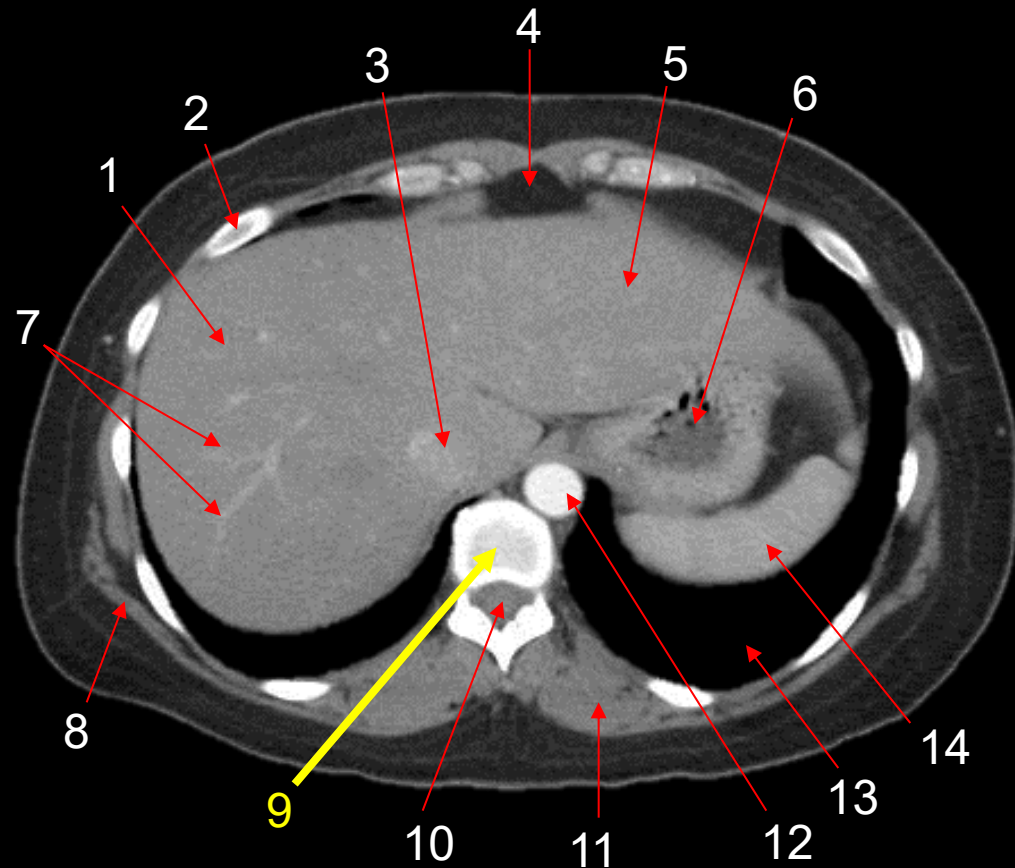
The arrow is pointing to the:

- a. vertebral canal.
- b. vertebral body.
- c. transverse process.
- d. spinous process.



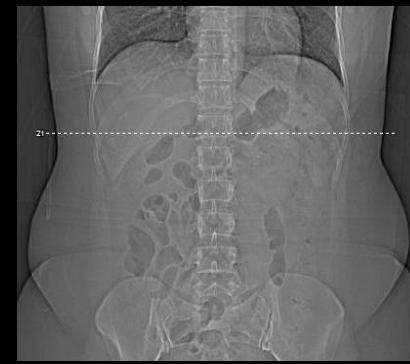
Question #37: Review

1. Liver-Right Lobe
2. Rib
3. Inferior Vena Cava
4. Fat
5. Liver-Left Lobe
6. Stomach
7. Hepatic Veins
8. Latissimus Dorsi Muscle
- 9. Vertebral Body**
10. Spinal Canal
11. Erector Spinae Muscle
12. Descending Aorta
13. Left Lung
14. Spleen



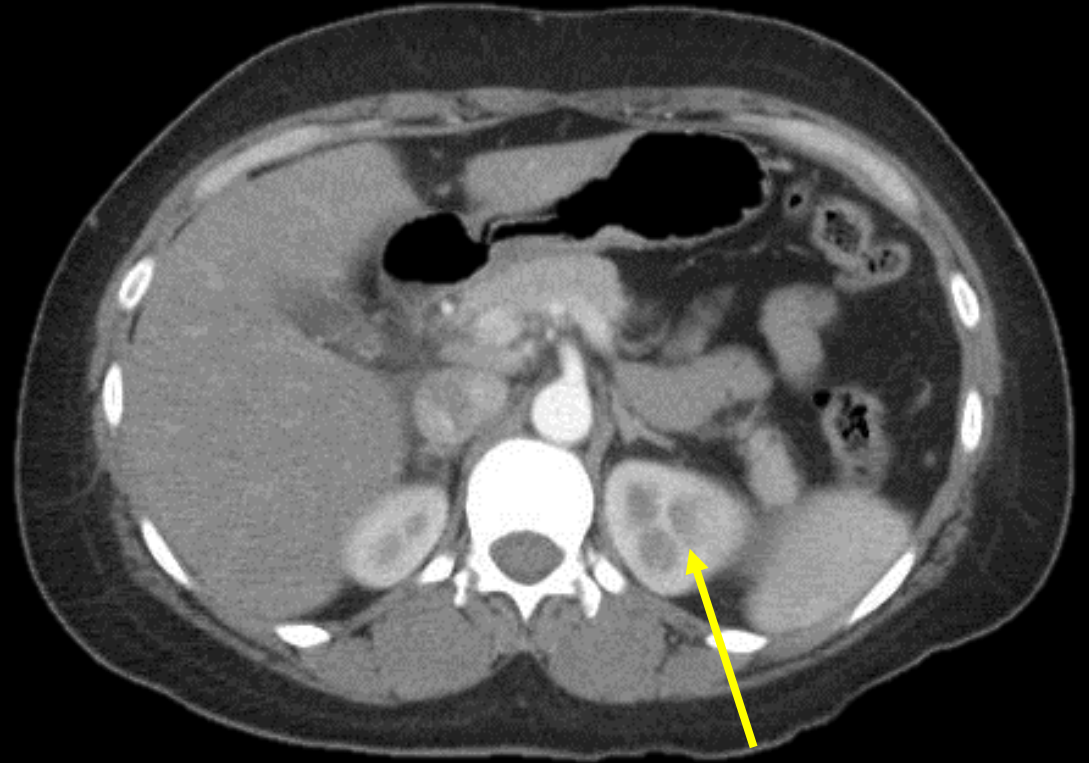
Axial Abdomen

Question #38:



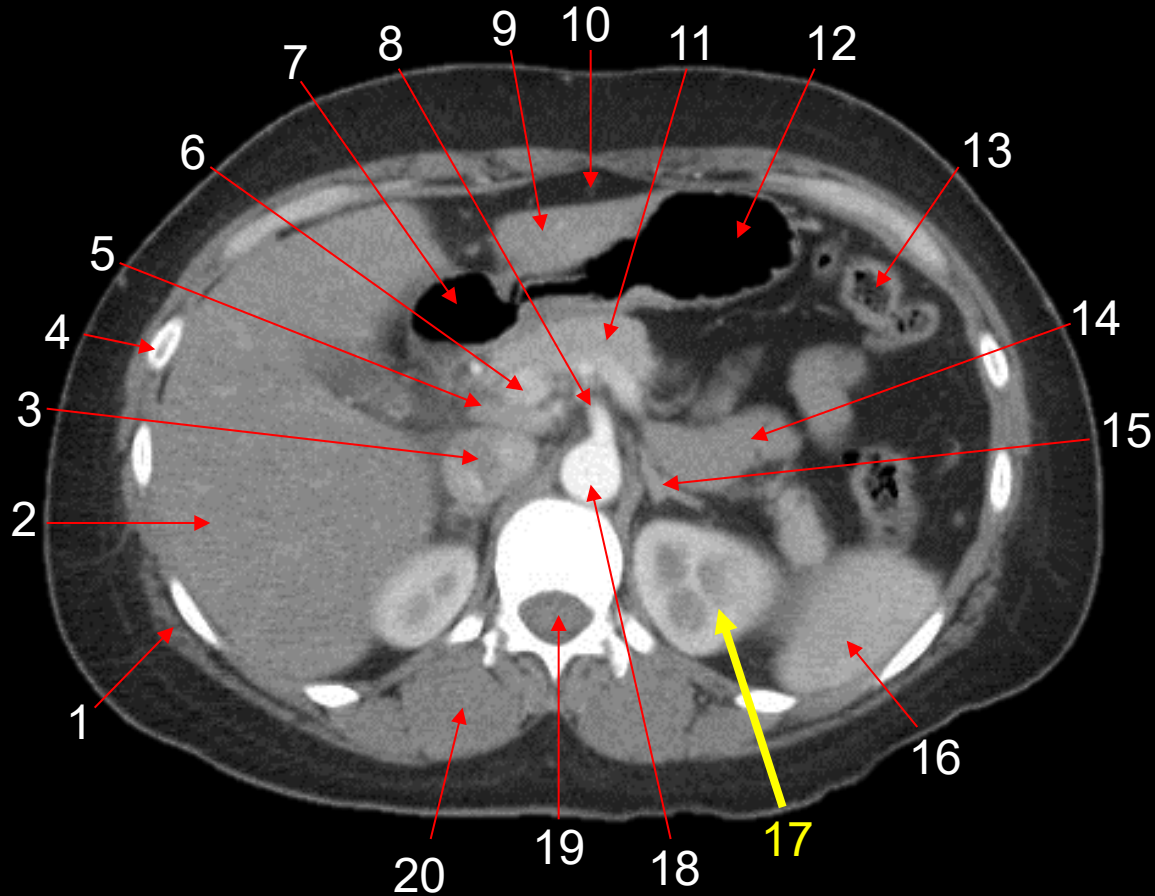
The arrow is pointing to the:

- a. spleen.
- b. kidney.
- c. gallbladder.
- d. pancreas.



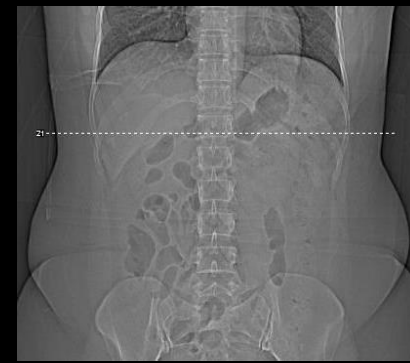
Question #38: Review

1. Latissimus Dorsi Muscle
2. Liver-Right Lobe
3. Inferior Vena Cava
4. Rib
5. Portal Vein
6. Hepatic Artery
7. Duodenum
8. Celiac Trunk
9. Liver-Left Lobe
10. Fat
11. Pancreas
12. Air in the Stomach
13. Transverse Colon
14. Small Bowel
15. Left Adrenal Gland
16. Spleen
17. Left Kidney
18. Descending Aorta
19. Spinal Cord
20. Erector Spinae Muscle



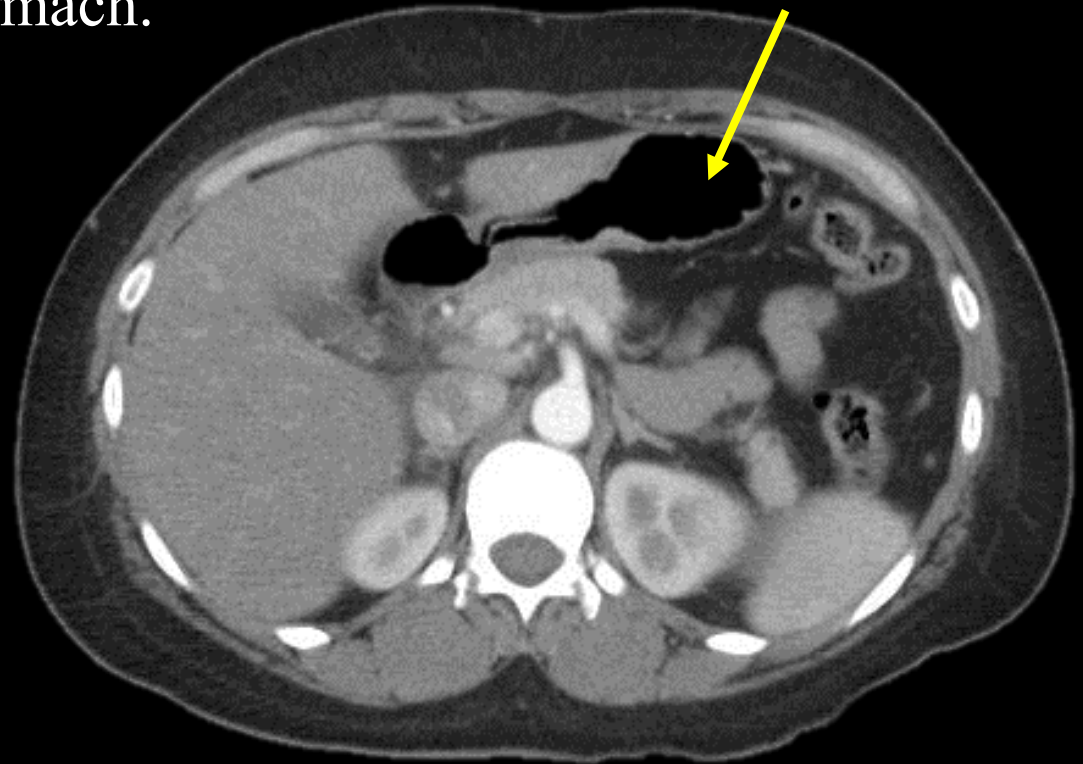
Axial Abdomen

Question #39:



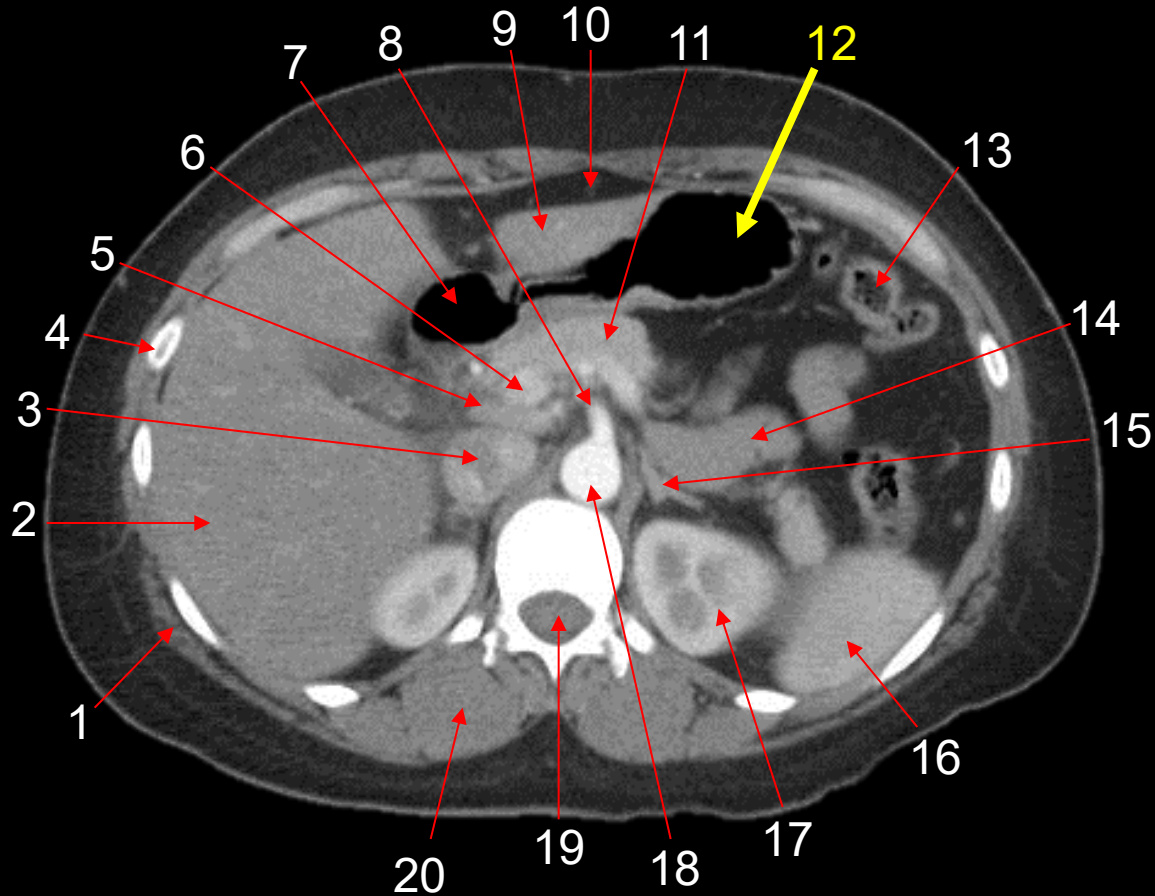
The arrow is pointing to the:

- a. air in the fundus of the stomach.
- b. transverse colon.
- c. spleen.
- d. duodenum.



Question #39: Review

1. Latissimus Dorsi Muscle
2. Liver-Right Lobe
3. Inferior Vena Cava
4. Rib
5. Portal Vein
6. Hepatic Artery
7. Duodenum
8. Celiac Trunk
9. Liver-Left Lobe
10. Fat
11. Pancreas
12. Air in the Stomach
13. Transverse Colon
14. Small Bowel
15. Left Adrenal Gland
16. Spleen
17. Left Kidney
18. Descending Aorta
19. Spinal Cord
20. Erector Spinae Muscle

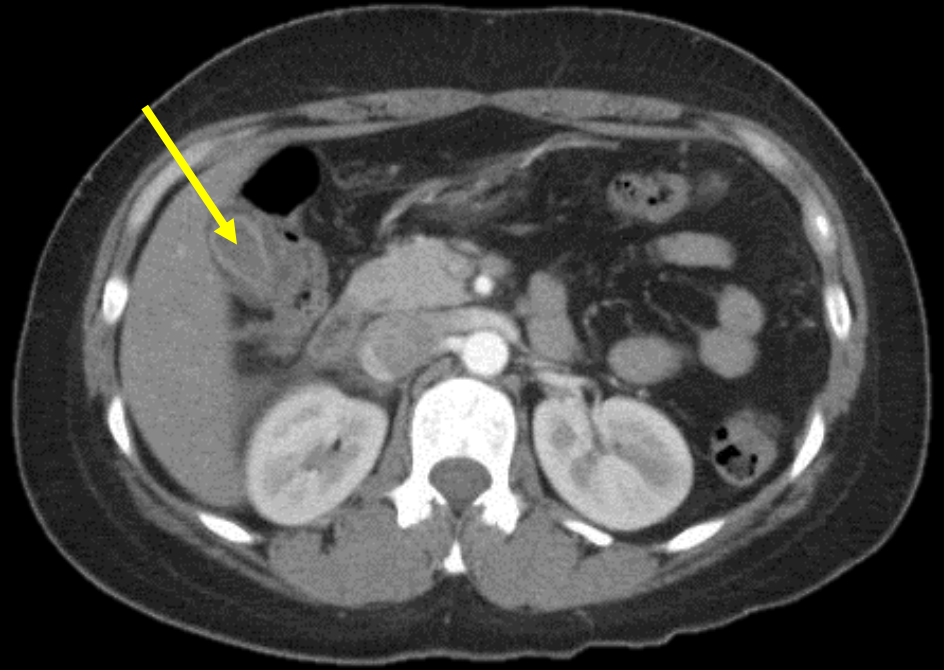


Axial Abdomen

Question #40:

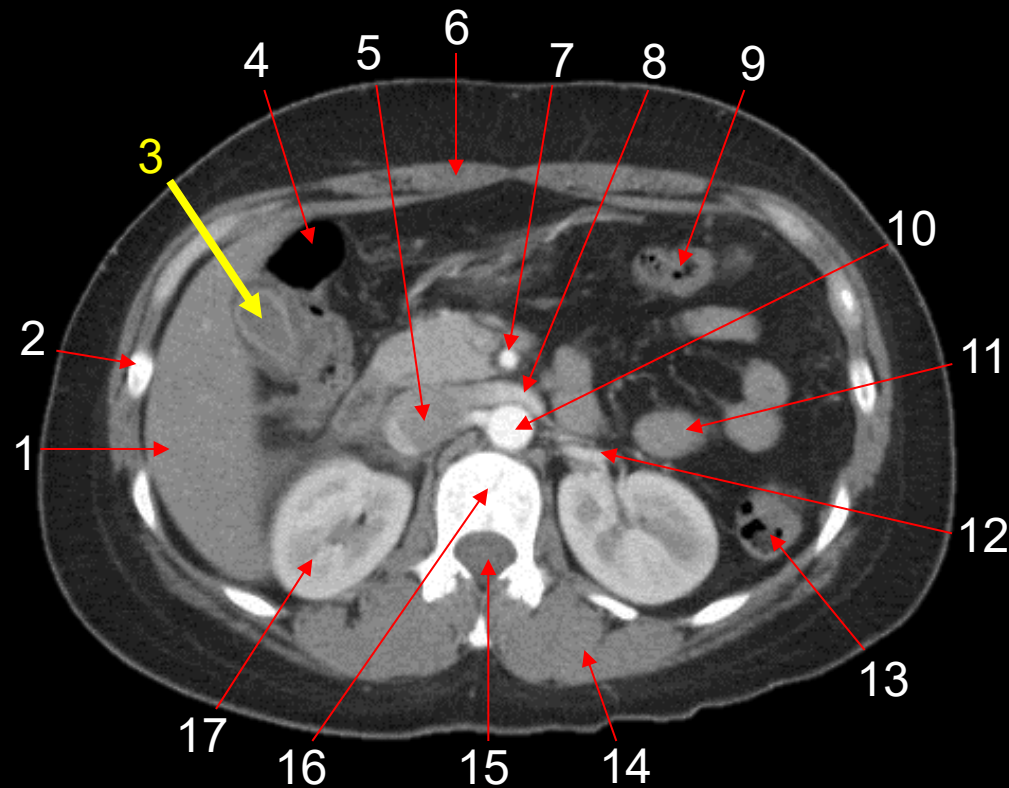
The arrow is pointing to the:

- a. gallbladder.
- b. right lobe of liver.
- c. falciform ligament.
- d. pancreas.



Question #40: Review

1. Liver
2. Rib
3. Gall Bladder
4. Transverse Colon
5. Inferior Vena Cava
6. Rectus Abdominis Muscle
7. Superior Mesenteric Artery
8. Renal Vein
9. Transverse Colon
10. Descending Aorta
11. Small Bowel
12. Left Renal Vein
13. Descending Colon
14. Erector Spinae Muscle
15. Spinal Cord
16. Vertebra
17. Right Kidney

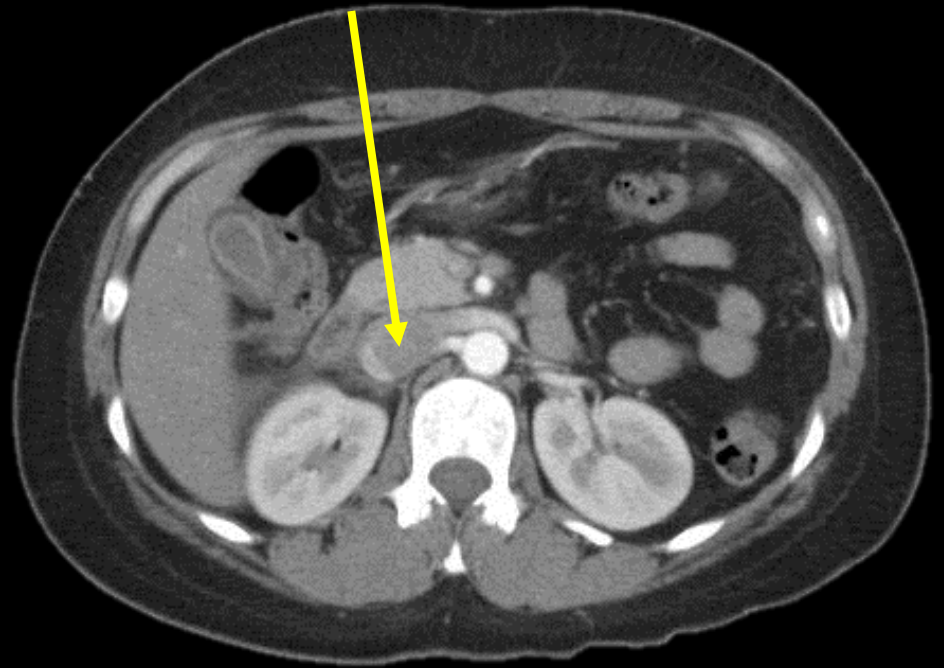


Axial Abdomen

Question #41:

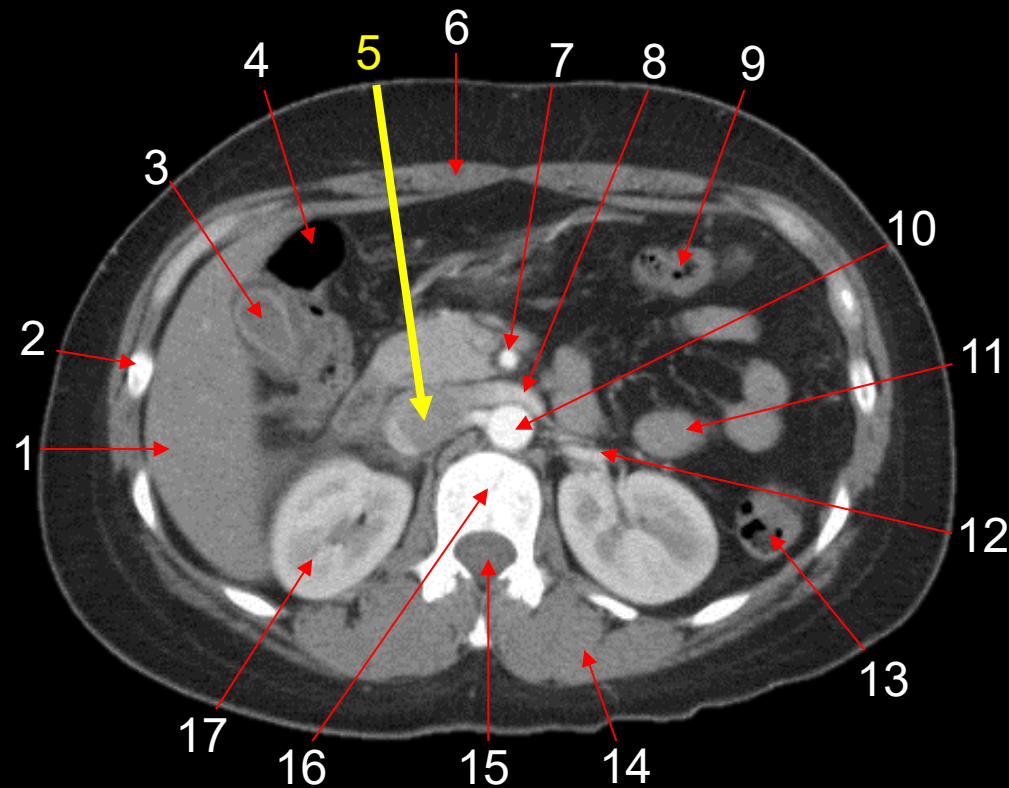
The arrow is pointing to the:

- a. descending aorta.
- b. inferior vena cava.
- c. superior mesenteric artery.
- d. renal vein.



Question #41: Review

1. Liver
2. Rib
3. Gall Bladder
4. Transverse Colon
5. Inferior Vena Cava
6. Rectus Abdominis Muscle
7. Superior Mesenteric Artery
8. Renal Vein
9. Transverse Colon
10. Descending Aorta
11. Small Bowel
12. Left Renal Vein
13. Descending Colon
14. Erector Spinae Muscle
15. Spinal Cord
16. Vertebra
17. Right Kidney

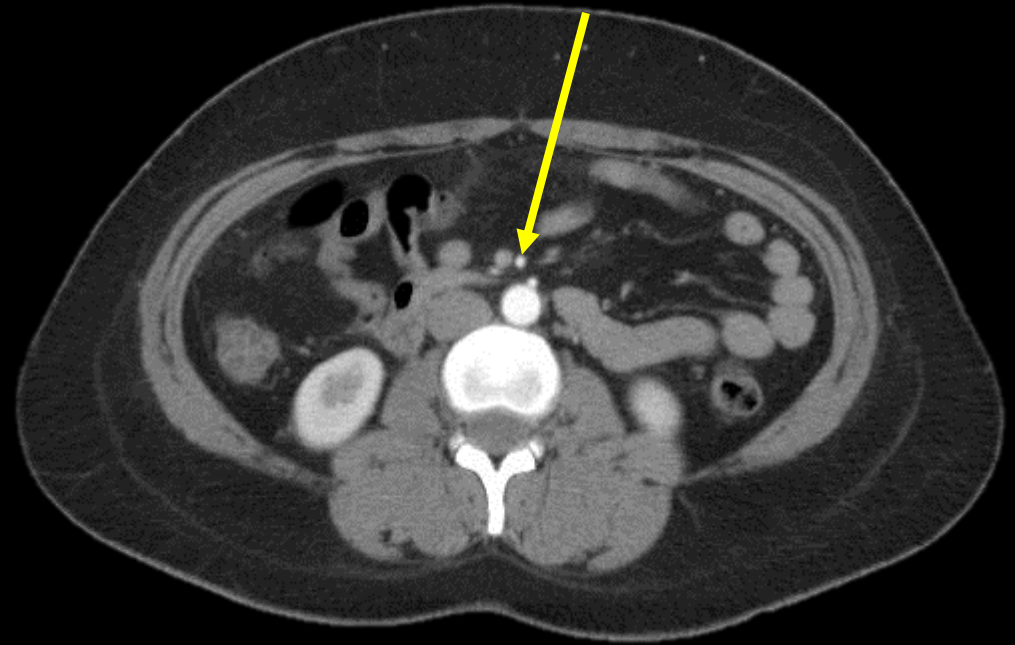


Axial Abdomen

Question #42:

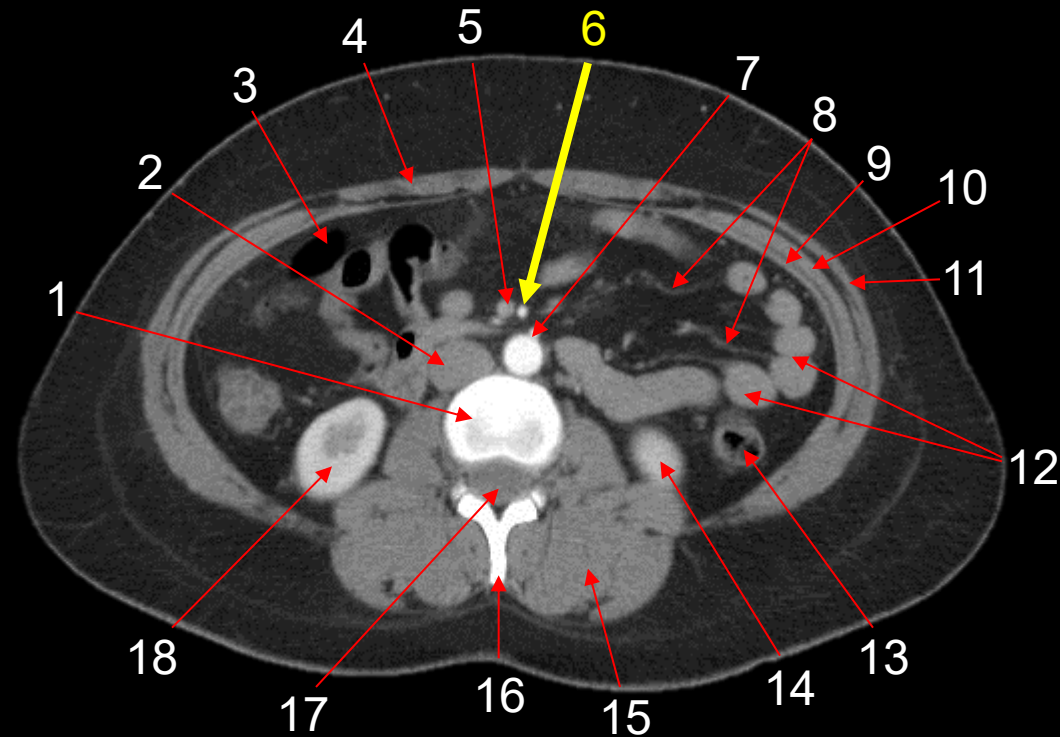
The arrow is pointing to the:

- a. superior mesenteric vein.
- b. descending aorta.
- c. inferior vena cava.
- d. superior mesenteric artery.



Question #42: Review

1. Vertebral Body
2. Inferior Vena Cava
3. Ascending Colon
4. Rectus Abdominis
5. Superior Mesenteric Vein
6. Superior Mesenteric Artery
7. Descending Aorta
8. Mesenteric Vessels
9. Transverse Abdominis Muscle
10. Internal Oblique Muscle
11. External Oblique Muscle
12. Small Bowel
13. Descending Colon
14. Left Kidney (Inferior)
15. Erector Spinae Muscle
16. Spinous Process (Lumbar)
17. Spinal Cord
18. Right Kidney

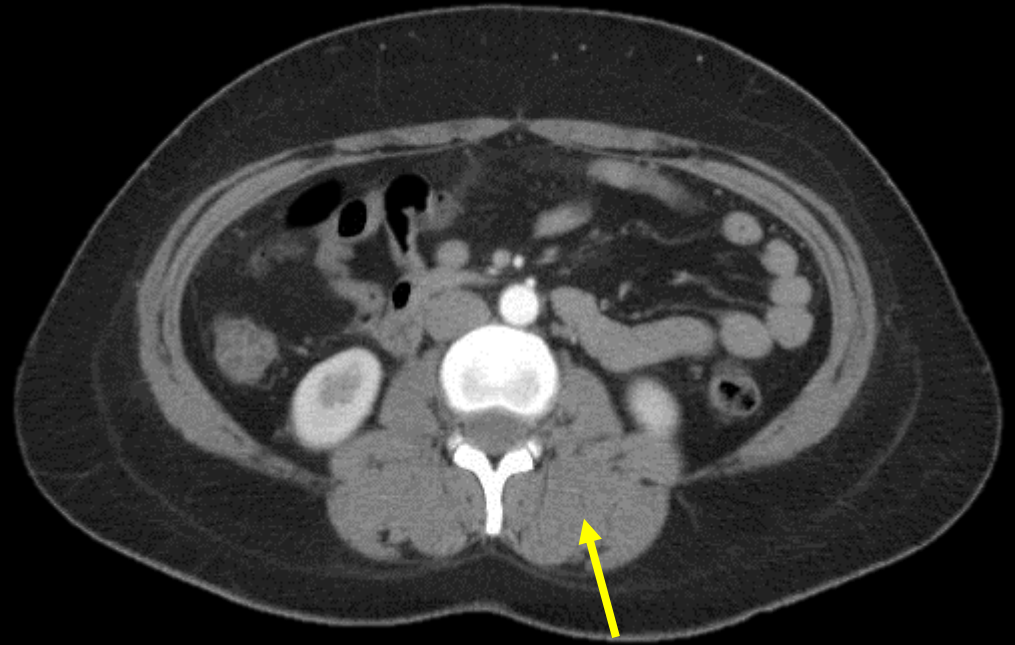


Axial Abdomen

Question #43:

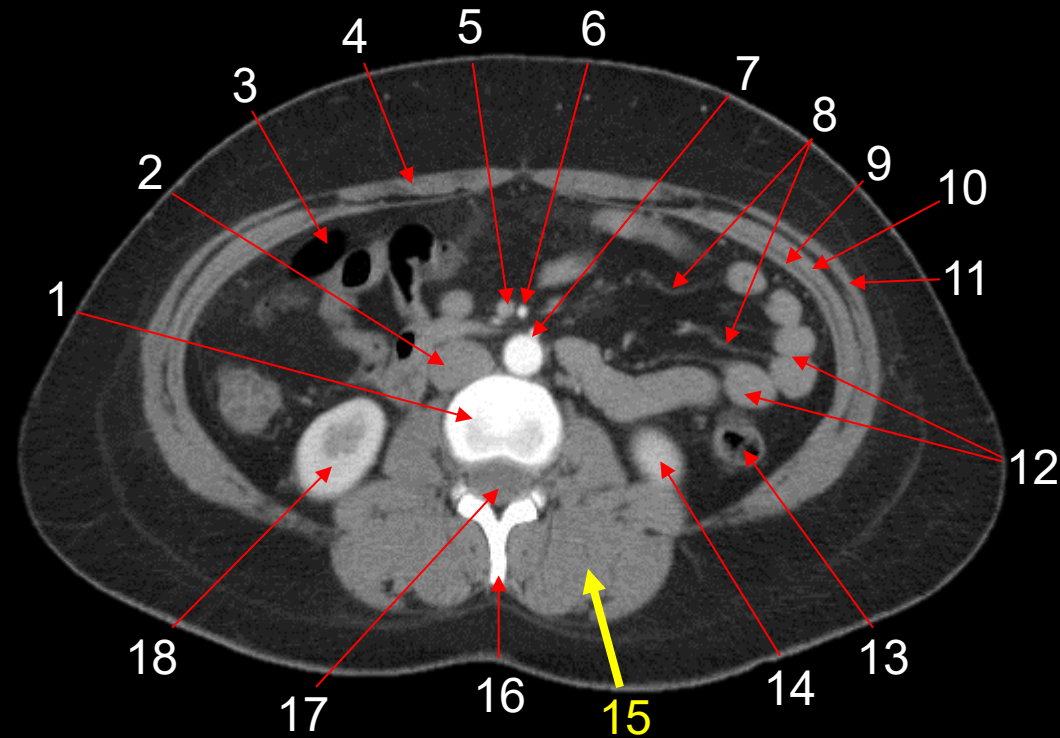
The arrow is pointing to the:

- a. psoas muscle.
- b. rectus abdominis muscle.
- c. erector spinae muscle.
- d. external oblique muscle.



Question #43: Review

1. Vertebral Body
2. Inferior Vena Cava
3. Ascending Colon
4. Rectus Abdominis
5. Superior Mesenteric Vein
6. Superior Mesenteric Artery
7. Descending Aorta
8. Mesenteric Vessels
9. Transverse Abdominis Muscle
10. Internal Oblique Muscle
11. External Oblique Muscle
12. Small Bowel
13. Descending Colon
14. Left Kidney (Inferior)
15. Erector Spinae Muscle
16. Spinous Process (Lumbar)
17. Spinal Cord
18. Right Kidney

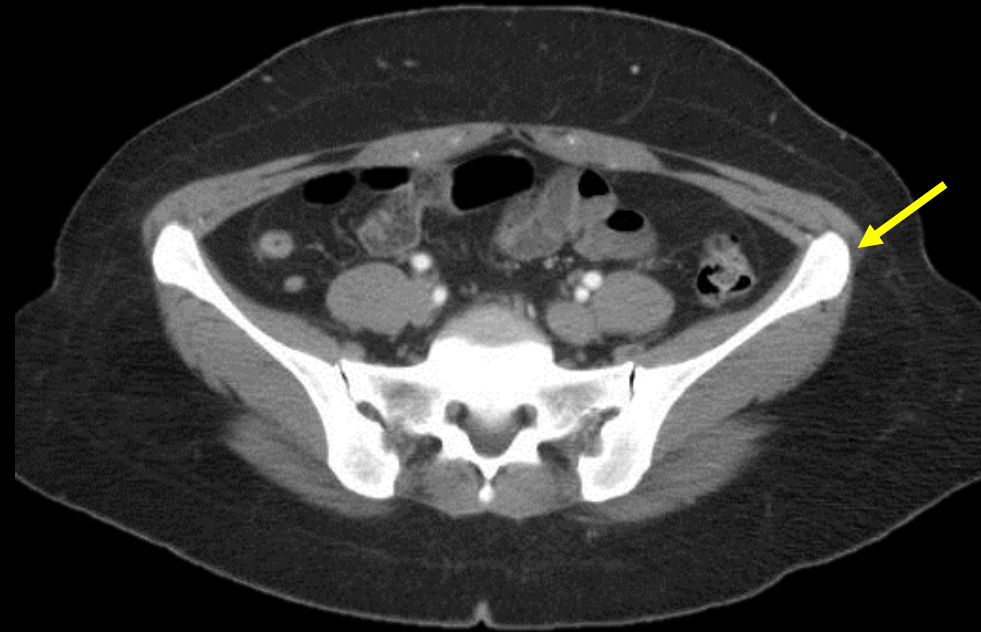


Axial Abdomen

Question #44:

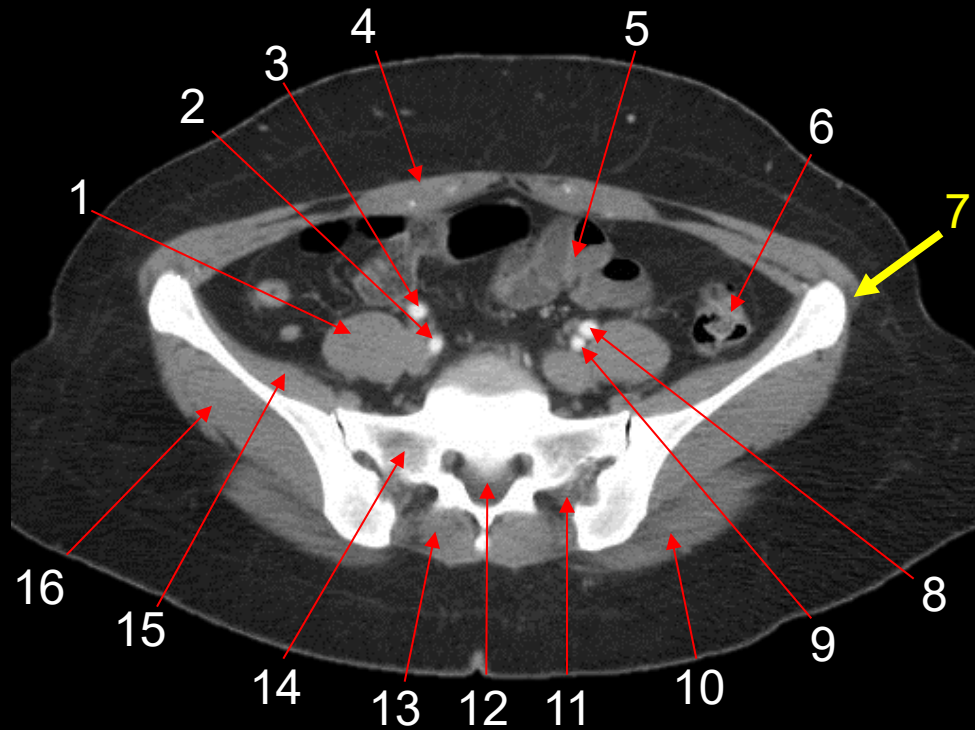
The arrow is pointing to the:

- a. ilium.
- b. sacrum.
- c. sacroiliac joint.
- d. ischium.



Question #44: Review

1. Psoas
2. Right Internal Iliac Artery
3. Right External Iliac Artery
4. Rectus Abdominis Muscle
5. Small Bowel
6. Descending Colon
7. Ilium
8. Left External Iliac Artery
9. Left Internal Iliac Artery
10. Gluteus Maximus Muscle
11. Sacroiliac Joint
12. Cauda Equina
13. Erector Spinae Muscle
14. Sacrum
15. Iliacus Muscle
16. Gluteus Medius Muscle

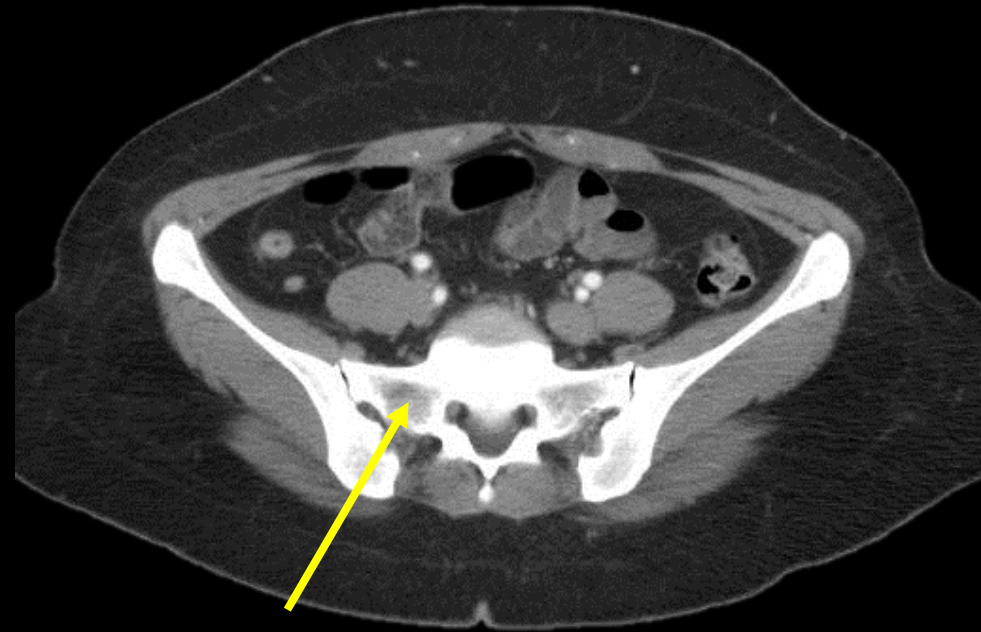


Axial Female Pelvis

Question #45:

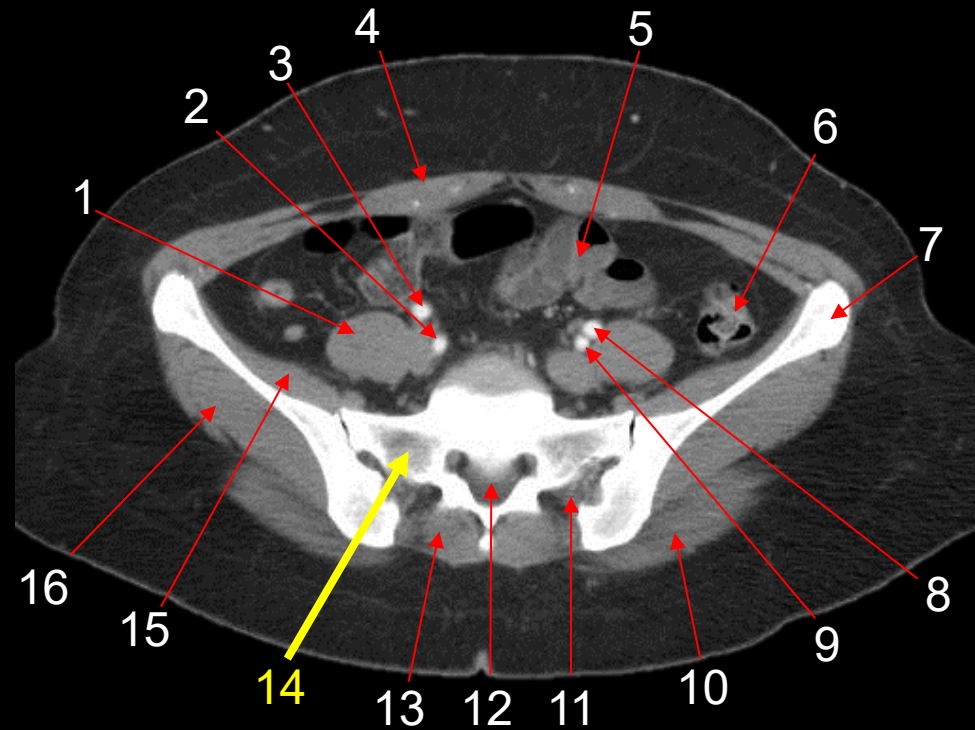
The arrow is pointing to the:

- a. ilium.
- b. sacroiliac joint.
- c. sacrum.
- d. cauda equina.



Question #45: Review

1. Psoas
2. Right Internal Iliac Artery
3. Right External Iliac Artery
4. Rectus Abdominis Muscle
5. Small Bowel
6. Descending Colon
7. Ilium
8. Left External Iliac Artery
9. Left Internal Iliac Artery
10. Gluteus Maximus Muscle
11. Sacroiliac Joint
12. Cauda Equina
13. Erector Spinae Muscle
14. Sacrum
15. Iliacus Muscle
16. Gluteus Medius Muscle



Axial Female Pelvis

Question #46:

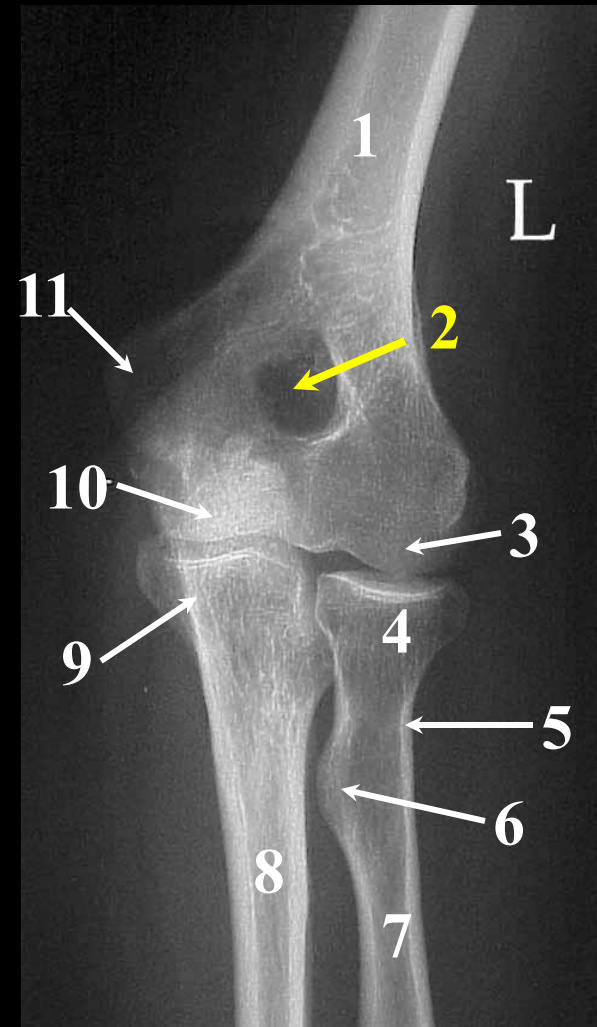
The arrow is pointing to the:

- a. olecrenon fossa.
- b. olecranon process.
- c. coronoid process.
- d. trochlea.



Question #46: Review

1. Shaft of the Humerus
2. Olecranon Fossa
3. Capitulum
4. Head of the Radius
5. Neck of the Radius
6. Radial Tuberosity
7. Shaft of the Radius
8. Shaft of the Ulna
9. Coronoid Process
10. Trochlea
11. Epicondyle



AP Elbow

Question #47:

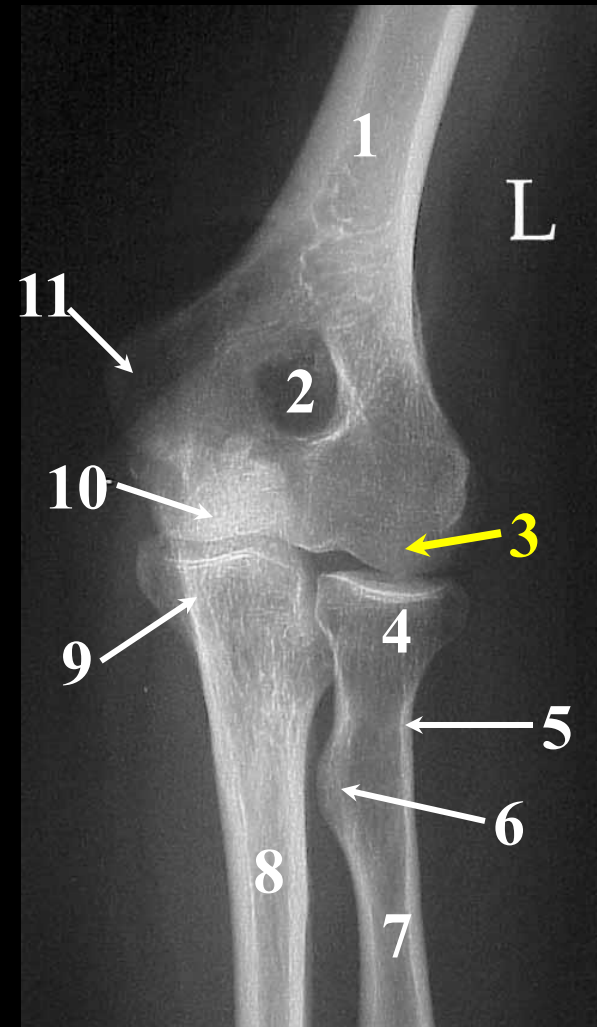
The arrow is pointing to the:

- a. coronoid process.
- b. capitulum.
- c. trochlea.
- d. medial epicondyle.



Question #47: Review

1. Shaft of the Humerus
2. Olecranon Fossa
3. Capitulum
4. Head of the Radius
5. Neck of the Radius
6. Radial Tuberosity
7. Shaft of the Radius
8. Shaft of the Ulna
9. Coronoid Process
10. Trochlea
11. Epicondyle



AP Elbow

Question #48:

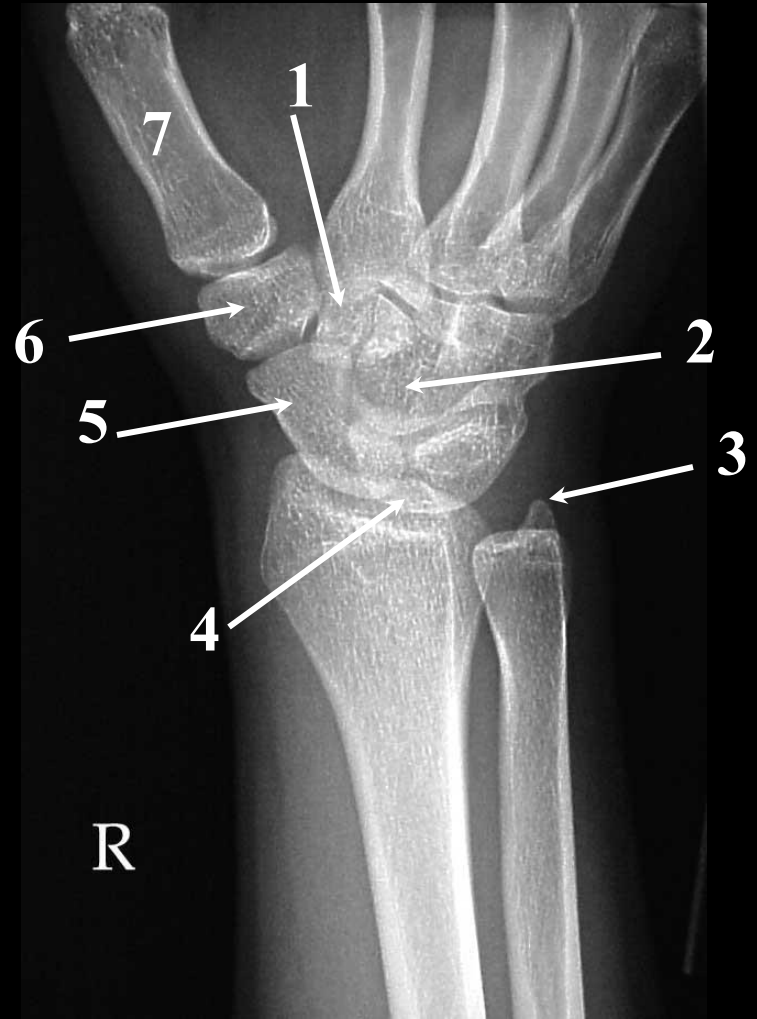
What position or projection of the wrist is this?

- a. PA
- b. PA oblique
- c. AP oblique
- d. lateral



Question #48: Review

1. Lesser Multangular or Trapezoid
2. Capitate or Os Magnum
3. Styloid Process of the Ulna
4. Lunate or Semilunar
5. Navicular or Scaphoid
6. Greater Multangular or Trapezium
7. Shaft of the 1st Metacarpal



PA Oblique Wrist

Question #49:

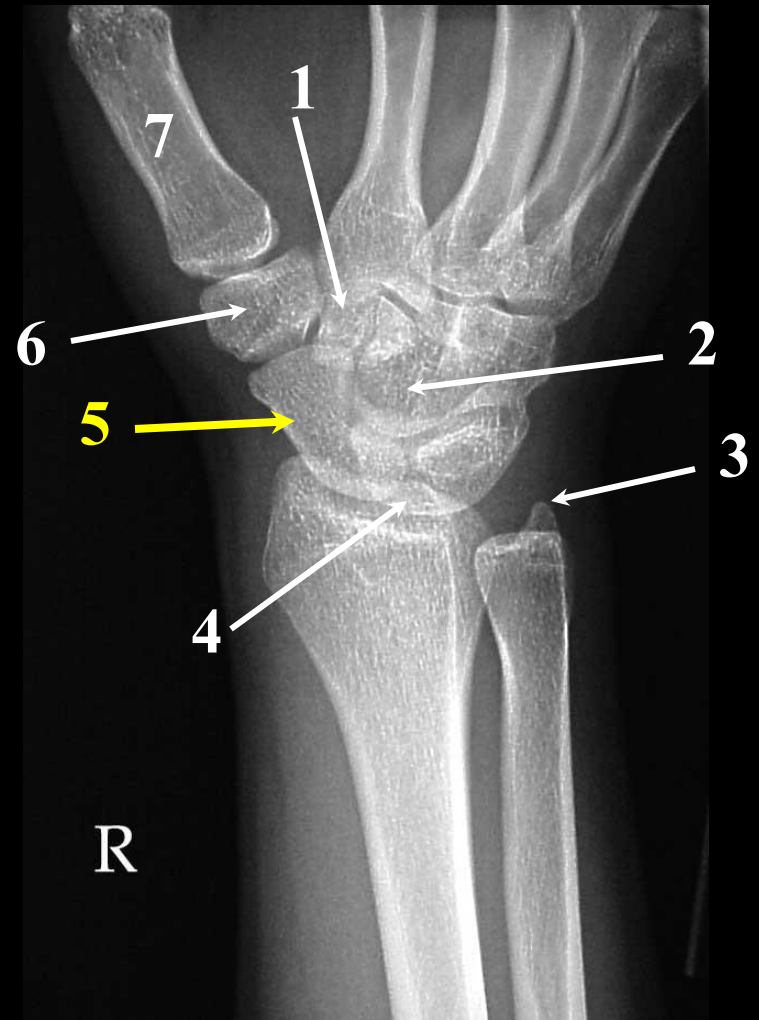
The arrow is pointing to the:

- a. trapezoid.
- b. navicular.
- c. capitate.
- d. trapezium.



Question #49: Review

1. Lesser Multangular or Trapezoid
2. Capitate or Os Magnum
3. Styloid Process of the Ulna
4. Lunate or Semilunar
5. Navicular or Scaphoid
6. Greater Multangular or Trapezium
7. Shaft of the 1st Metacarpal

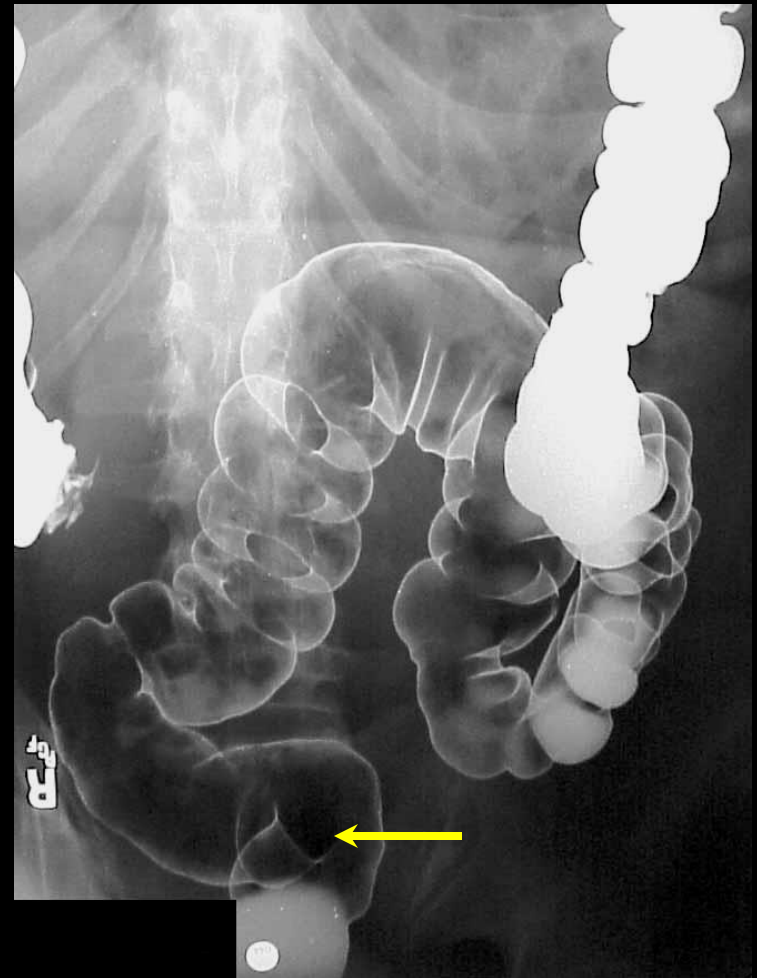


PA Oblique Wrist

Question #50:

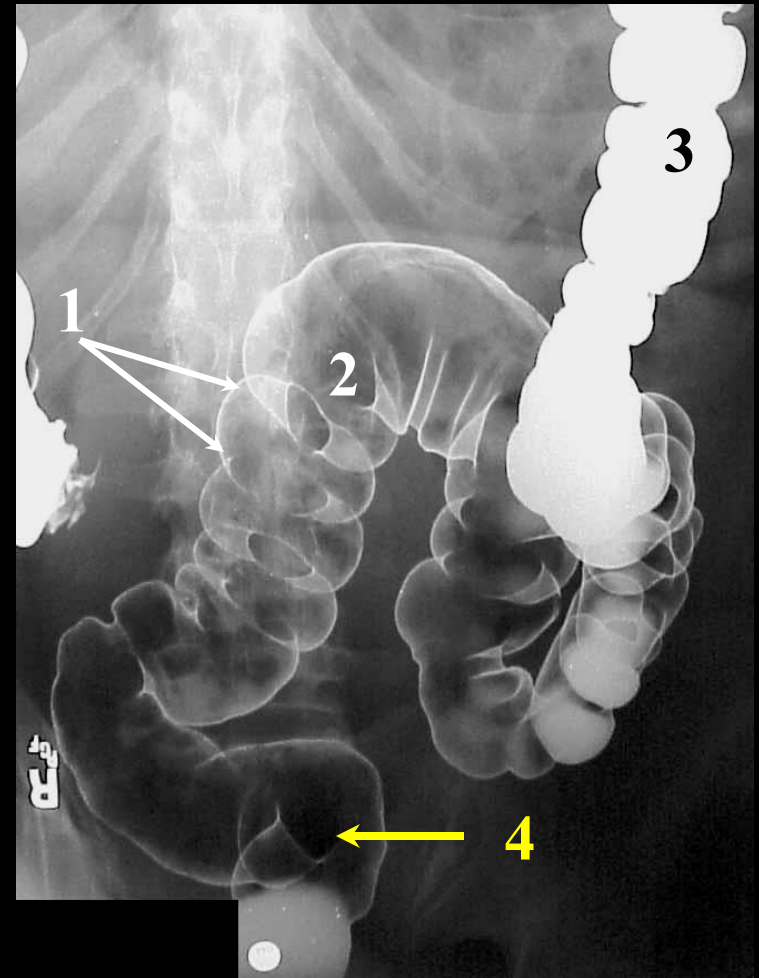
The arrow is pointing to the:

- a. cecum.
- b. sigmoid colon.
- c. rectum.
- d. ileocecal valve.



Question #50: Review

1. Haustra
2. Sigmoid Colon
3. Descending Colon
4. Rectum

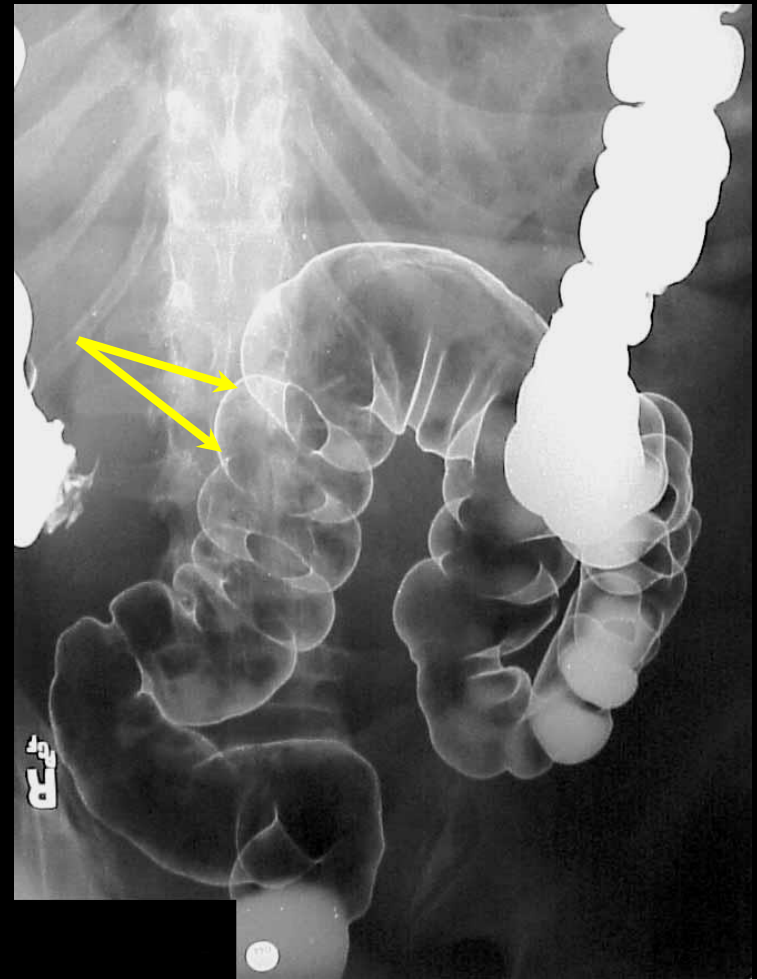


BE with Air: AP Axial or “Sigmoid”

Question #51:

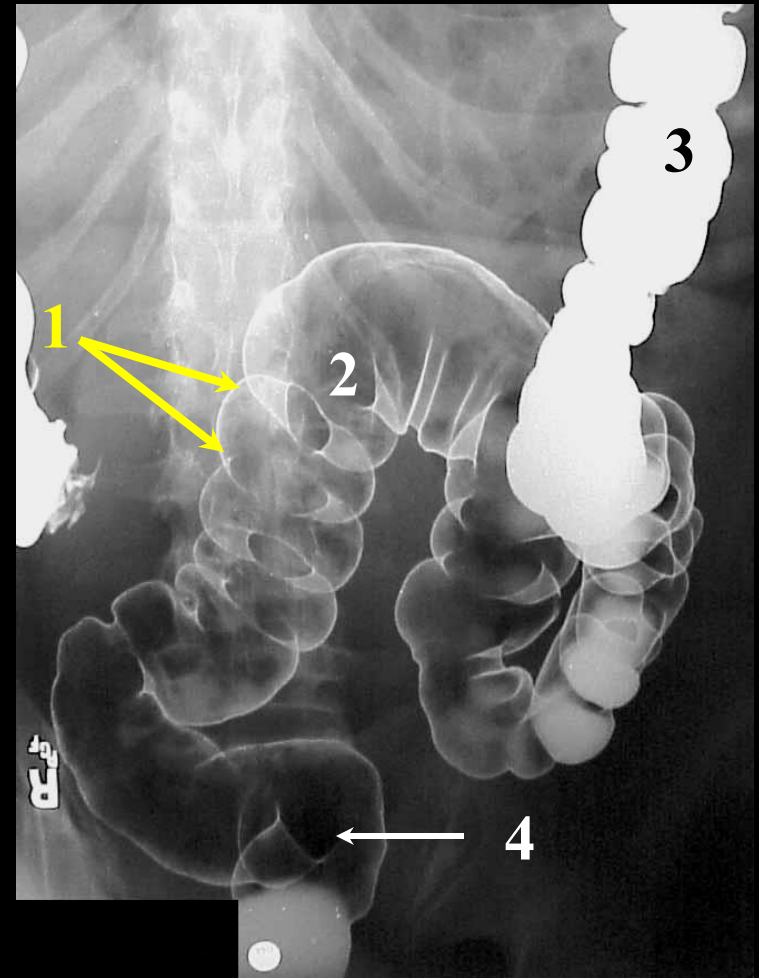
The arrows are pointing to which of the following?

- a. polyp
- b. taeniae coli
- c. haustra
- d. diverticula



Question #51: Review

1. Haustra
2. Sigmoid Colon
3. Descending Colon
4. Rectum



BE with Air: AP Axial or “Sigmoid”

Question #52:

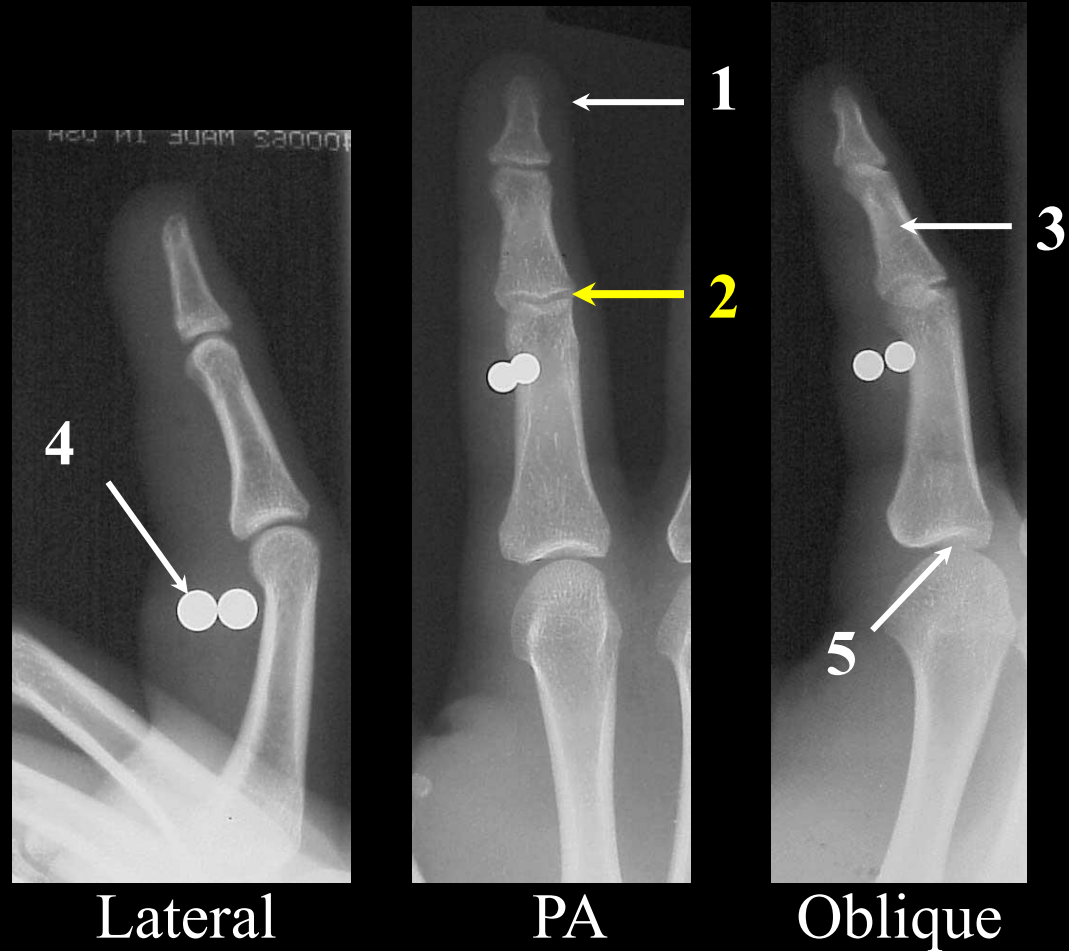
The arrow is pointing to the:

- a. distal interphalangeal joint.
- b. metacarpophalangeal joint.
- c. proximal interphalangeal joint.
- d. interphalangeal joint.



Question #52: Review

1. Tuft
2. Proximal Interphalangeal Joint
3. Middle Phalanx
4. BBs x 2
5. Metacarpophalangeal Joint



Routine Finger

Question #53:

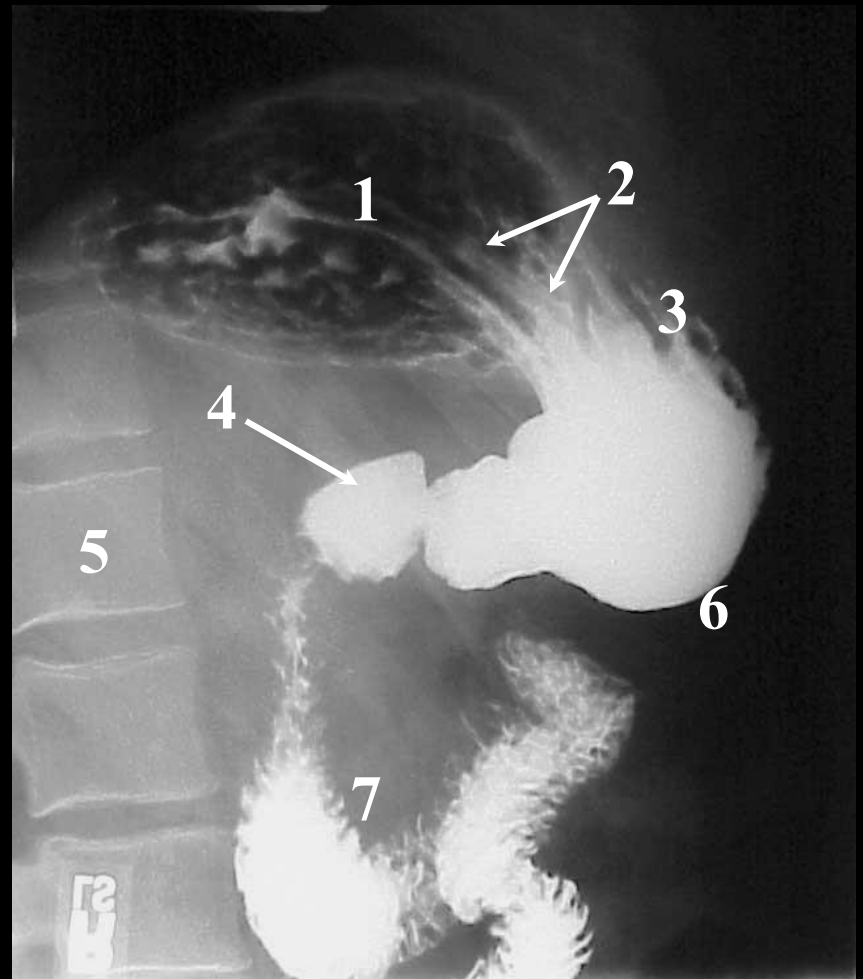
What is the name of this stomach position?

- a. LPO
- b. RAO
- c. PA
- d. right lateral



Question #53: Review

1. Air in the Fundus
2. Rugae (Mucosal Folds)
3. Body of the Stomach
4. Bulb of the Duodenum
5. Body of a Lumbar Vertebrae (note that it is in the lateral position)
6. Pyloric Antrum
7. Descending Portion of the Duodenum

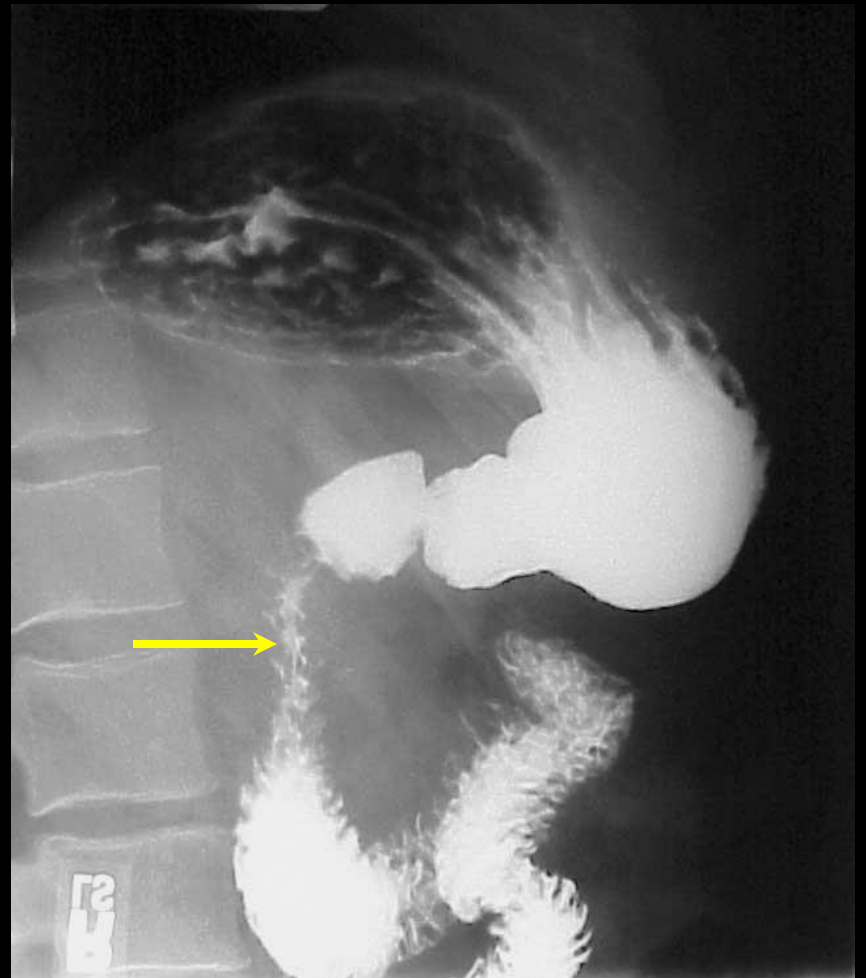


UGI: Right Lateral Stomach

Question #54:

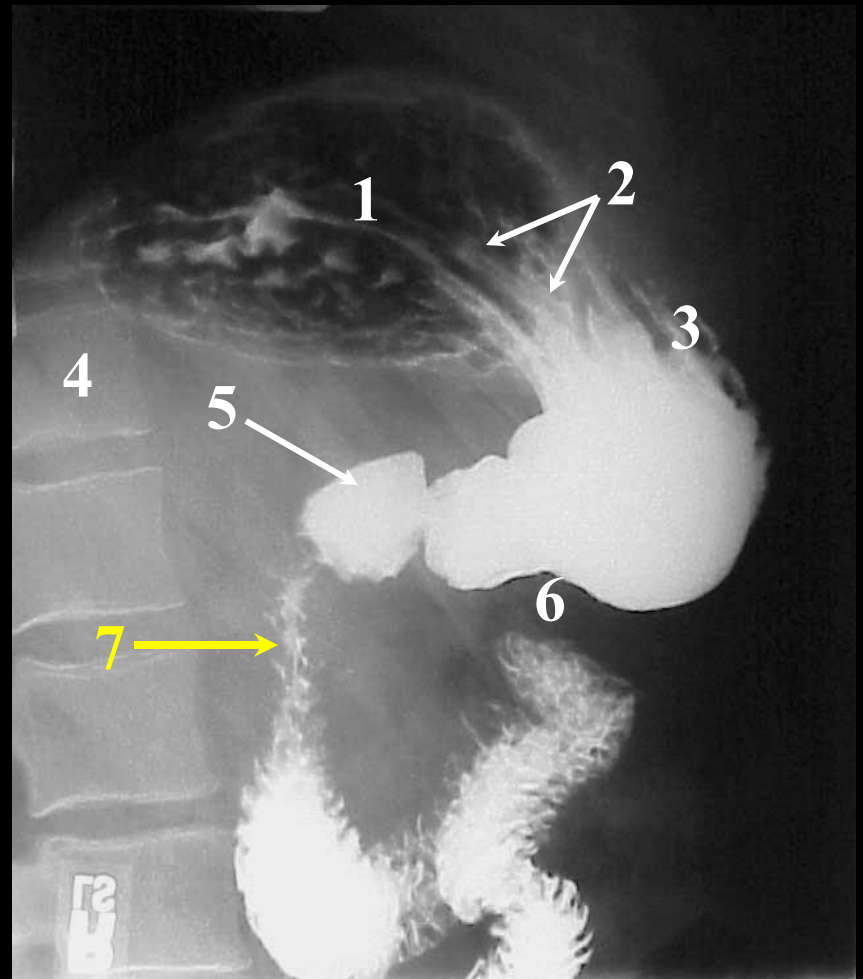
The arrow is pointing to the:

- a. ileum.
- b. pylorus.
- c. greater curvature.
- d. descending portion of the duodenum.



Question #54: Review

1. Air in the Fundus
2. Rugae (Mucosal Folds)
3. Body of the Stomach
4. Body of a Lumbar Vertebrae (note that it is in the lateral position)
5. Bulb of the Duodenum
6. Pyloric Antrum
7. Descending Portion of the Duodenum

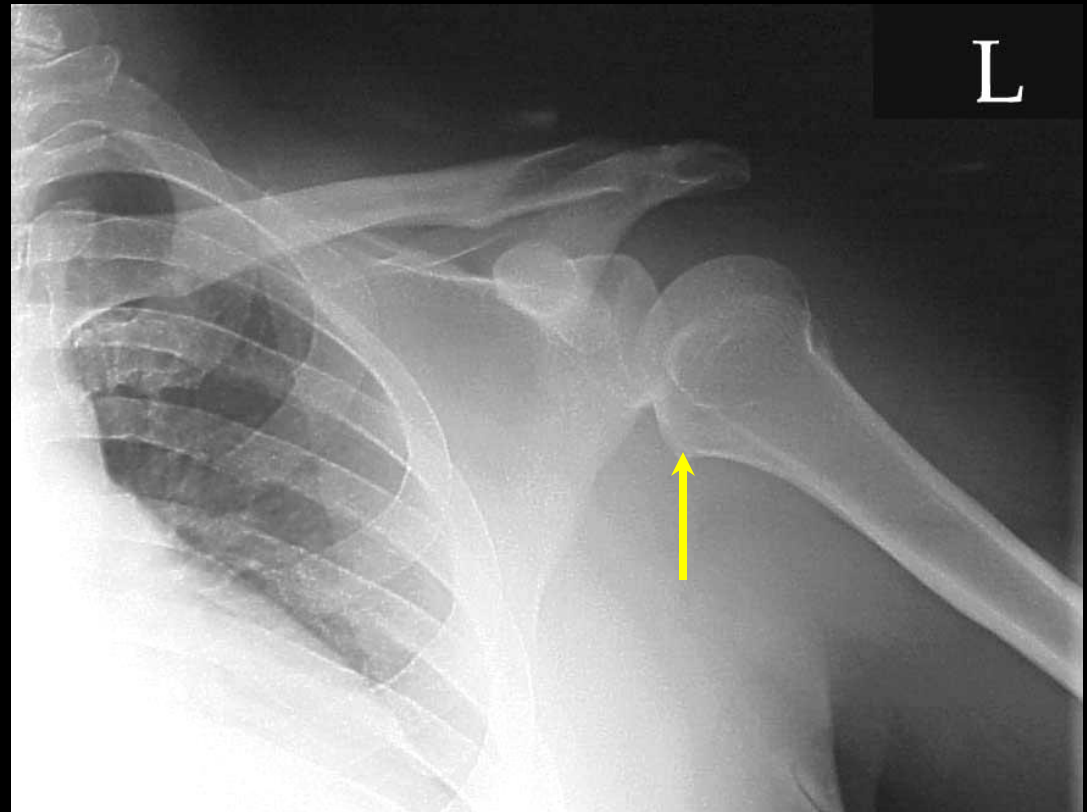


UGI: Right Lateral Stomach

Question #55:

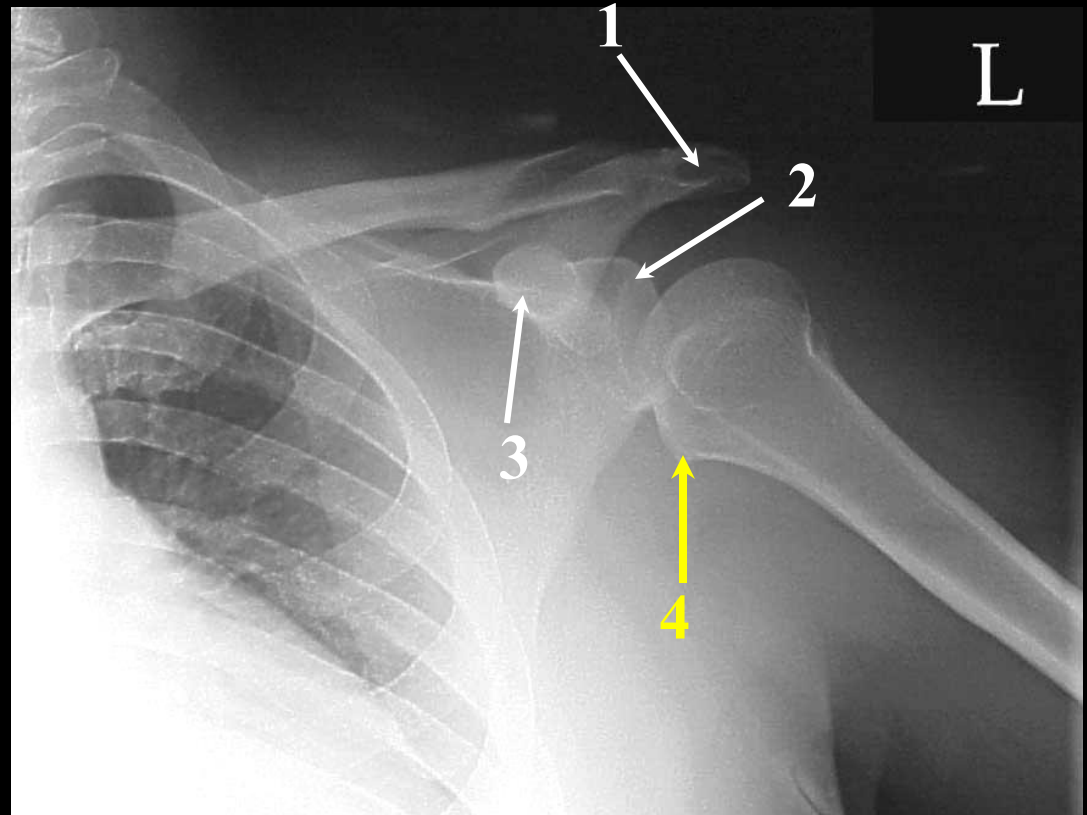
The arrow is pointing to the:

- a. greater tubercle.
- b. lesser tubercle.
- c. surgical neck.
- d. intertubercular groove.



Question #55: Review

1. Acromion Process
2. Glenoid Fossa
3. Coracoid Process
4. Lesser Tubercle of the Humerus

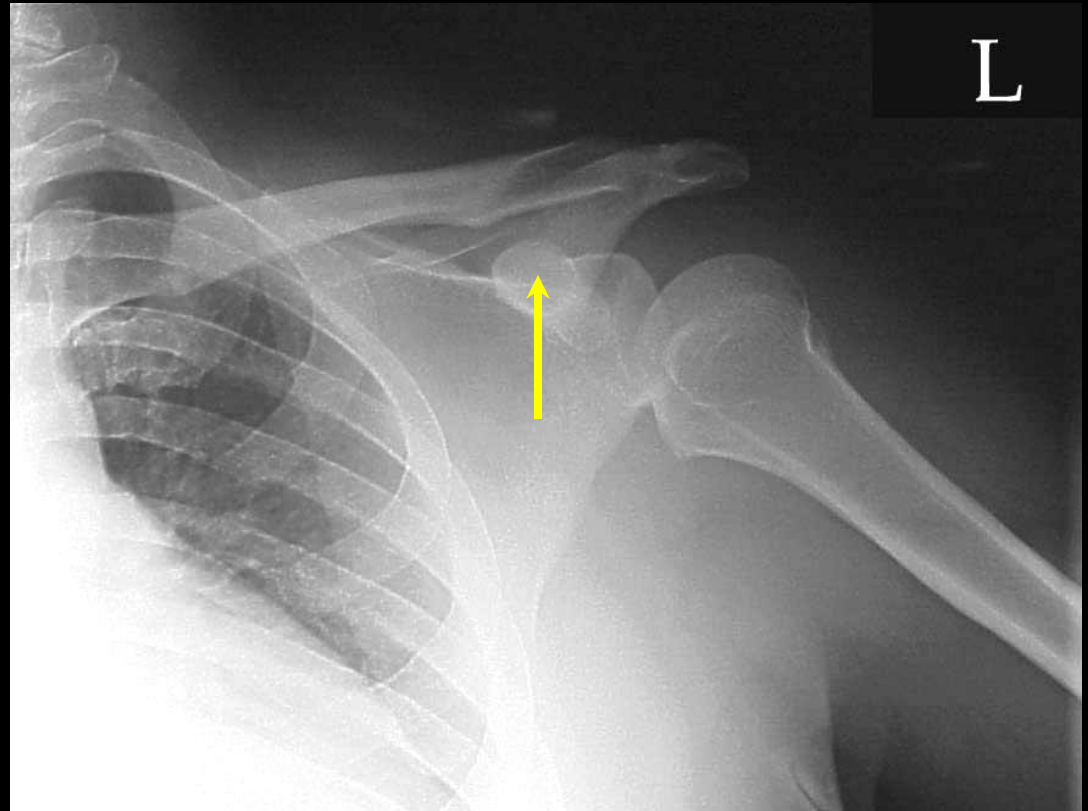


Internally Rotated Shoulder

Question #56:

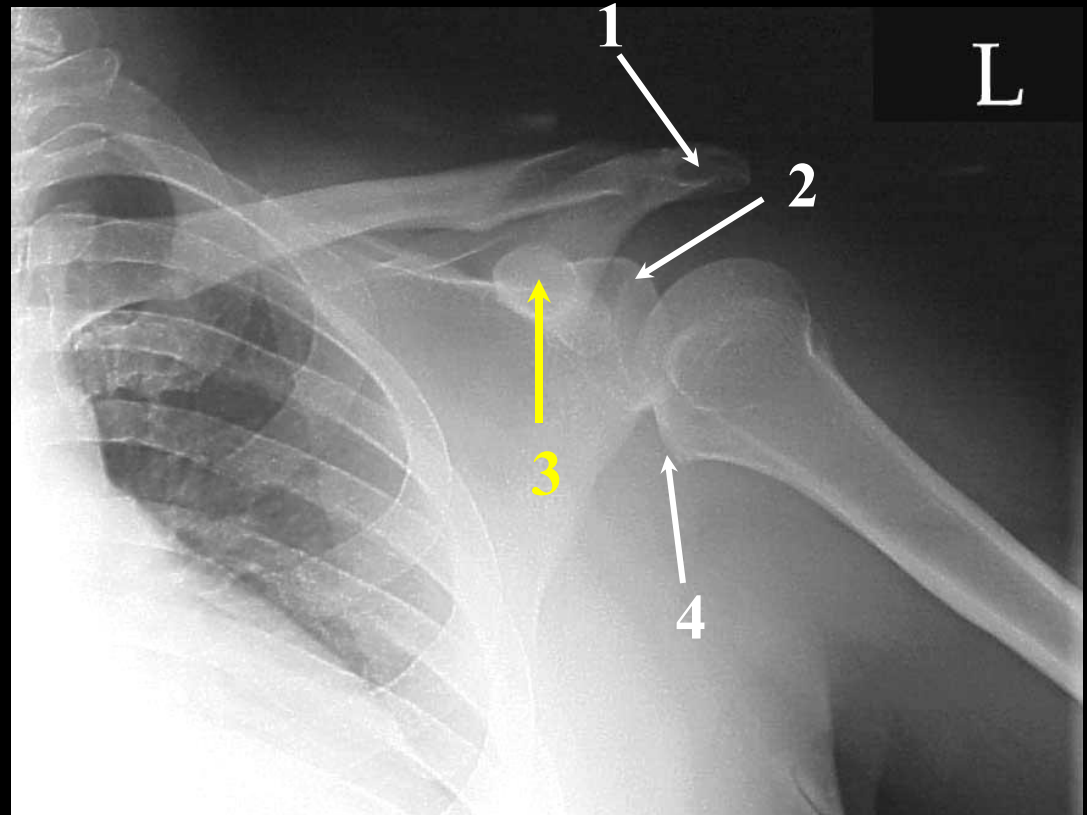
The arrow is pointing to the:

- a. coracoid process.
- b. acromion process.
- c. AC joint.
- d. coronoid process.



Question #56: **Review**

1. Acromion Process
2. Glenoid Fossa
- 3. Coracoid Process**
4. Lesser Tubercle of the Humerus



Internally Rotated Shoulder

Question #57:

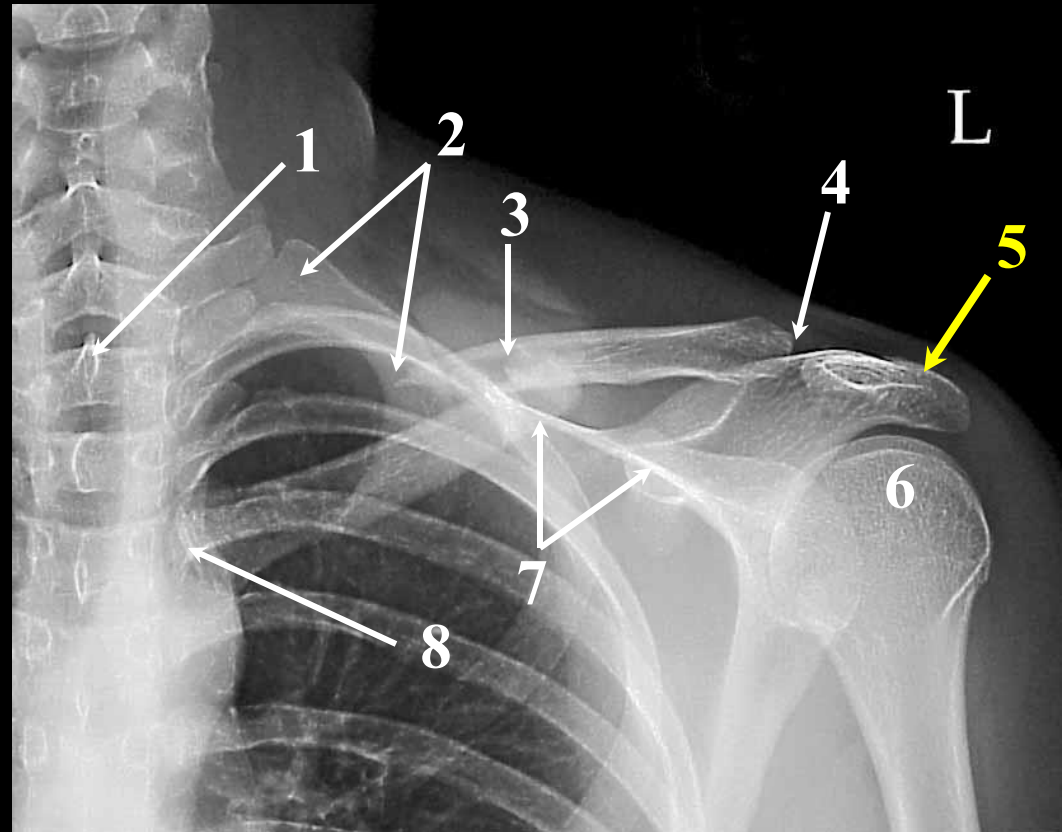
The arrow is pointing to the:

- a. AC joint.
- b. scapular spine.
- c. acromion process.
- d. coracoid process.



Question #57: Review

1. Spinous Process
2. 1st Rib
3. Fracture Site
4. AC Joint
- 5. Acromion Process**
6. Head of the Humerus
7. Scapular Spine
8. SC Joint

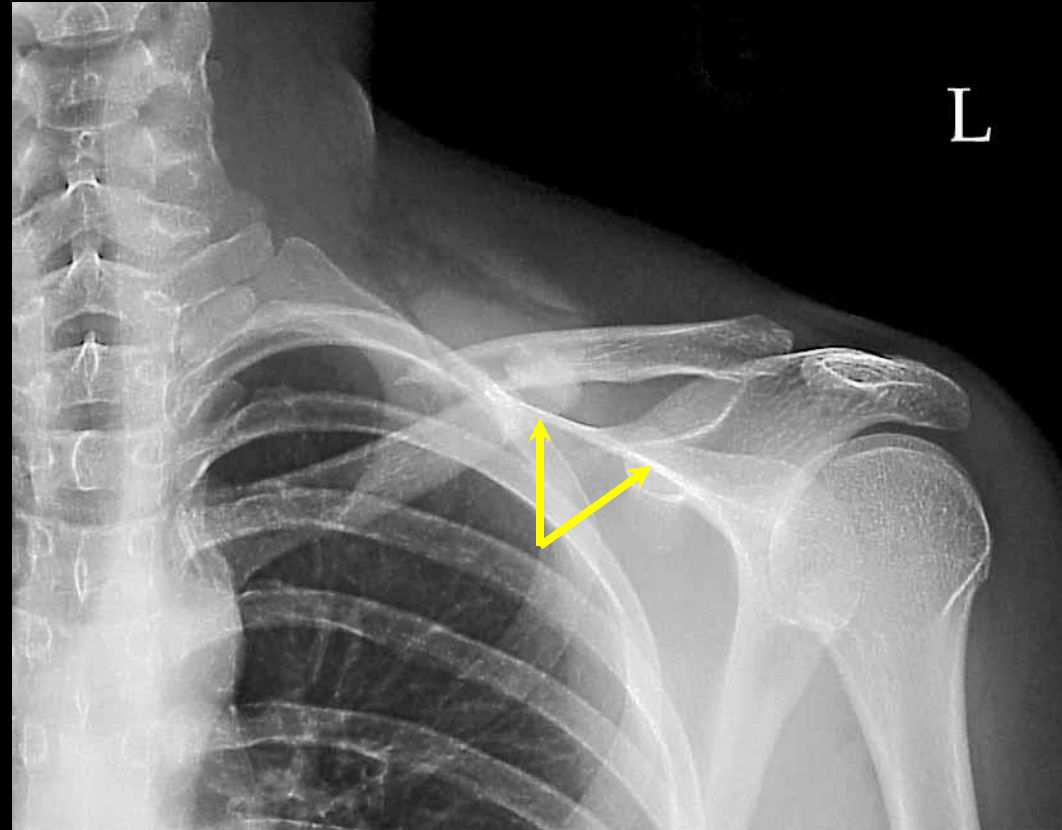


AP Clavicle

Question #58:

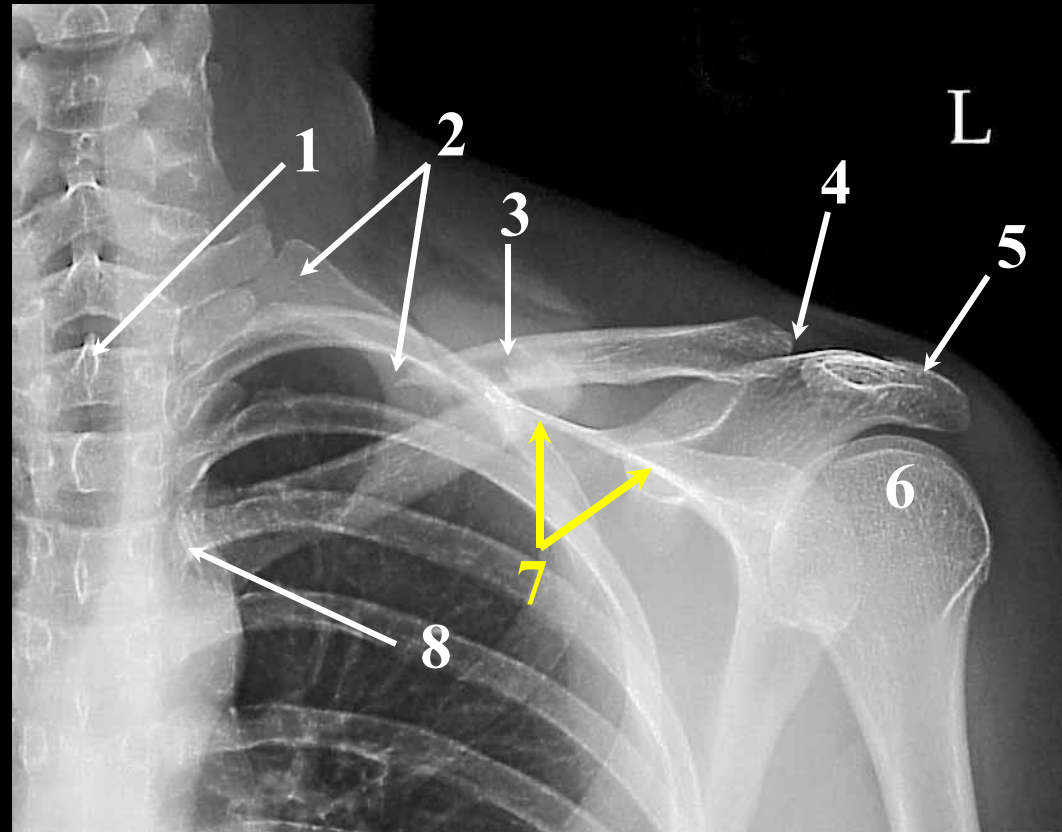
The arrows are pointing to the:

- a. body of the clavicle.
- b. scapular spine.
- c. axillary border.
- d. coracoid process.



Question #58: Review

1. Spinous Process
2. 1st Rib
3. Fracture Site
4. AC Joint
5. Acromion Process
6. Head of the Humerus
7. Scapular Spine
8. SC Joint

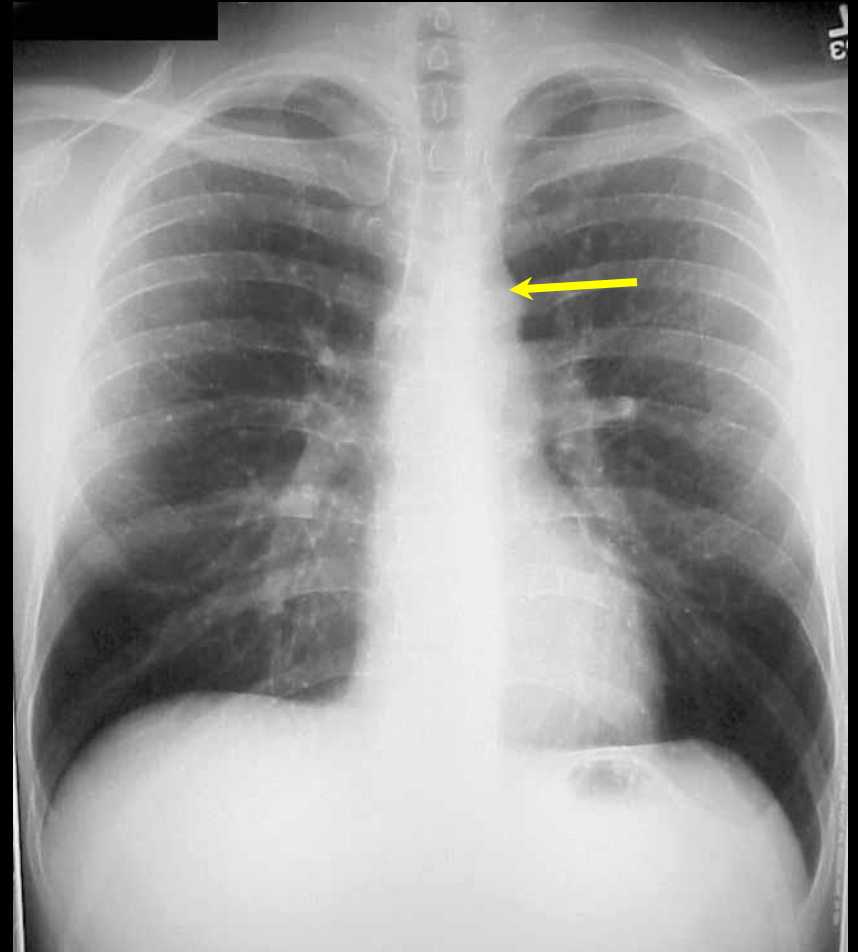


AP Clavicle

Question #59:

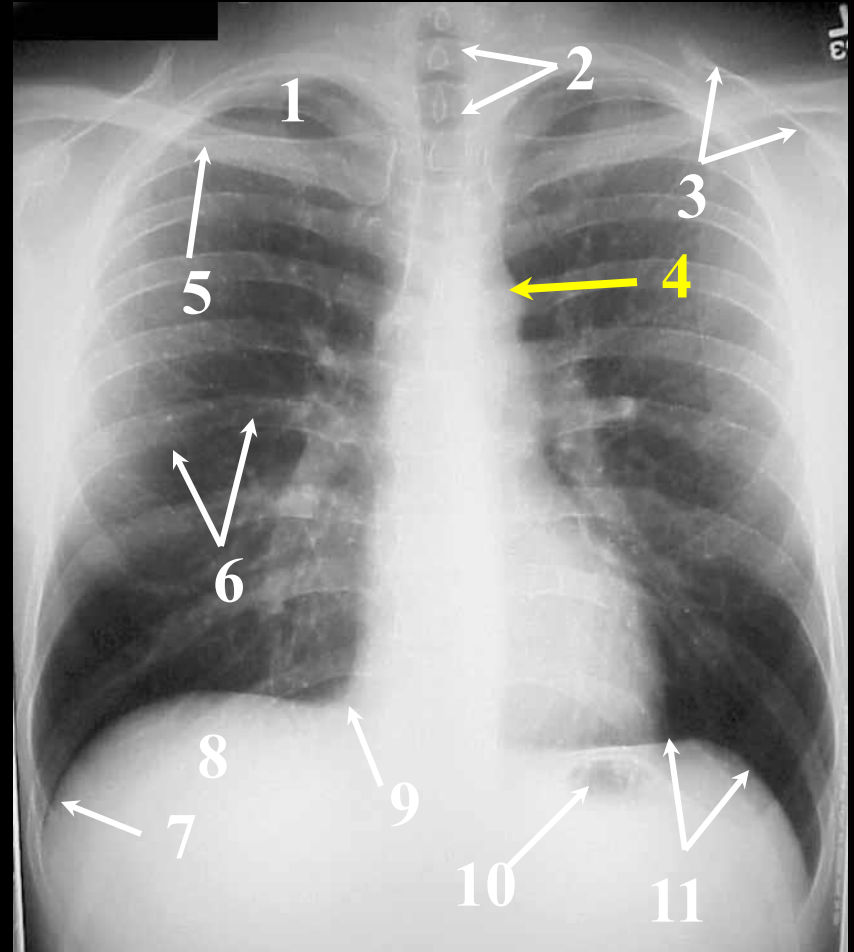
The arrow is pointing to the:

- a. pulmonary markings.
- b. lymph node.
- c. primary bronchus.
- d. aortic arch.



Question #59: Review

1. Apex of the Lung
2. Trachea
3. Spine of the Scapula
4. **Aortic Arch**
5. Clavicle
6. 8th Posterior Rib
7. Costophrenic Angle
8. Liver
9. Cardiophrenic Angle
10. Air in the Fundus of the Stomach
11. Left Hemidiaphragm

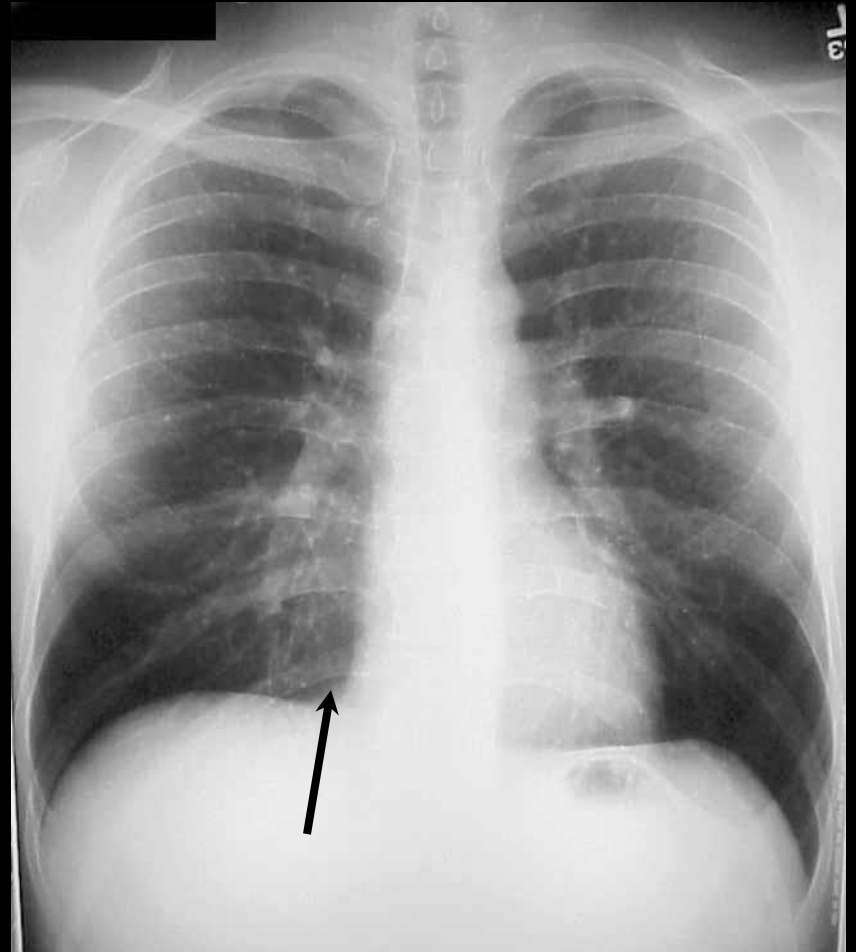


Routine PA Chest

Question #60:

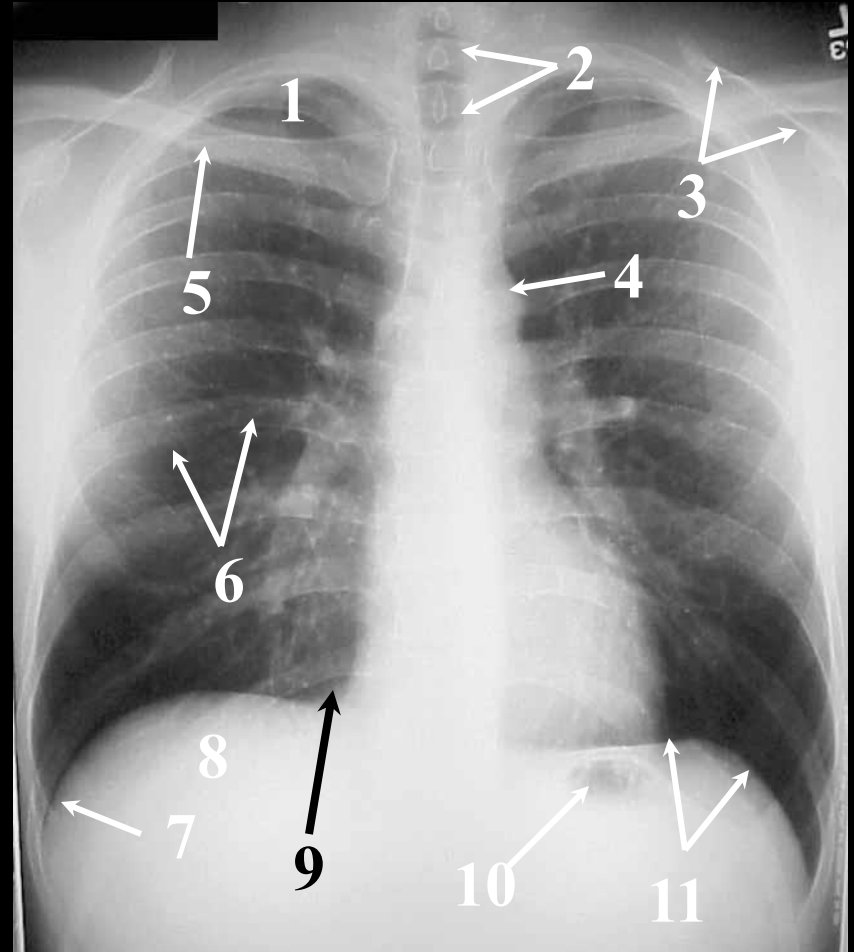
The arrow is pointing to the:

- a. left hemi-diaphragm.
- b. costophrenic angle.
- c. heart shadow.
- d. cardiophrenic angle.



Question #60: Review

1. Apex of the Lung
2. Trachea
3. Spine of the Scapula
4. Aortic Arch
5. Clavicle
6. 8th Posterior Rib
7. Costophrenic Angle
8. Liver
9. **Cardiophrenic Angle**
10. Air in the Fundus of the Stomach
11. Left Hemidiaphragm

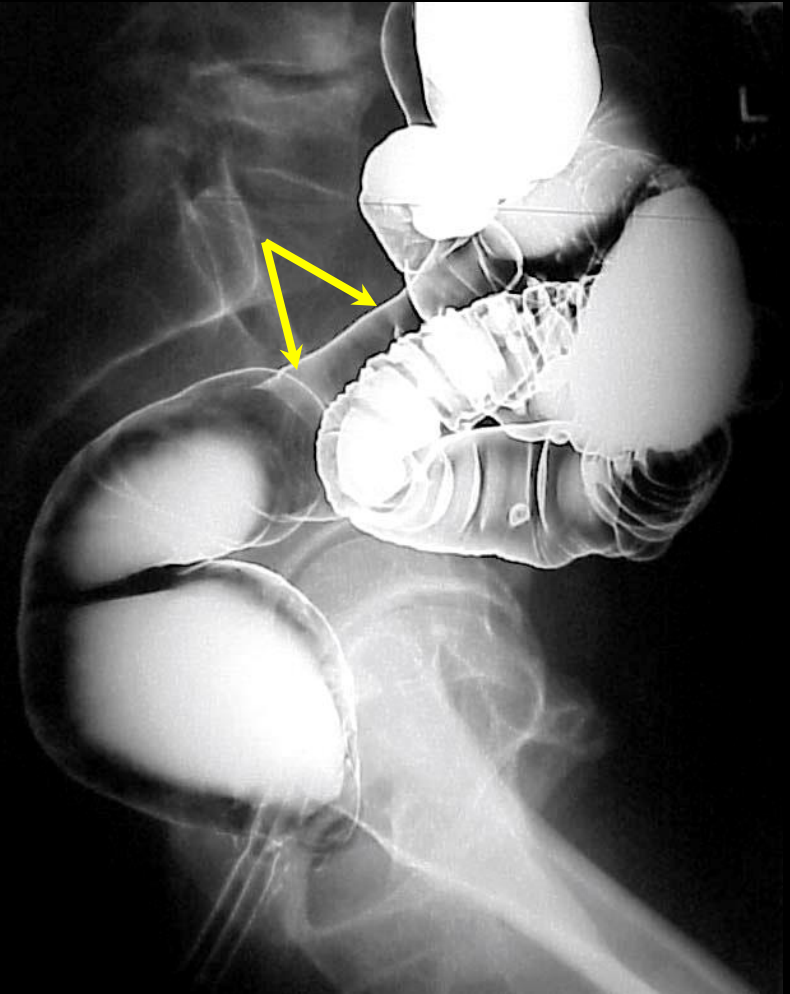


Routine PA Chest

Question #61:

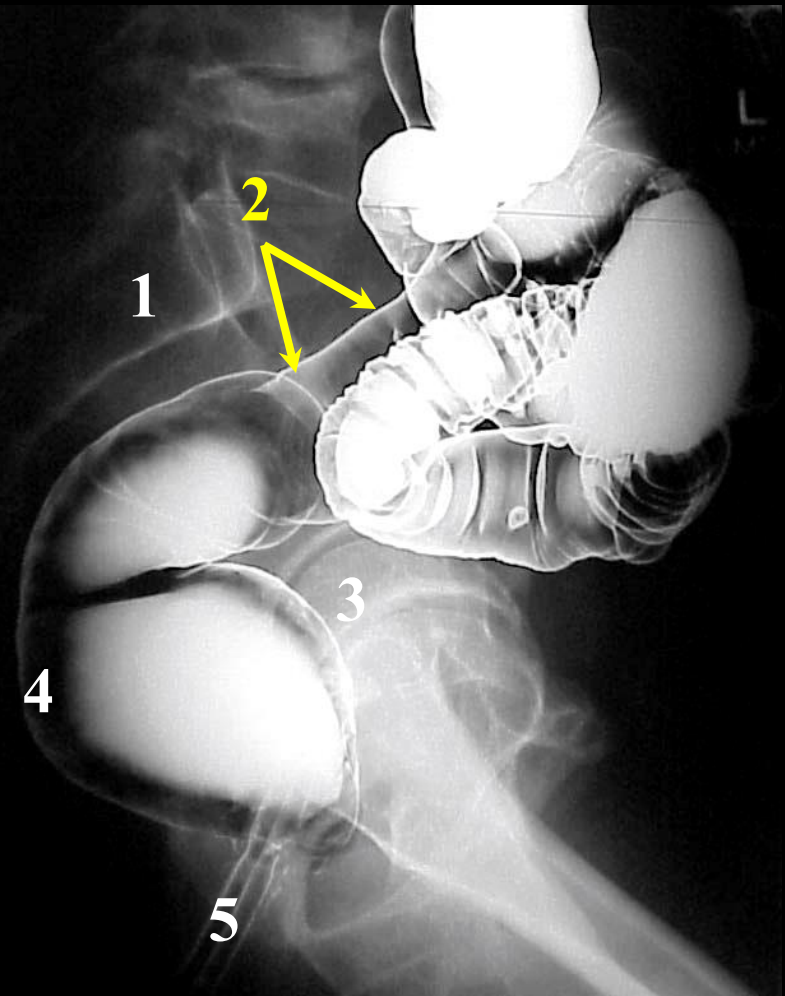
The arrows are pointing to the:

- a. rectum.
- b. sigmoid colon.
- c. descending colon.
- d. ascending colon.



Question #61: Review

1. Sacrum
2. Sigmoid Colon
3. Heads of both Femurs
Superimposed
4. Rectum
5. BE Tip



Lateral Rectum: BE with Air

Question #62:

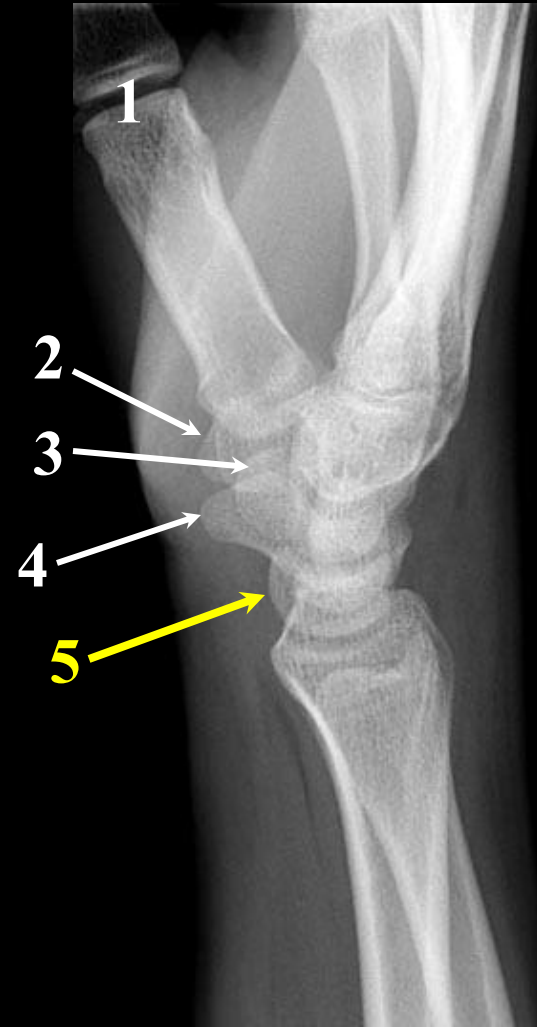
The arrow is pointing to the:

- a. trapezoid.
- b. pisiform.
- c. capitate.
- d. lunate.



Question #62: Review

1. 1st Metacarpophalangeal Joint (MP)
2. Greater Multangular or Trapezium
3. Pisiform
4. Navicular or Scaphoid
5. Lunate or Semilunar



Lateral Wrist

Question #63:

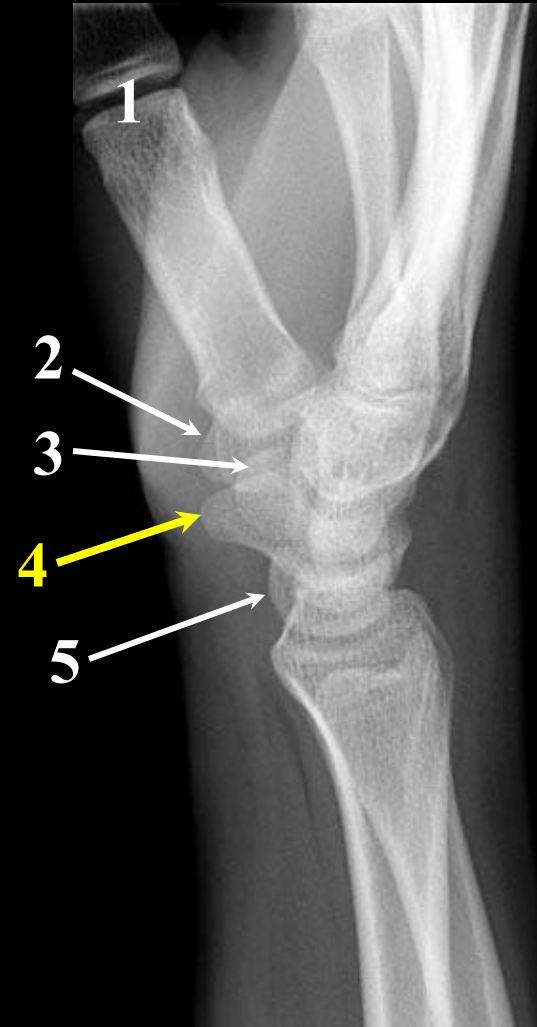
The arrow is pointing to the:

- a. lunate.
- b. trapezium.
- c. navicular.
- d. capitate.



Question #63: Review

1. 1st Metacarpophalangeal Joint (MP)
2. Greater Multangular or Trapezium
3. Pisiform
4. Navicular or Scaphoid
5. Lunate or Semilunar



Lateral Wrist

Question #64:

The arrow is pointing to the:

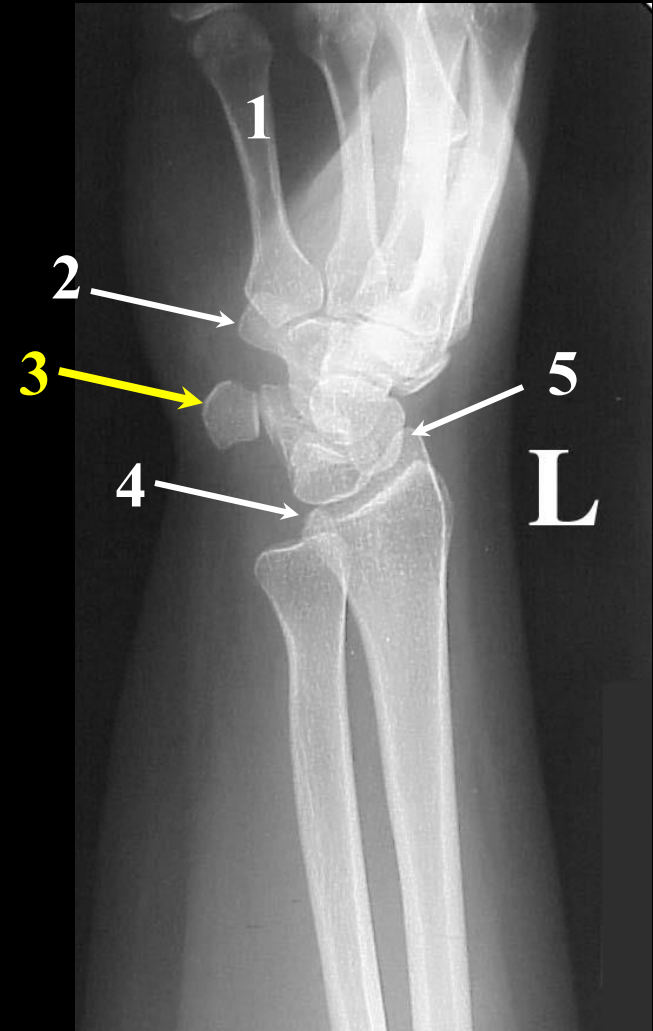
- a. pisiform.
- b. trapezoid.
- c. navicular.
- d. cuboid.



Question #64: Review

This position best demonstrates the pisiform free from bony superimposition.

1. Shaft of the 5th Metacarpal
2. Hamulus of Hamate (Unciform)
- 3. Pisiform**
4. Styloid Process of the Ulna
5. Styloid Process of the Radius



AP Oblique Wrist

Question #65:

The arrow is pointing to the:

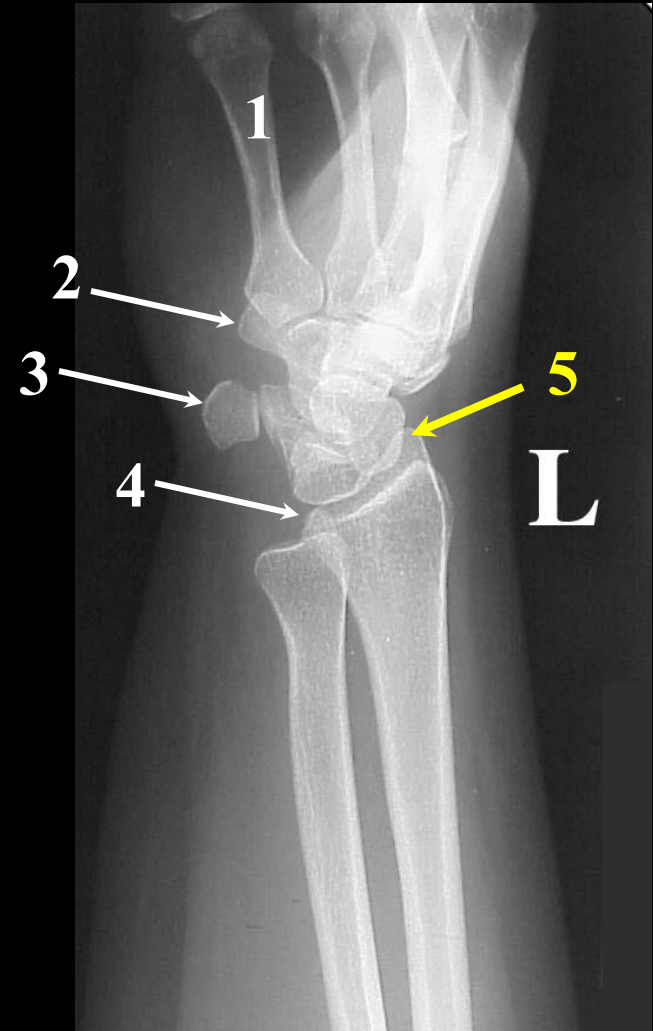
- a. styloid process of the ulna.
- b. pisiform.
- c. coronoid process.
- d. styloid process of the radius.



Question #65: Review

This position best demonstrates the pisiform free from bony superimposition.

1. Shaft of the 5th Metacarpal
2. Hamulus of Hamate (Unciform)
3. Pisiform
4. Styloid Process of the Ulna
5. Styloid Process of the Radius

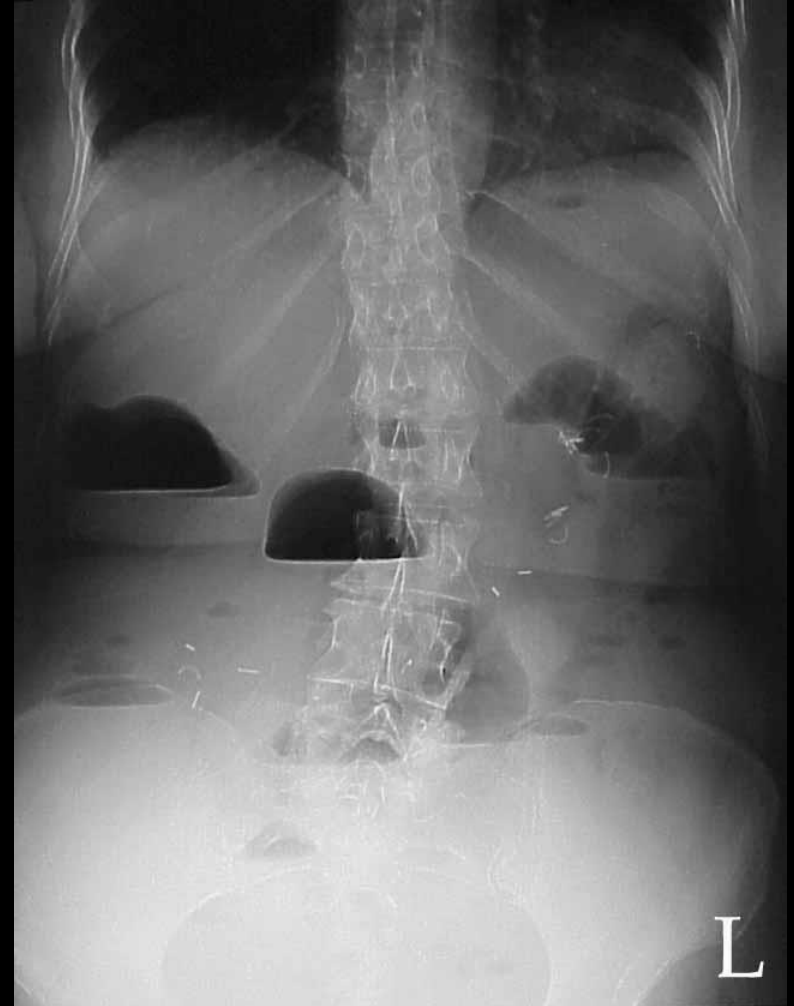


AP Oblique Wrist

Question #66:

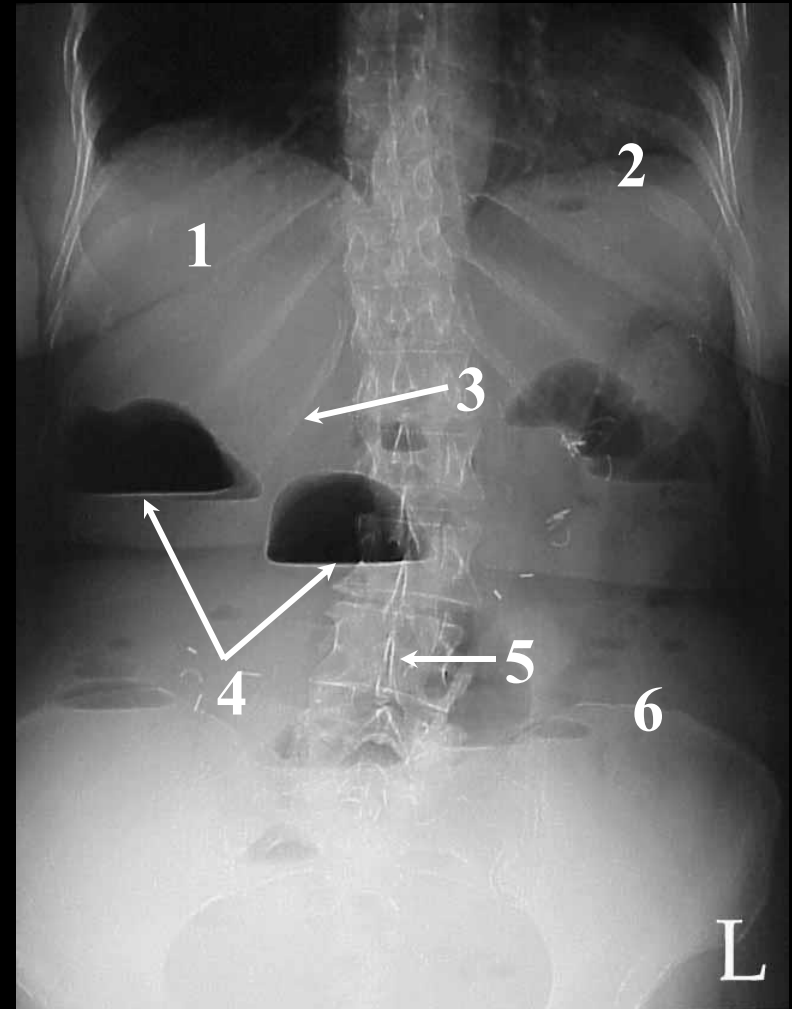
What is the name of this position?

- a. upright abdomen
- b. decub abdomen
- c. KUB
- d. dorsal decub abdomen



Question #66: Review

1. Liver
2. Left Hemidiaphragm
3. 12th Rib
4. Air/Fluid Levels
5. Spinous Process of L4
6. Top of the Iliac Crest

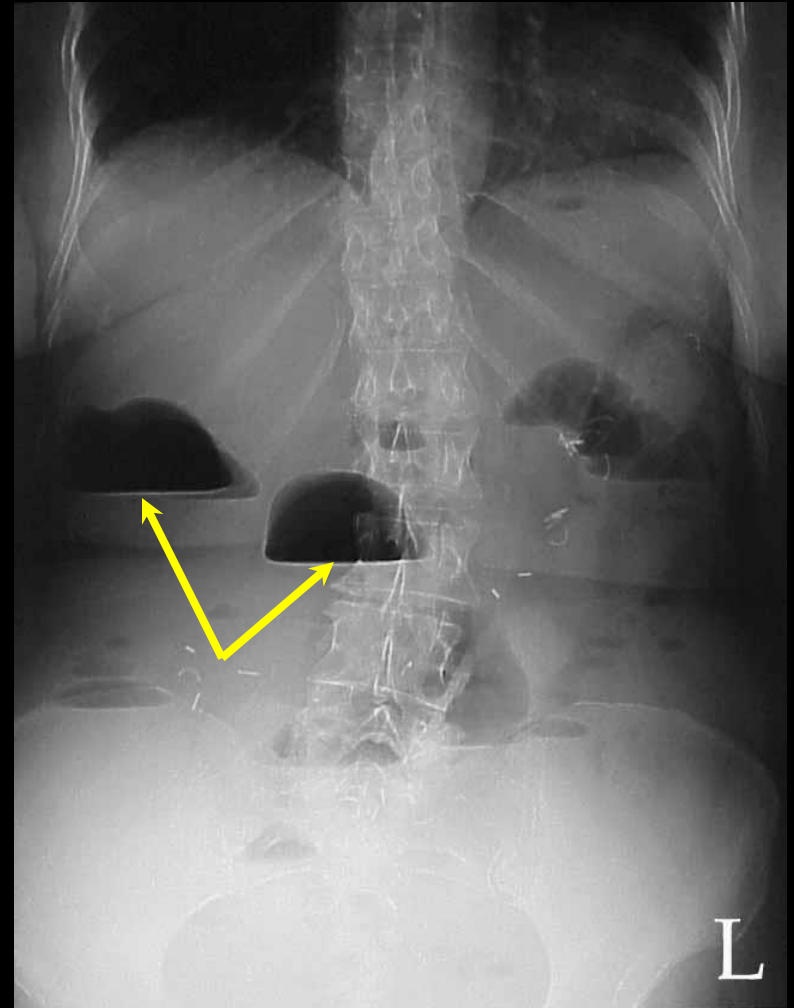


Upright Abdomen

Question #67:

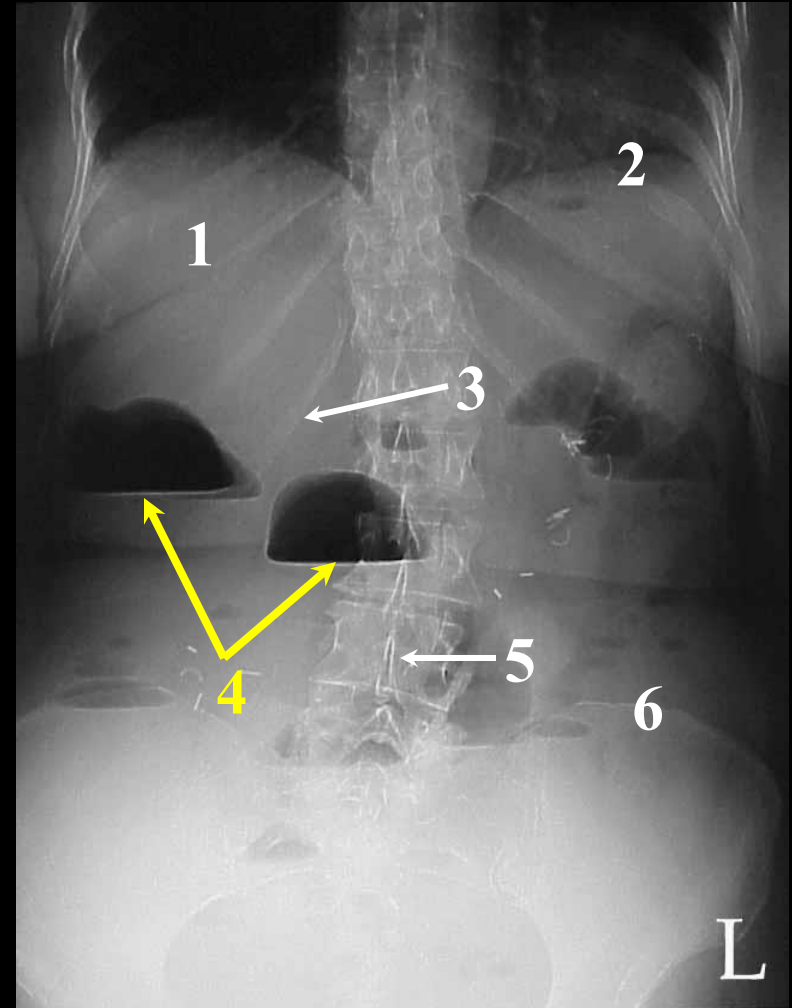
The arrows are pointing to air in the:

- a. large intestine.
- b. small intestine.
- c. fundus of the stomach.
- d. body of the stomach.



Question #67: Review

1. Liver
2. Left Hemidiaphragm
3. 12th Rib
4. Air/Fluid Levels
5. Spinous Process of L4
6. Top of the Iliac Crest



Upright Abdomen

Question #68:

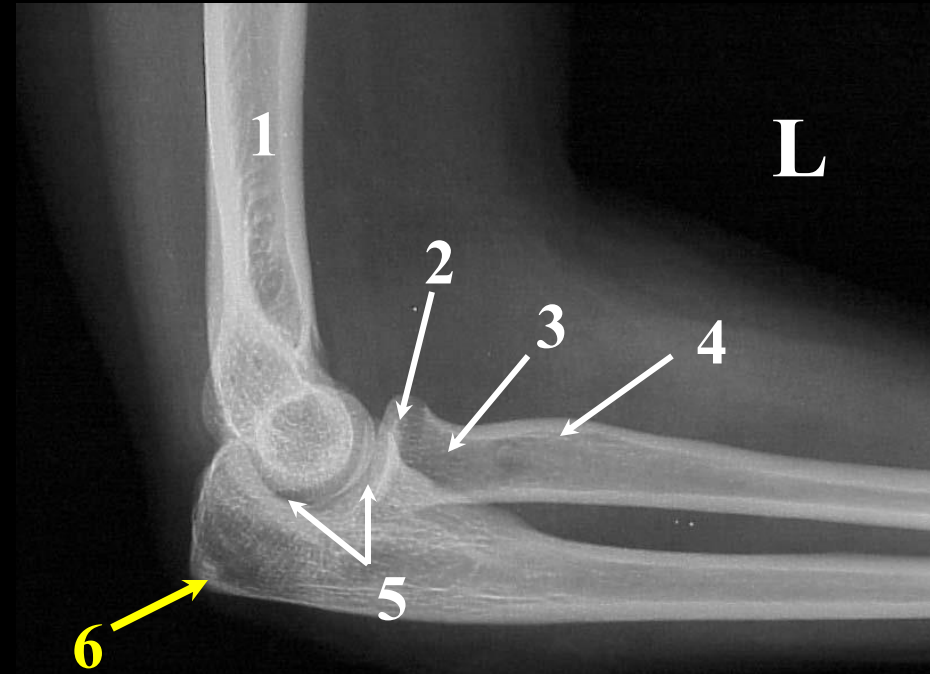
The arrow is pointing to the:

- a. coracoid process.
- b. coronoid process.
- c. olecrenon process.
- d. trochlea.



Question #68: Review

1. Shaft of the Humerus
2. Head of the Radius
3. Neck of the Radius
4. Radial Tuberosity
5. Trochlear or Semilunar Notch
6. Olecranon Process

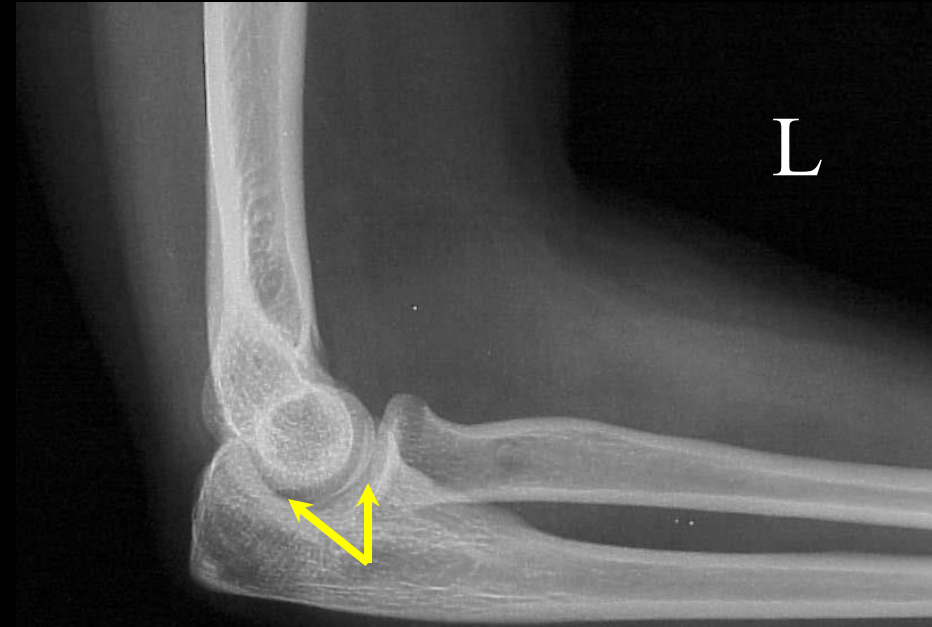


Lateral Elbow

Question #69:

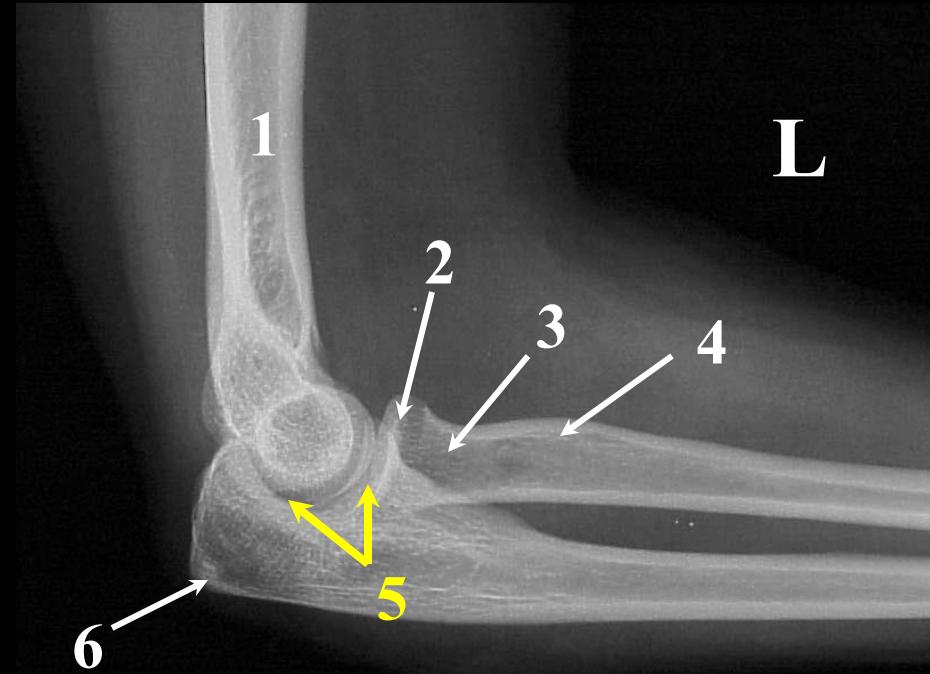
The arrows are pointing to the:

- a. coronoid process.
- b. trochlear or semilunar notch.
- c. head of the radius.
- d. coracoid process.



Question #69: Review

1. Shaft of the Humerus
2. Head of the Radius
3. Neck of the Radius
4. Radial Tuberosity
5. Trochlear or Semilunar Notch
6. Olecranon Process



Lateral Elbow

Question #70:

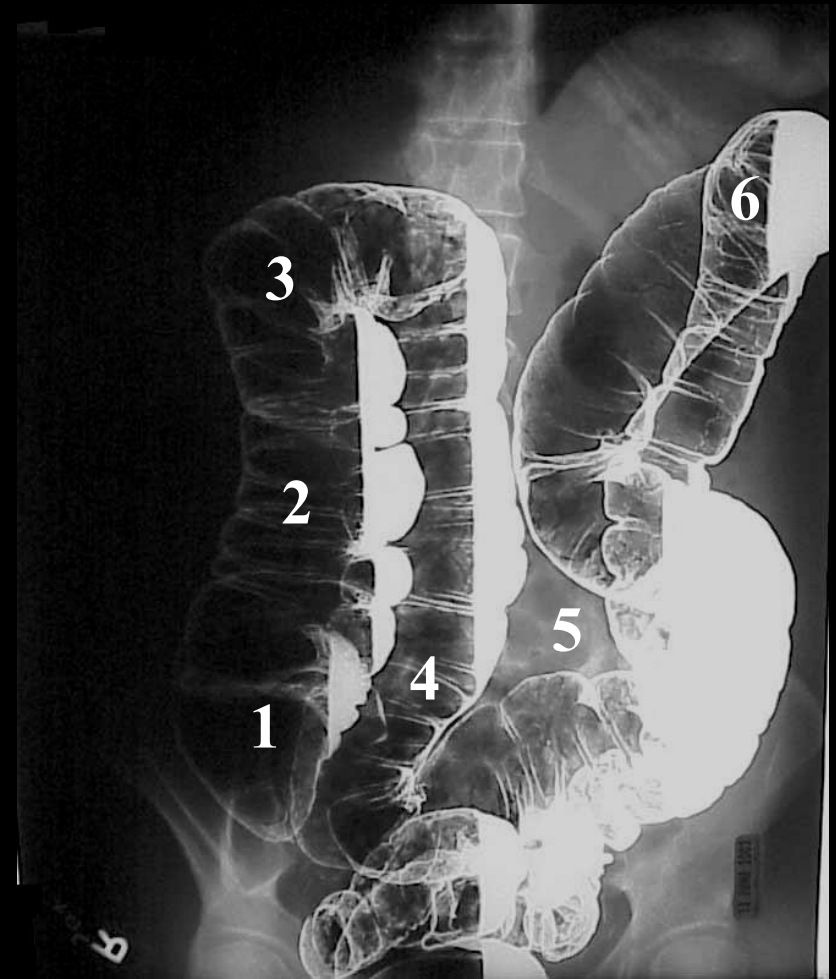
This position is a left lateral decubitus for a BE with air.

- a. true
- b. false



Question #70: Review

1. Cecum
2. Ascending Colon
3. Hepatic or Right Colic Flexure
4. Transverse Colon
5. Descending Colon
6. Splenic or Left Colic Flexure

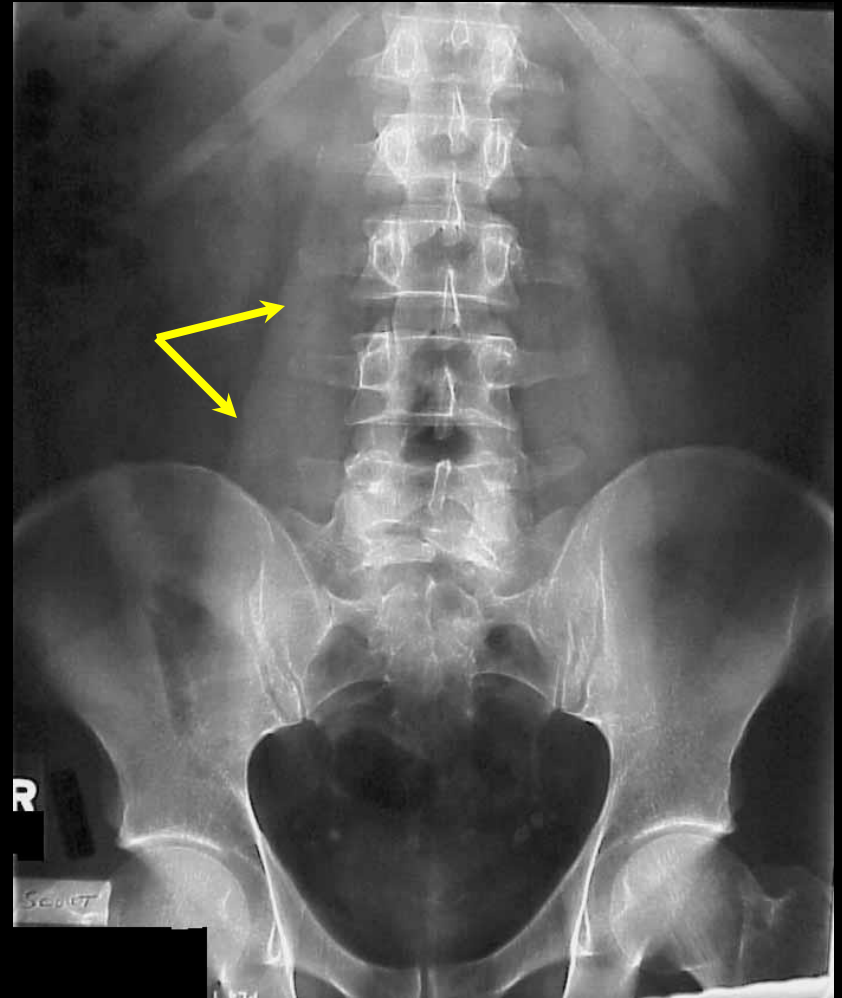


Left Lateral Decubitus: BE with Air

Question #71:

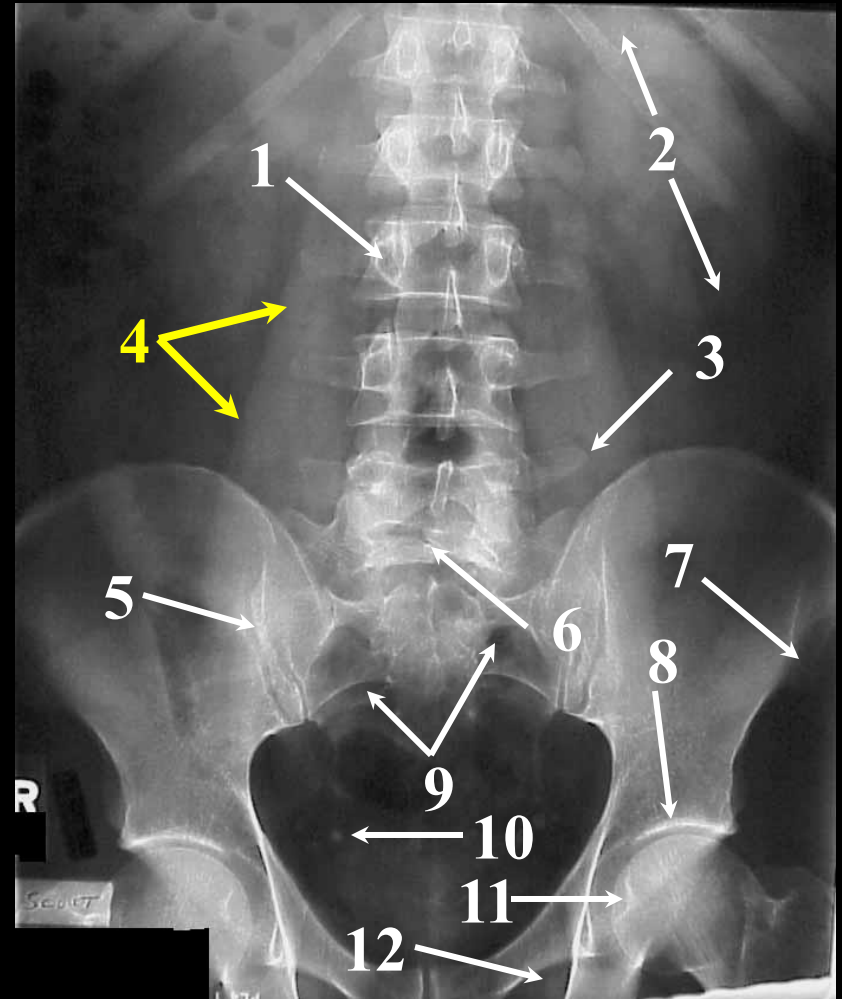
The arrows are pointing to the:

- a. ileum.
- b. jejunum.
- c. psoas muscle.
- d. pancreas.



Question #71: Review

1. Pedicle of L2
2. Shadow of the Kidney
3. Transverse Process of L5
4. **Psoas Muscle**
5. Sacroiliac Joint
6. Spina Bifida
7. ASIS
8. Acetabulum
9. Anterior Sacral Foramen
10. Phlebolith
11. Fovea Capitus
12. Obturator Foramen



Supine Abdomen or KUB

Question #72:

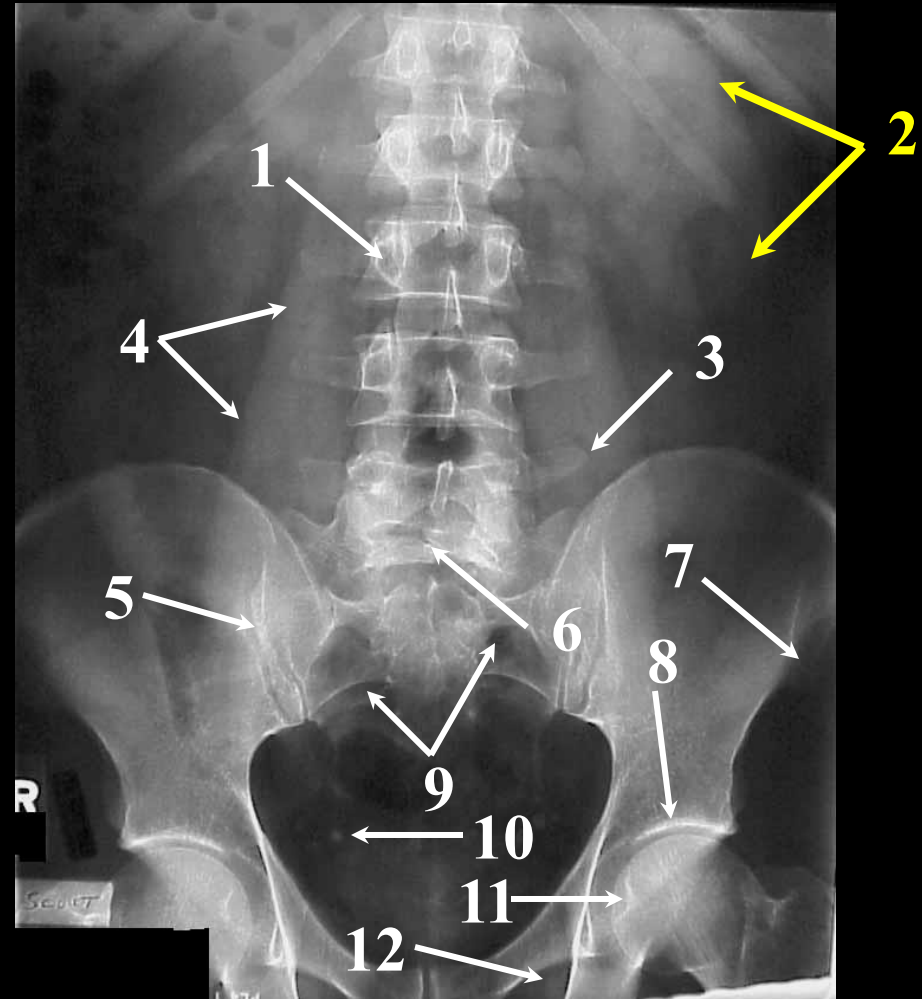
The arrows are pointing to the:

- a. stomach.
- b. spleen.
- c. pancreas.
- d. kidney.



Question #72: Review

1. Pedicle of L2
2. Shadow of the Kidney
3. Transverse Process of L5
4. Psoas Muscle
5. Sacroiliac Joint
6. Spina Bifida
7. ASIS
8. Acetabulum
9. Anterior Sacral Foramen
10. Phlebolith
11. Fovea Capitus
12. Obturator Foramen

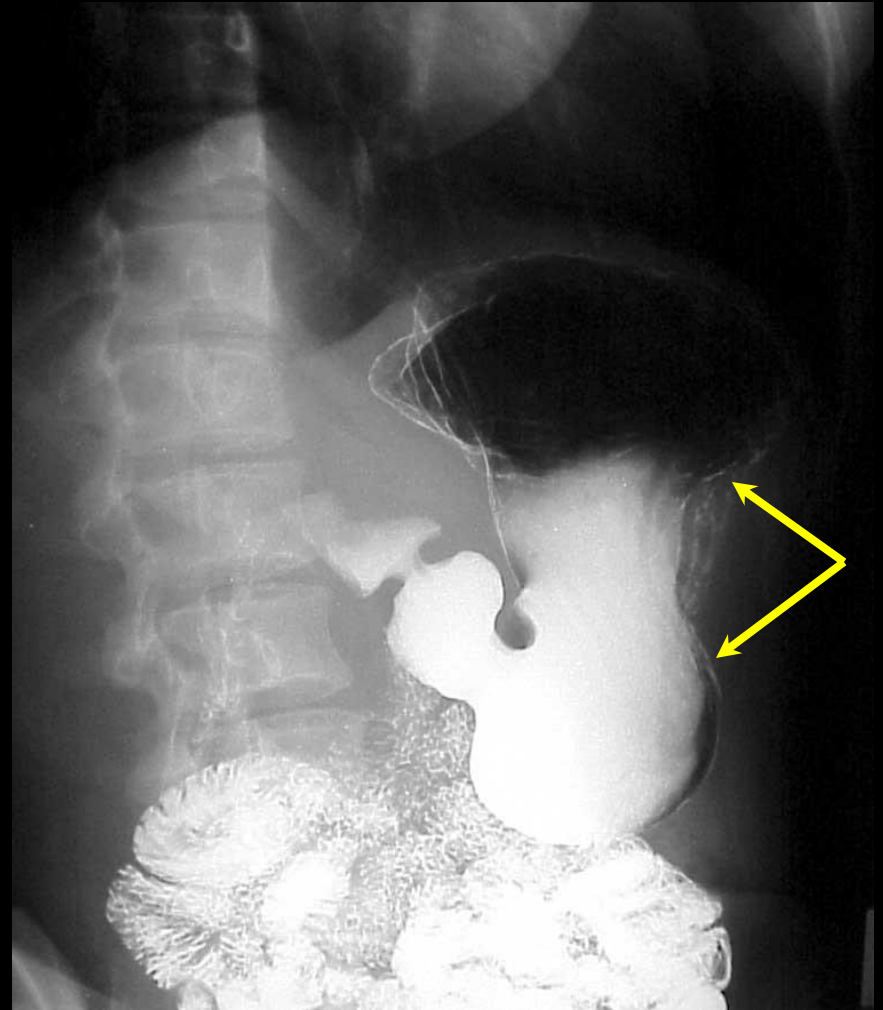


Supine Abdomen or KUB

Question #73:

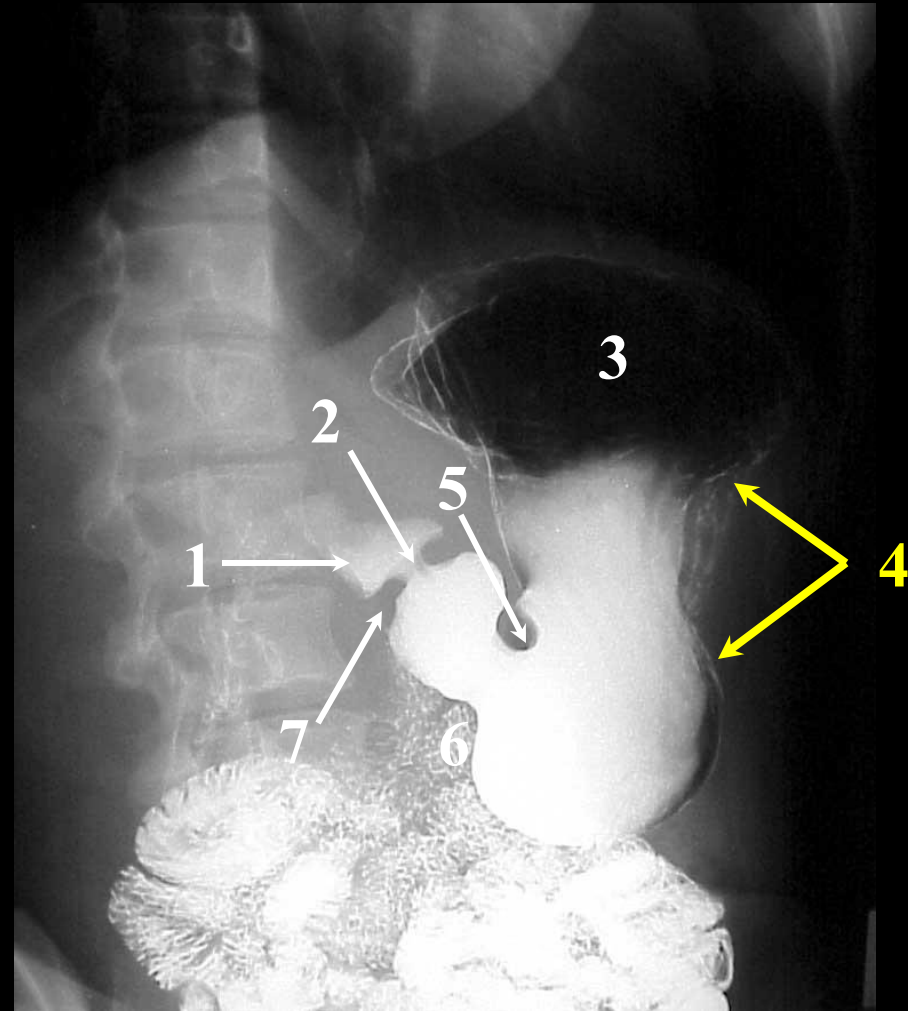
The arrows are pointing to the _____ of the stomach.

- a. greater curvature
- b. pylorus
- c. lesser curvature
- d. fundus



Question #73: Review

1. Duodenal Bulb or Ampulla
2. Pyloric Orifice
3. Air in the Fundus
4. Greater Curvature of the Stomach
5. Angular Notch
6. Pyloric Antrum
7. Muscular Sphincter of Pylorus



RAO Stomach UGI

Question #74:

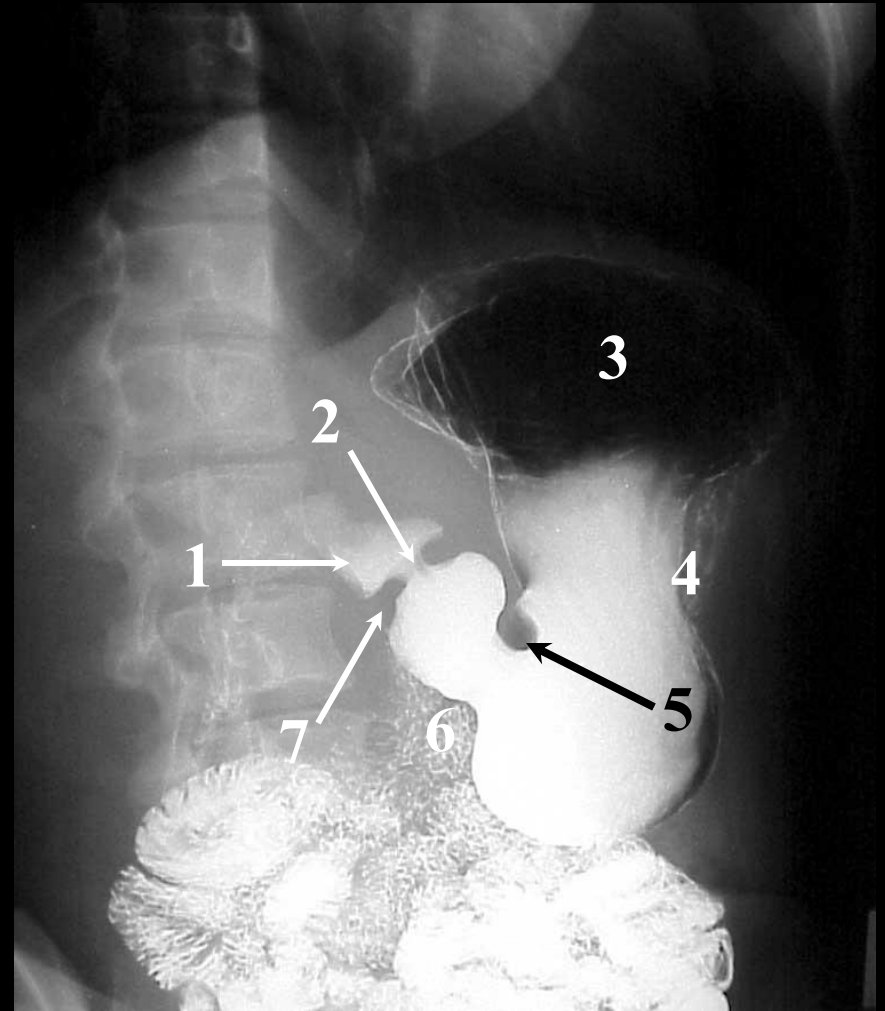
The arrow is pointing to the _____ of the stomach.

- a. angular notch
- b. pylorus
- c. body
- d. duodenum



Question #74: Review

1. Duodenal Bulb or Ampulla
2. Pyloric Orifice
3. Air in the Fundus
4. Body of the Stomach
5. Angular Notch
6. Pyloric Antrum
7. Muscular Sphincter of Pylorus

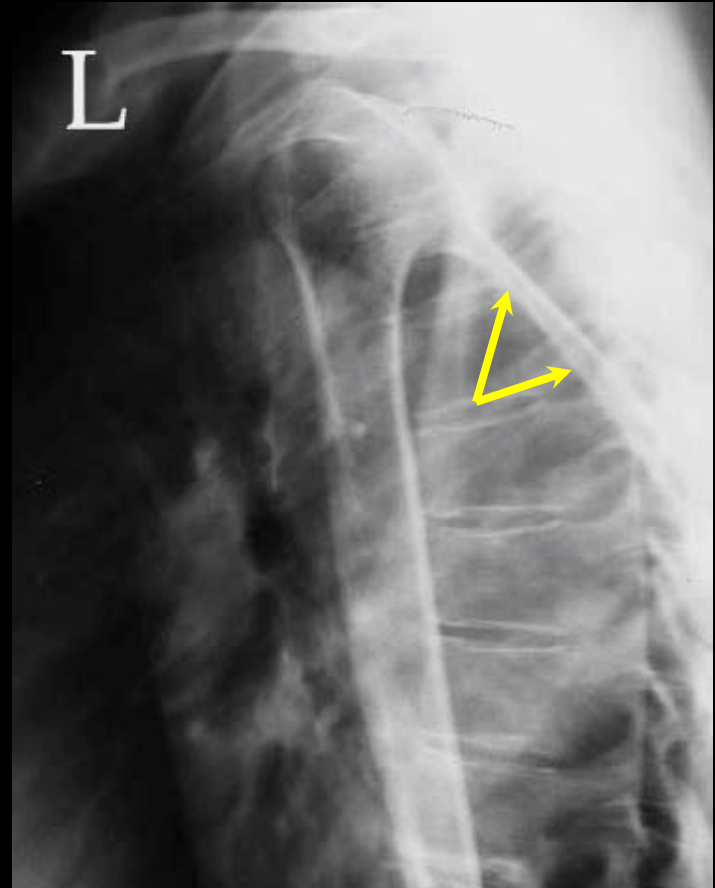


RAO Stomach UGI

Question #75:

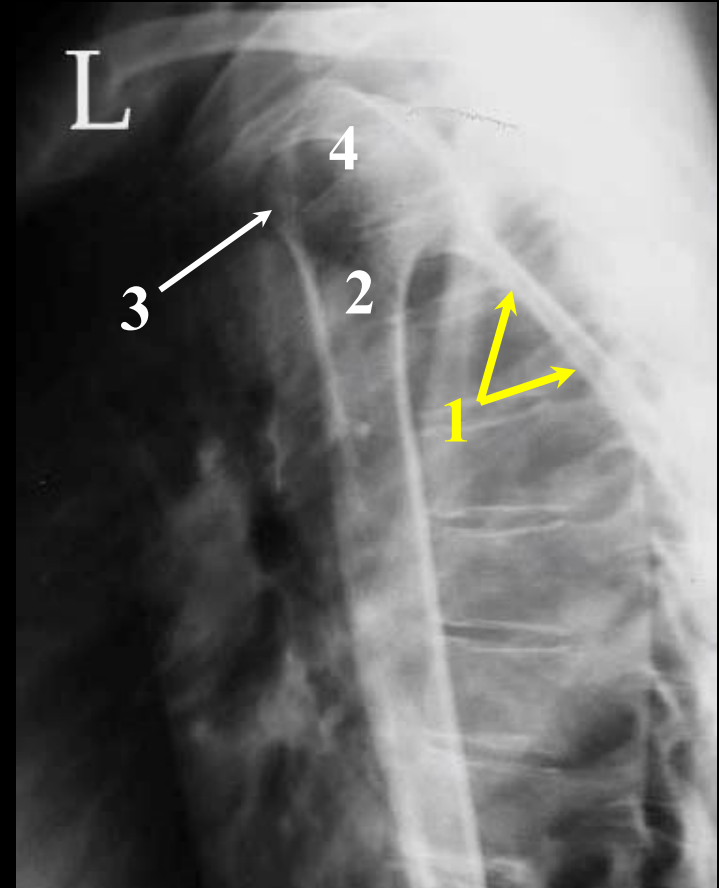
The arrows are pointing to the:

- a. scapula.
- b. trachea.
- c. esophagus.
- d. clavicle.



Question #75: Review

1. Scapula
2. Surgical Neck of the Humerus
3. Greater Tubercle of the Humerus
4. Head of the Humerus

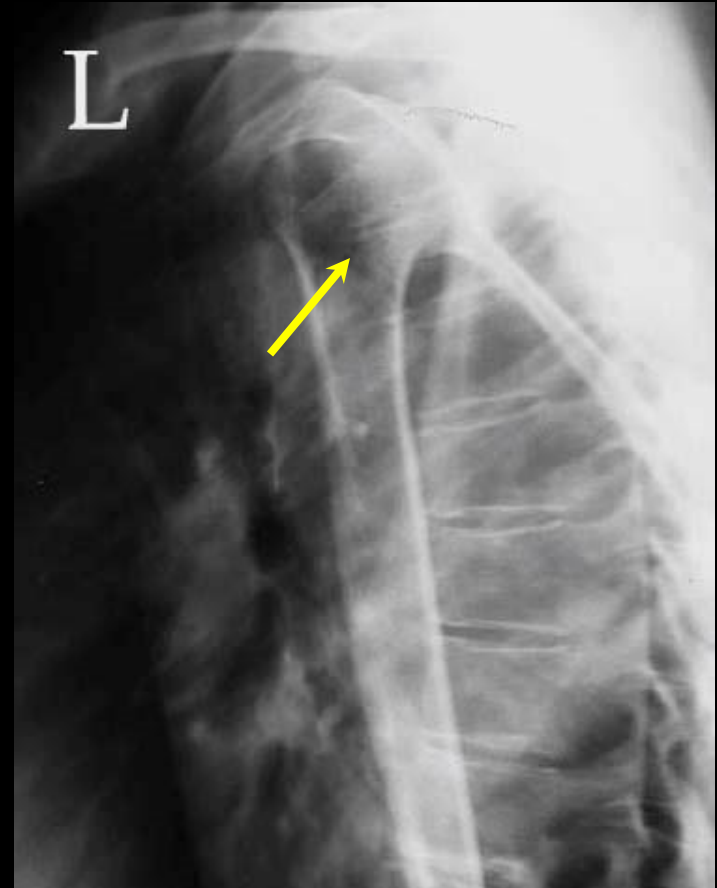


Transthoracic Shoulder

Question #76:

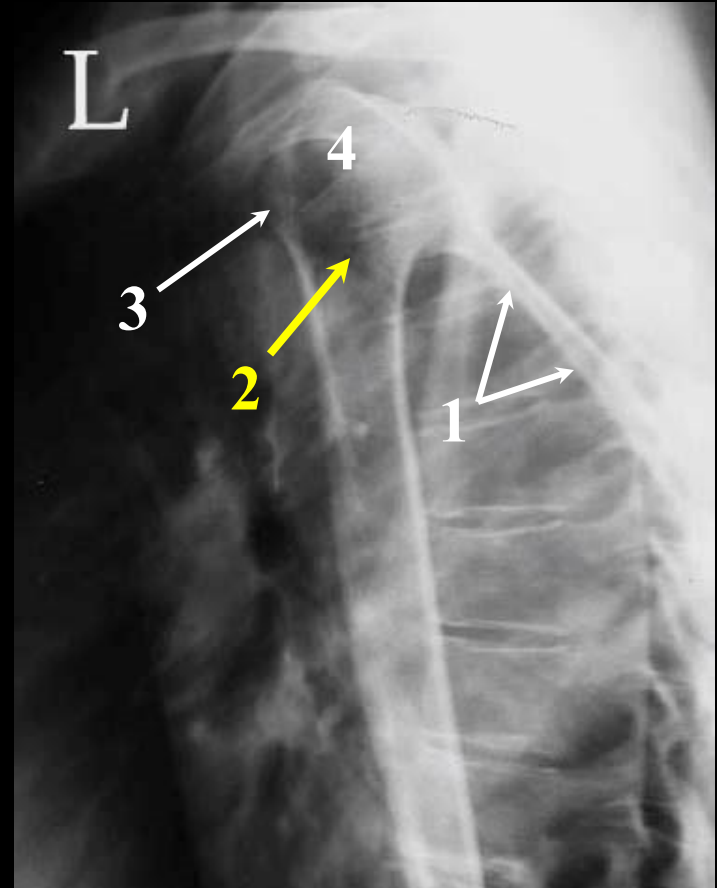
The arrows are pointing to the _____ of the humerus.

- a. surgical neck
- b. anatomical neck
- c. greater tubercle
- d. intertubercular groove



Question #76: Review

1. Scapula
2. Surgical Neck of the Humerus
3. Greater Tubercle of the Humerus
4. Head of the Humerus

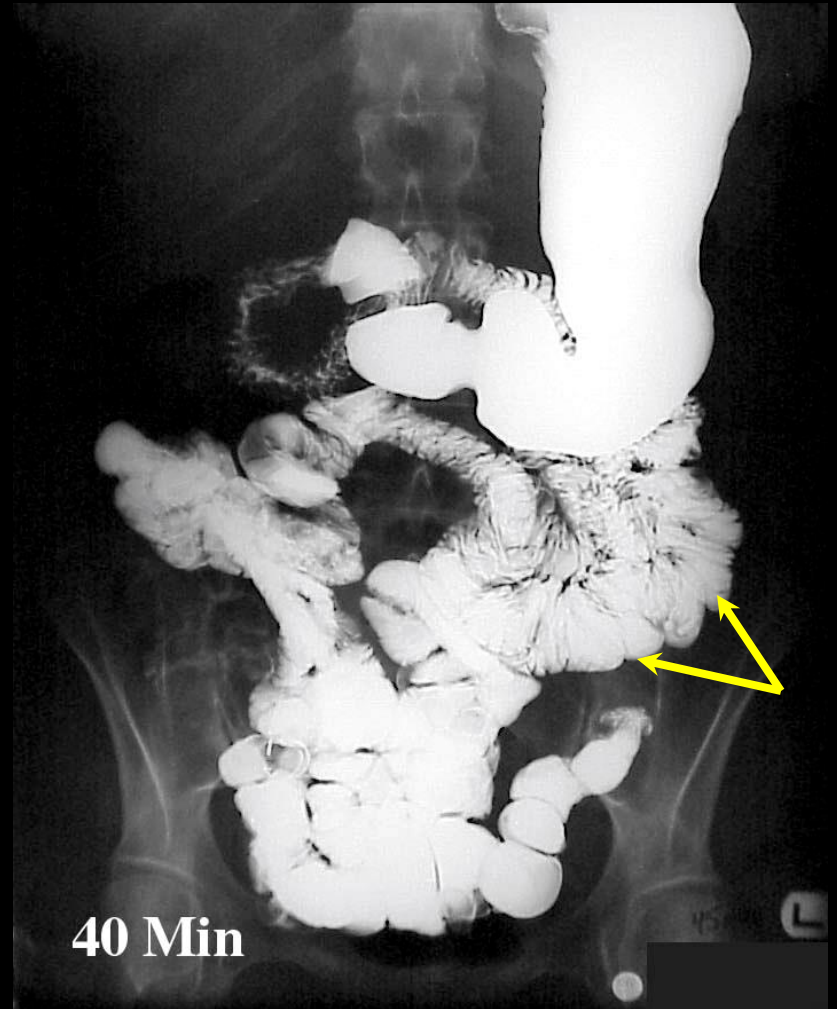


Transthoracic Shoulder

Question #77:

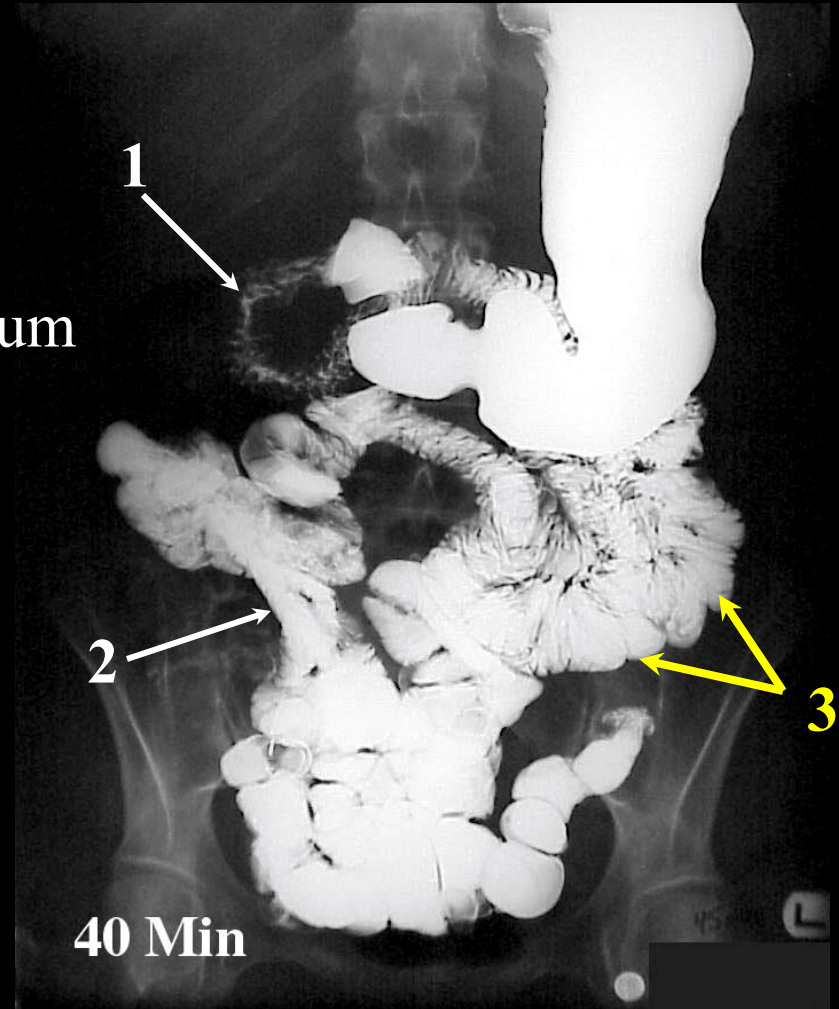
The arrows are pointing to the:

- a. duodenum.
- b. ileum.
- c. jejunum.
- d. ilium.



Question #77: Review

1. Descending Portion of the Duodenum
2. Ileum
3. Jejunum



SBS: 40 Minute Delay

Question #78:

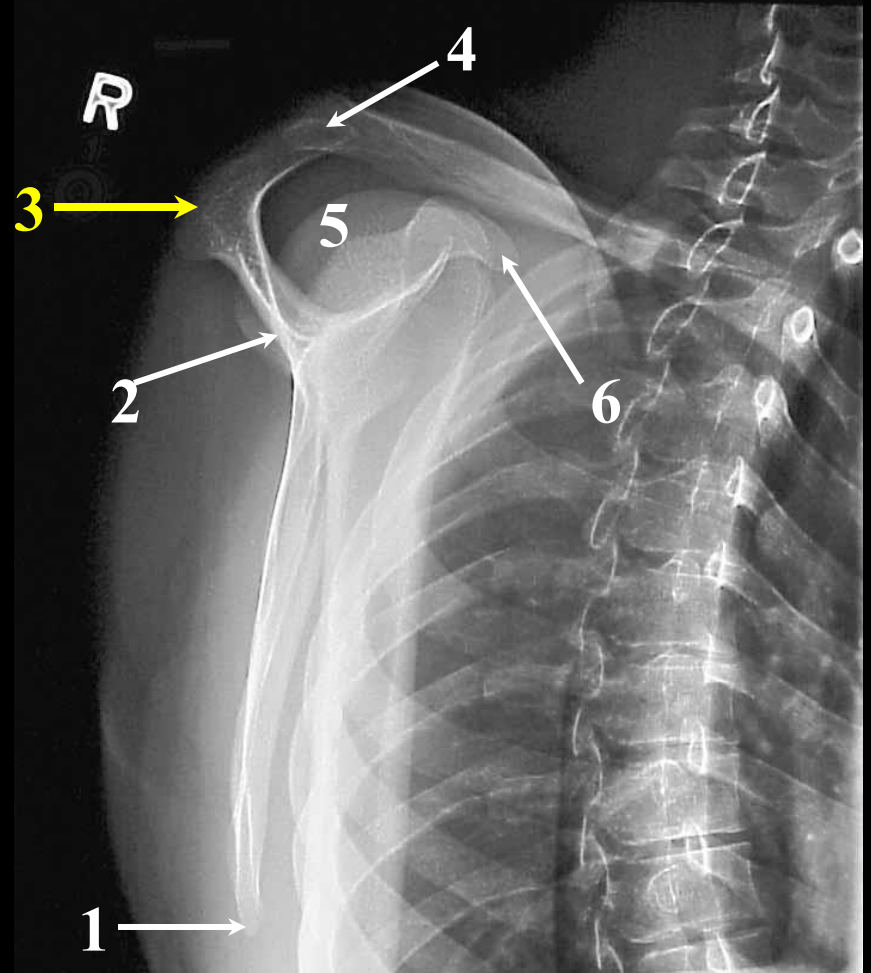
The arrow is pointing to the:

- a. acromion process.
- b. scapular spine.
- c. AC joint.
- d. coracoid process.



Question #78: Review

1. Inferior Angle of the Scapula
2. Spine of the Scapula
3. Acromion Process
4. AC Joint
5. Head of the Humerus
6. Coracoid Process

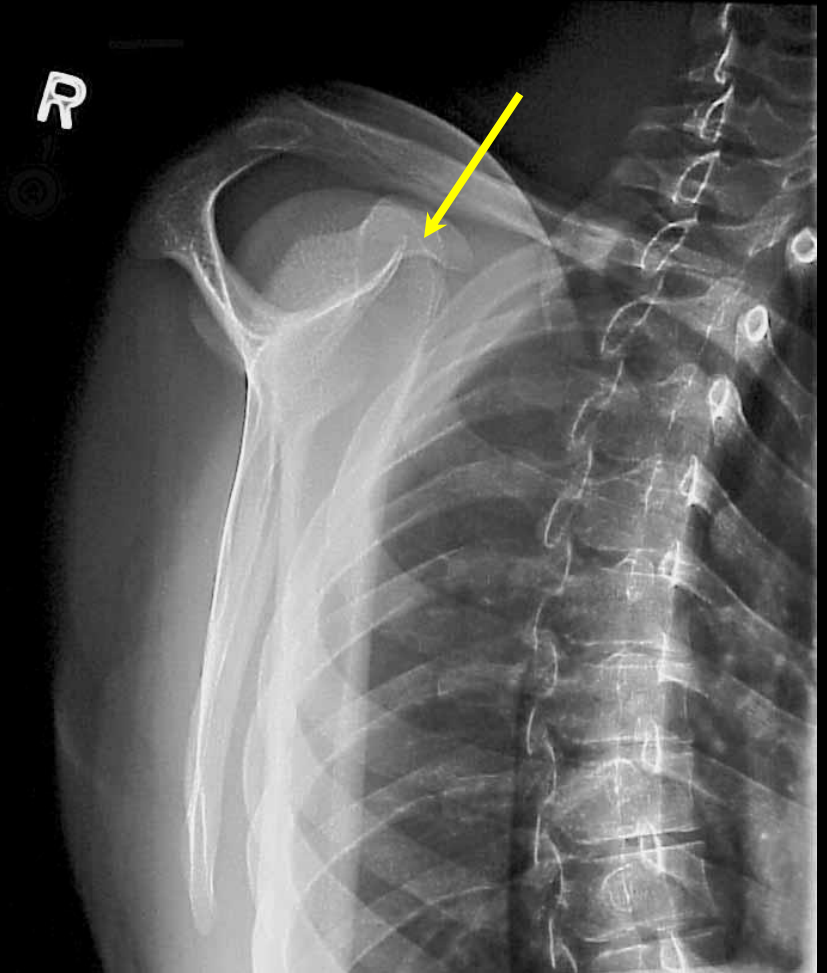


“Y” View of the Shoulder/Scapula

Question #79:

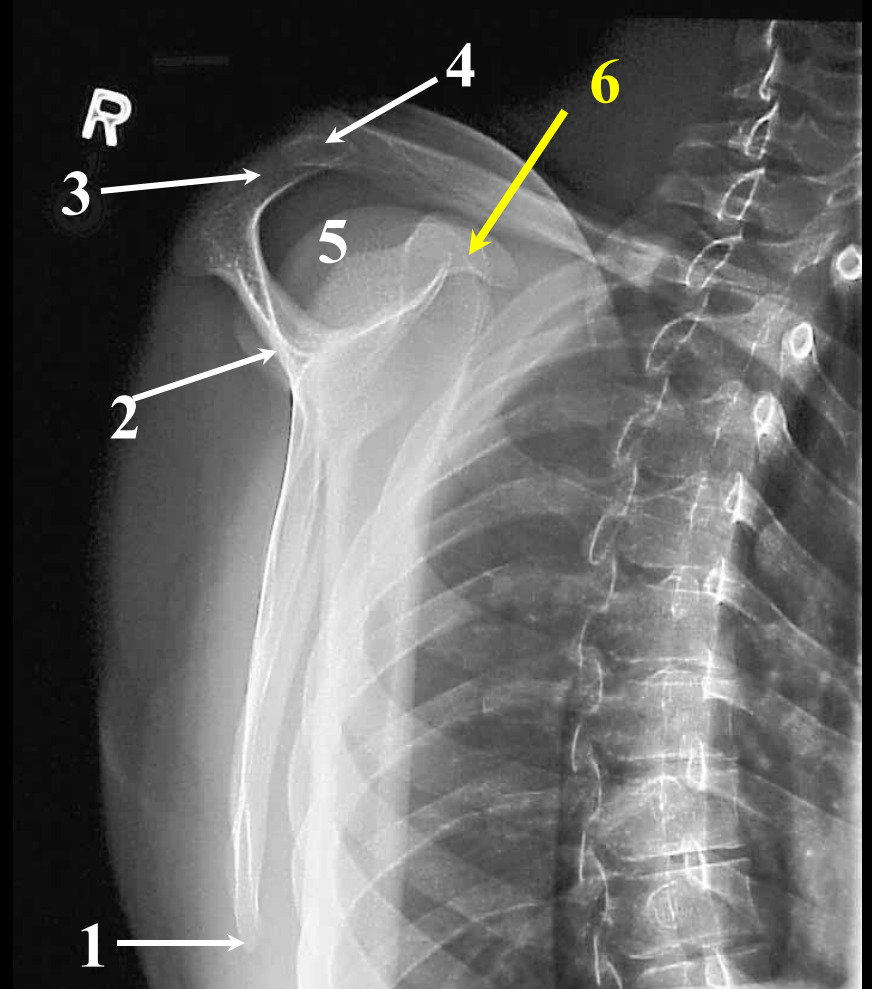
The arrow is pointing to the:

- a. coracoid process.
- b. acromion process.
- c. scapular spine.
- d. AC joint.



Question #79: Review

1. Inferior Angle of the Scapula
2. Spine of the Scapula
3. Acromion Process
4. AC Joint
5. Head of the Humerus
6. Coracoid Process



“Y” View of the Shoulder/Scapula

Question #80:

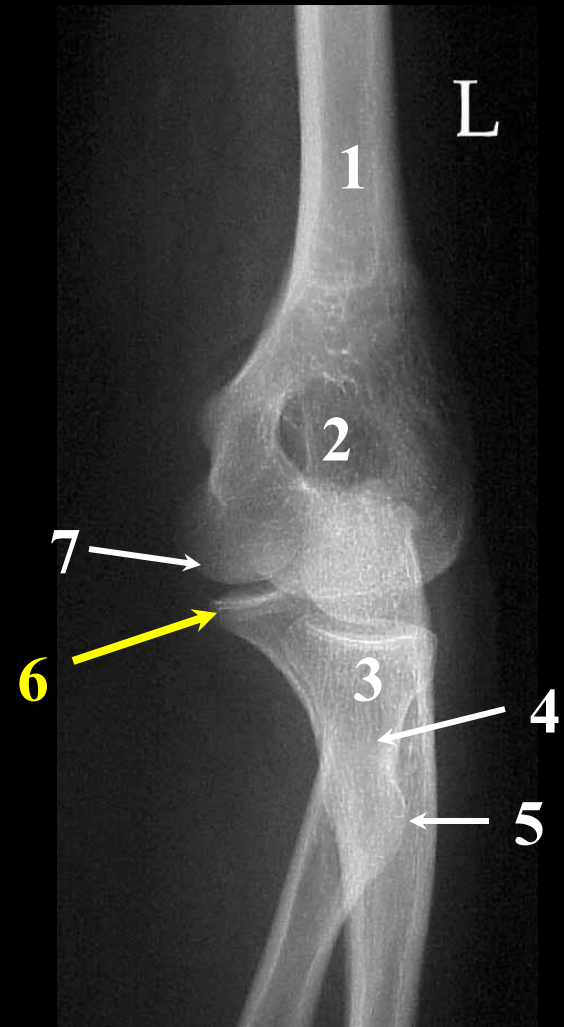
The arrow is pointing to the:

- a. coronoid process.
- b. capitulum.
- c. trochlea.
- d. head of the radius.



Question #80: Review

1. Shaft of the Humerus
2. Olecranon Fossa
3. Head of the Radius
4. Neck of the Radius
5. Radial Tuberosity
6. Coronoid Process
7. Trochlea



Internal Oblique Elbow

Question #81:

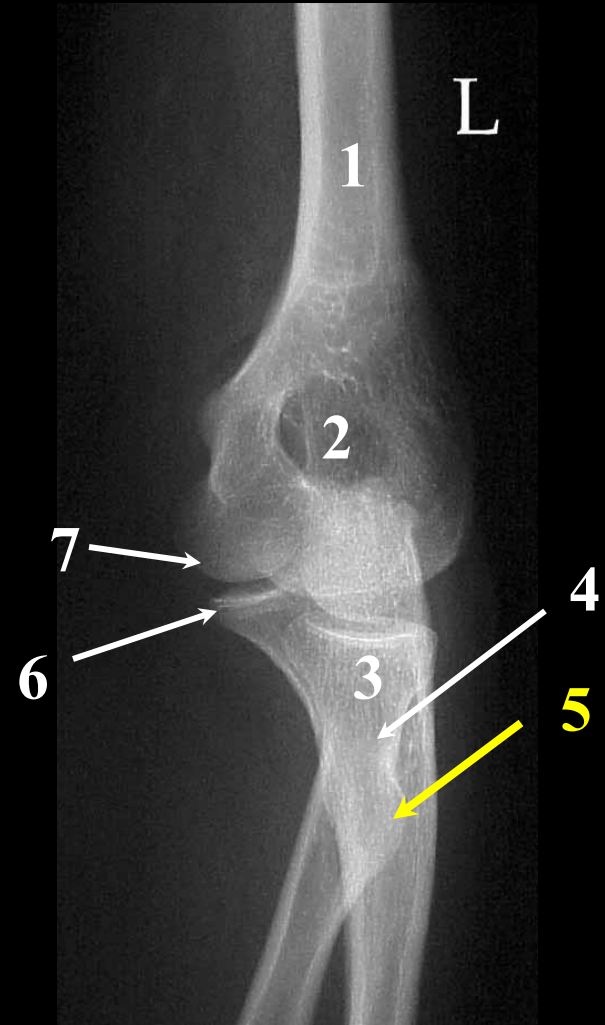
The arrow is pointing to the:

- a. trochlea.
- b. neck of the radius.
- c. head of the radius.
- d. radial tuberosity.



Question #81: Review

1. Shaft of the Humerus
2. Olecranon Fossa
3. Head of the Radius
4. Neck of the Radius
5. Radial Tuberosity
6. Coronoid Process
7. Trochlea

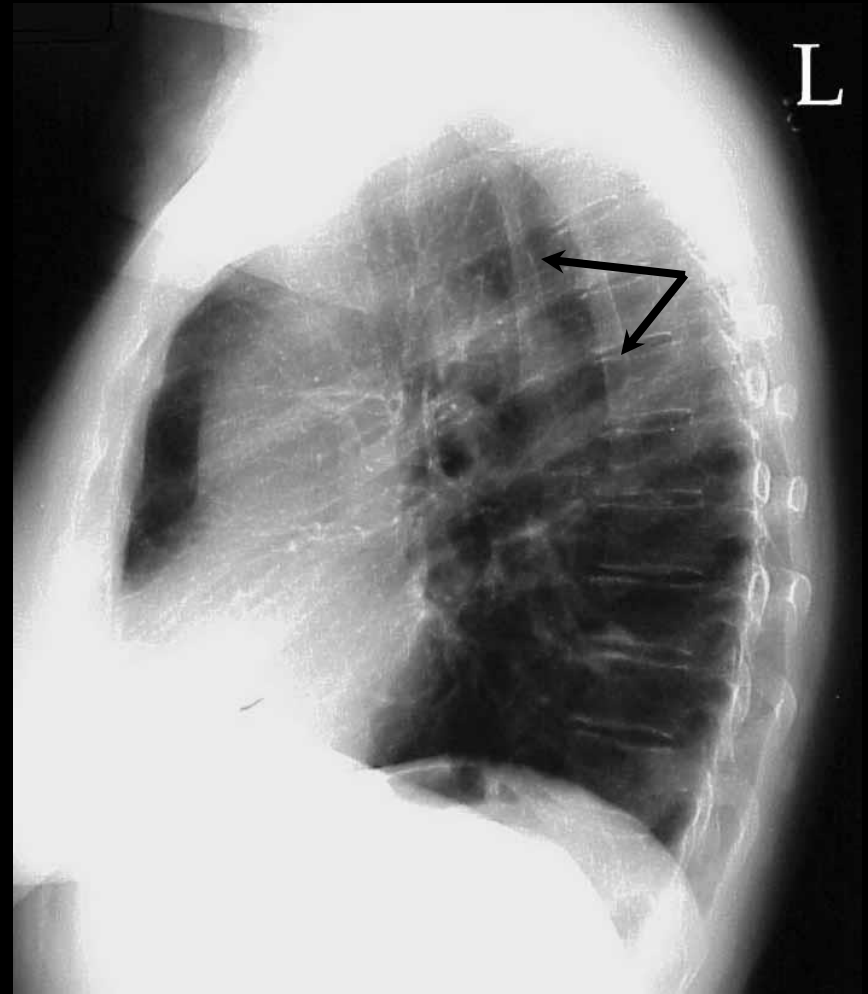


Internal Oblique Elbow

Question #82:

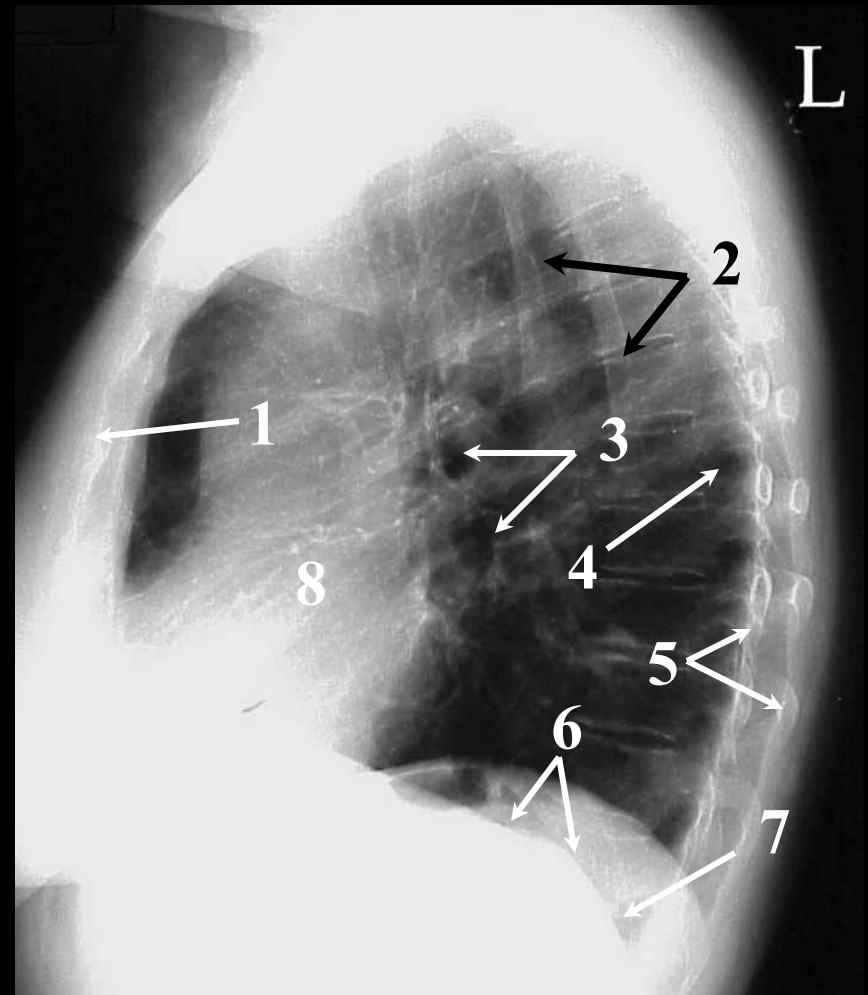
The arrows are pointing to the:

- a. esophagus.
- b. trachea.
- c. right and left bronchus.
- d. scapulae.



Question #82: Review

1. Body of the Sternum
2. Right & Left Scapula
3. Primary Bronchi Seen on End
4. Thoracic Intervertebral Foramen
5. Slightly Rotated Posterior Ribs
6. Left Diaphragm
7. Left Costophrenic Angle
8. Shadow of the Heart



Routine Lateral Chest

Question #83:

Which of the following terms refers to a condition that is marked by an abnormal disturbance in the function and or structure of the human body as a result of some type of injury or trauma?

- a. disease
- b. pathology
- c. pathogenesis
- d. etiology

Question #83: Review

- Simply put, pathology is the study of disease.
- **Disease** is a term that literally refers to a lack of “ease.”
- It is a condition that is marked by an abnormal disturbance in the function and or structure of the human body as the result of some type of injury or trauma.

Question #84:

Which of the following is not an example of an inflammatory reaction?

- a. abscess
- b. ulcer
- c. ischemia
- d. cellulitis

Question #84: Review

- Three Types of Inflammatory Reactions:

Abscess

- This type of inflammatory reaction causes the injurious agent to become a walled-off ball of pus.

Ulcers

- This is another type of inflammatory reaction that is the result of a healing wound that is located on the skin or a mucous membrane

Cellulitis

- This is an acute bacterial infection of the skin and is a third example of an inflammatory reaction.
- It can be found anywhere in the body, but it is more often seen in areas where the skin can be damaged and thus allow a portal of entry for bacteria.

Question #85:

Which of the following is not a cardinal sign of inflammation?

- a. pain
- b. redness
- c. cyanosis
- d. All of the above are cardinal signs of inflammation.

Question #85: Review

- Inflammation refers to the body's ability to wall-off and sequester an injurious agent.
- The ultimate goal of this process is the safe removal of said injurious agents.
- Hyperemia is the process of dilating capillaries to allow fluids and leucocytes to infiltrate the infected area.
- The leucocytes will act to remove cellular debris through a process known as phagocytosis.
- The cardinal signs of inflammation include heat (results from hyperemia), redness, pain, and often a decrease in function.

Question #86:

The inability of an organ or structure to form properly is called:

- a. aplasia.
- b. atrophy.
- c. hypertrophy.
- d. ischemia.

Question #86: **Review**

- **Aplasia is the inability of an organ or structure to form properly.**
- The defective development of an organ can result in the partial or complete loss of an organ.

Question #87:

An abnormal proliferation of foreign cells that forms a mass of tissue within an organ or structure is called:

- a. edema.
- b. transudate.
- c. cachexia.
- d. neoplasm.

Question #87: Review

- A neoplasm is the abnormal proliferation of foreign cells that form a mass of tissue within an organ or structure.
- A neoplasm will compete for nutrients from the cells that normally comprise the host organ and it is often referred to as a mass or tumor.
- Oncology is the study of neoplasms.
- A benign neoplasm is one that is self-limited and will not spread or seed to distant sites within the host organism.
- A malignant neoplasm (cancer), on the other hand, does possess the ability to spread to distant sites in the body.

This type of tumor will seed by employing either the lymphatic system (primary method) or by using the circulatory system (hematogenous spread).

Question #88:

Cancer of the blood and blood forming tissues is known as:

- a. lymphoma.
- b. leukemia.
- c. adenocarcinoma.
- d. sarcoma.

Question #88: Review

- Four major cancer categories are as follows:
 1. Carcinoma/Adenocarcinoma
 - This type of cancer will arise from epithelial cells or tissues such as the breast, colon, or pancreas.
 2. Sarcoma
 - Relatively rare but highly malignant.
 - This is cancer of soft tissue or connective tissue such as bone, cartilage, muscle, and fat.
 3. Leukemia
 - This is cancer of the blood and blood forming tissues.
 4. Lymphoma
 - This type of cancer originates in lymphatic tissues and affects the production of lymphocytes (white blood cells).

Question #89:

The most likely cause of the infection (arrows) located on this lateral of the foot would be:

- a. virus.
- b. parasite.
- c. bacteria.
- d. none of the above



Question #89: Review

The arrows on this image are pointing to an area where the excrement of a **bacterial infection** has resulted in the formation of air within the tissue of this patient's foot. This is an indication of cellulitis.



Question #90:

All of the following would be an example of a sign (as opposed to a symptom) except:

- a. skin rash.
- b. edema.
- c. headache.
- d. cyanosis.

Question #90: Review

- The study of the origin and development of a disease.
- Pathogenesis will lead to observable changes that are known as manifestations.

Sign

- This is a manifestation that is observable by the health care worker.
- Examples would be edema, cyanosis, or a skin rash.

Symptom

- This pertains to the patient's perception of what is wrong and is subjective.
- An example would be a headache.

Question #91:

The understanding that there may be no real underlying cause for a disease is referred to as:

- a. idiopathic.
- b. etiology.
- c. syndrome.
- d. pathology.

Question #91: Review

- Idiopathic

This refers to the fact that there may be no real cause for the disease.

Examples would be hypertension and a spontaneous pneumothorax.

Question #92:

Atrophy refers to a decrease in size of cells within an organ or structure. Which of the following would **not** be an underlying cause of atrophy?

- a. nerve damage
- b. increase in physical activity
- c. poor nourishment
- d. poor circulation

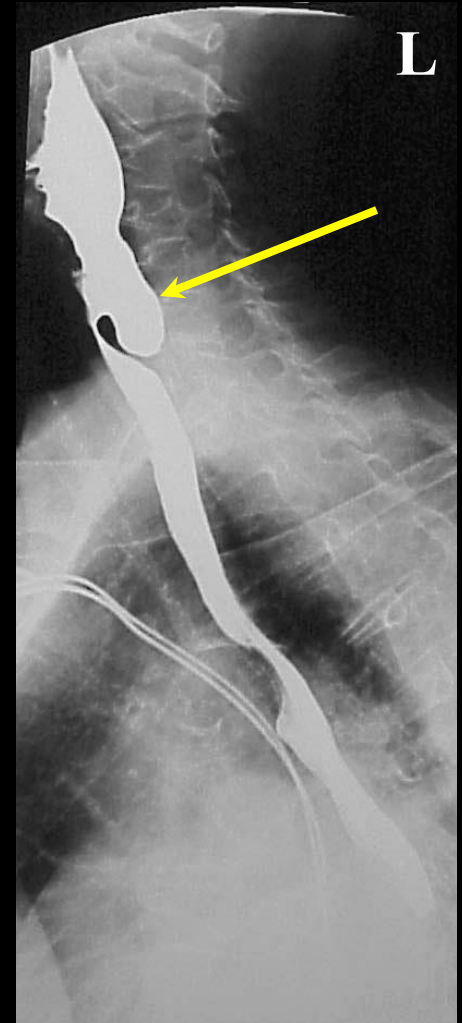
Question #92: Review

- Atrophy is the decrease in size of the cells within an organ or structure.
- The following is a list of some of the common causes of atrophy:
 - Lack of Physical Activity
 - Poor Nourishment
 - Nerve Damage
 - Poor Circulation

Question #93:

The most likely condition depicted on this radiograph of the esophagus (arrow) would be which of the following?

- a. polyp
- b. traction diverticula
- c. Zenker's diverticula
- d. epiphrenic diverticula



Question #93: Review

- A diverticulum is an outpouching that occurs due to a weakening in the lining of, in this instance, the digestive system.

This is not to be confused with a neoplasm which is a new growth that usually develops in towards the lumen of the digestive system.

Diverticulum are often diagnosed with barium studies of the digestive system.

- **Zenker's Diverticulum arise from the posterior wall of the upper esophagus in the area of the pharynx.**

Although often asymptomatic, they can cause dysphagia (difficulty in swallowing) and halitosis (bad breath).

Question #94:

The most likely condition depicted on this UGI radiograph (arrows) would be which of the following?

- a. epiphrenic diverticula
- b. candida
- c. hiatal hernia
- d. gastric ulcer



Question #94: Review

- A hiatal hernia occurs when a portion of the stomach herniates into the thorax through the esophageal opening in the diaphragm.

This is known as a sliding hiatal hernia, and it is the most common type of hiatal hernia encountered.

- This is one of the most common findings on an UGI series.
- It can affect up to 50% of the population as some point in their lives.
- A hiatal hernia is usually asymptomatic, but the patient may experience a fullness in their chest or regurgitation.

This acid reflux may lead to inflammation and ulceration of the esophagus.

Chronic herniation of the stomach may be associated with gastroesophageal reflux disease (GERD).

- Treatment includes a bland diet, antacids, and medications to reduce reflux.

Question #95:

Which of the following disorders of the intestines involves the “telescoping” of one bowel loop inside another loop?

- a. adhesion
- b. intussusception
- c. volvulus
- d. hernia

Question #95: Review

- Intussusception occurs when a section of bowel is constricted by peristalsis causing it to prolapse or telescope into itself.
- This condition is primarily confined to infants aged 2 to 36 months and occurs more frequently in boys than girls at a ratio of 3:1.
- Intussusception is the cause of approximately 1% of all adult bowel obstructions and commonly affects the ileocecal valve.
- It is commonly corrected with a barium enema.

Question #96:

The main abnormality on this BE radiograph (arrows) would be which of the following?

- a. sessile polyps
- b. Crohn's disease
- c. diverticulosis
- d. pedunculated polyps



Question #96: Review

- Diverticulosis can occur along the entire length of the GI tract.
- In the large intestine, they are commonly found in the area of the sigmoid colon.
- Diverticulum often have no signs or symptoms and are often a serendipitous discover on a barium study or colonoscopy.

Question #97:

A volvulus is a type of mechanical bowel obstruction that is defined as a loop of twisted bowel.

- a. true
- b. false

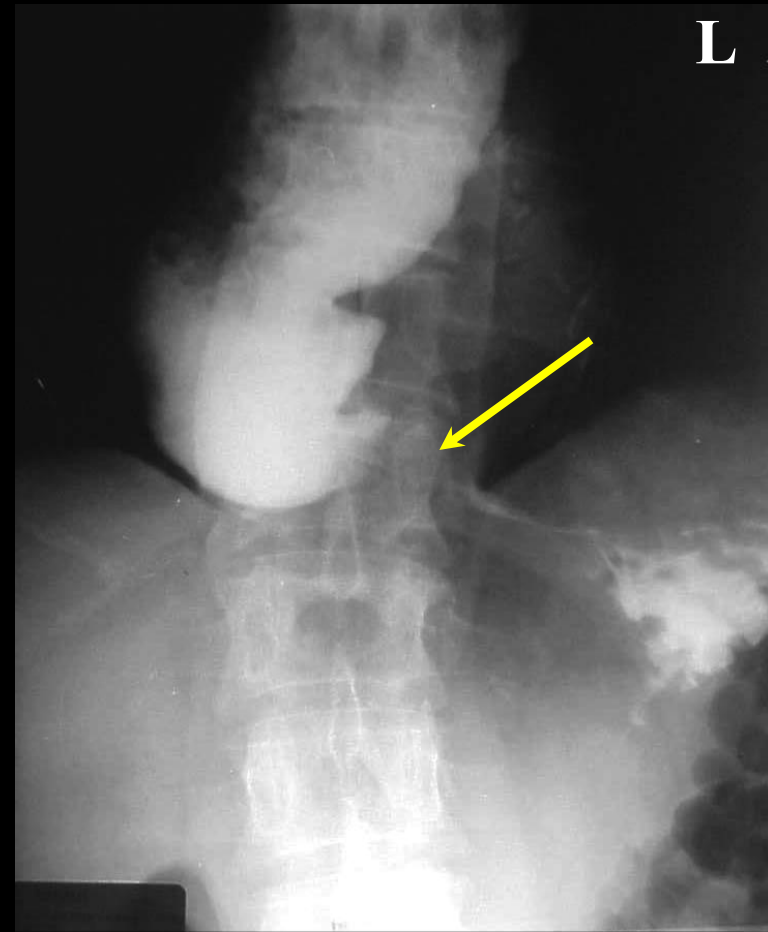
Question #97: Review

- A volvulus is a loop of intestine that has twisted around itself causing either a partial or complete obstruction.
- They may resolve on their own, but some will require surgical intervention to prevent a loss of blood supply to the affected area and relieve the obstruction.

Question #98:

The lower esophageal sphincter (LES) has failed to relax on this radiograph (arrow) resulting in an esophageal motility disorder. Which of the following would best describe this condition?

- a. candida
- b. gastroesophageal reflux disease
- c. esophageal varices
- d. achalasia



Question #98: Review

- Achalasia is an esophageal motility disorder that occurs due to the inability of the lower esophageal sphincter (LES) to relax.

As a result, the esophagus fills with ingested food and fluids.

- This is the exact opposite of acid reflux.
- Treatment includes a bland diet, medication to relax the LES, surgery, and an upright position to reduce regurgitation.

Question #99:

Which of the following is one of the most common findings on an UGI series?

- a. achalasia
- b. hiatal hernia
- c. adynamic ileus
- d. candida

Question #99: Review

- A hiatal hernia occurs when a portion of the stomach herniates into the thorax through the esophageal opening in the diaphragm.

This is known as a sliding hiatal hernia, and it is the most common type of hiatal hernia encountered.

- This is one of the most common findings on an UGI series.
- It can affect up to 50% of the population as some point in their lives.
- A hiatal hernia is usually asymptomatic, but the patient may experience a fullness in their chest or regurgitation.

This acid reflux may lead to inflammation and ulceration of the esophagus.

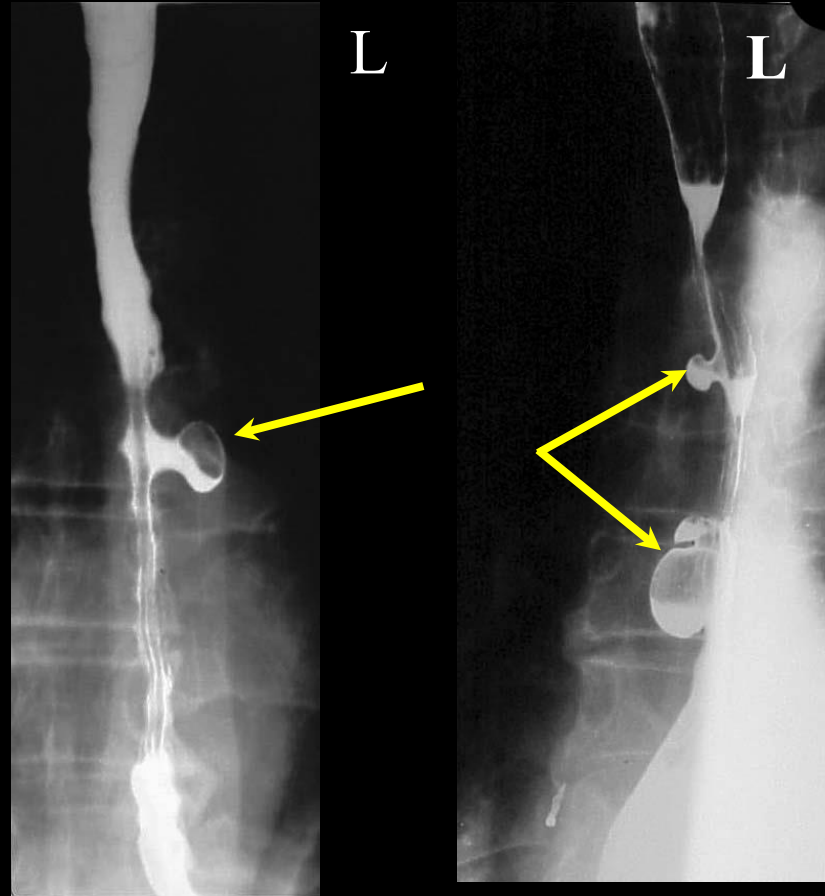
Chronic herniation of the stomach may be associated with gastroesophageal reflux disease (GERD).

- Treatment includes a bland diet, antacids, and medications to reduce reflux.

Question #100:

The most likely condition depicted on this radiograph of the esophagus (arrows) would be which of the following?

- a. Zenker's diverticula
- b. epiphrenic diverticula
- c. traction diverticula
- d. polyp



Question #100: Review

- A Traction Diverticulum forms in the mid esophagus area.
- Traction diverticulum may form due to scarring from pulmonary tuberculosis or an inflammatory process within the mediastinum.

Congratulations, you have just completed the Mastery Test!!

Now, just snap a picture of your completed answer sheet and text it to John Fleming at (727) 744-7946. If you score a 75% or higher, your certificate of completion will be emailed back to you within one week of us receiving your completed answer sheet and payment. *You will be allowed no more than three attempts to achieve a passing score on the mastery test.*

I hope that you have enjoyed this format for earning your continuing education and thanks for your support.

Contact Information:

Mailing Address: Three Phase CEUs
c/o John Fleming
80 Bay Woods Drive
Safety Harbor, FL 34695

Cell Phone: (727) 744-7946 (please send a text)

Website: <http://www.ceuarmy.com/>

Email: threephaseceus@tampabay.rr.com

About the Author:

John Fleming graduated from the St. Petersburg College (SPC) Radiography Program in Pinellas Park, Florida in December of 1985. He has been employed by SPC since May of 1987 and is currently the Radiography Program Director.

John completed a Master of Education Degree from the University of South Florida in December of 1998, and he has passed the American Registry of Radiologic Technology's Computed Tomography and Magnetic Resonance Imaging certification examinations.

References:

Seeram, Euclid; Computed Tomography: Physical Principles, clinical Applications, and Quality Control, Third Edition, Elsevier Education, St. Louis, MO, 2009.

Romans, Lois; Computed Tomography for Technologists, A Comprehensive Text; Wolters Kluwer Health/Lippincott, Williams, & Wilkins Publishing Company, 2010

Kelly, Lorrie L. & Petersen, Connie M.; Sectional Anatomy for Imaging Professionals, Second Edition; Elsevier Publishing Company, 2007.

Applegate, Judith K.; The Sectional Anatomy Learning System: Concepts & Applications 2-Volume Set, Third Edition; Saunders Publishing Company, 2010

Lazo, Denise L.; Fundamentals of Sectional Anatomy: An Imaging Approach; Thompson-Delmar Learning, 2005.

Madden, Michael E.; Introduction to Sectional Anatomy, Second Edition; Wolters Kluwer Health/Lippincott, Williams, & Wilkins Publishing Company, 2008.

References:

Mace, James D. and Kowalczyk, Nina; Radiographic Pathology for Technologists, Sixth Edition, Elsevier Education, St. Louis, MO., 2014.

Eisenberg, Ronald L. and Johnson, Nancy M.; Comprehensive Radiographic Pathology, Fifth Edition, Elsevier Education, St. Louis, MO, 2012.

Wicke, Lothar; Atlas of Radiologic Anatomy, Sixth Edition, Williams & Wilkins, 1998

Bontrager, Kenneth and Lampignano, John P.; Textbook of Radiographic Positioning and Related Anatomy, Eighth Edition, Elsevier Education, St. Louis, MO, 2014

Mission Statement:

Provide high quality, affordable home study courses in a prompt and courteous manner for all health care professionals.
