



Lesson 4 Assignment Packet

Pancreas Sonography: Anatomy, Scanning Techniques & Common Pathology

Assignment 1

Fill-in-the-Blank Worksheet

Student Name: _____

Date: _____

Instructions

Complete each statement by filling in the blank with the correct answer.

1. The pancreas is located _____ the stomach.
2. The pancreas has both _____ and _____ functions.
3. The digestive function of the pancreas is called the _____ function.
4. The hormone-producing function of the pancreas is called the _____ function.
5. The pancreas is divided into five major regions: head, uncinate process, neck, body, and _____.
6. The head of the pancreas lies within the C-shaped curve of the _____.
7. The tail of the pancreas extends toward the _____.
8. The _____ vein is one of the most important landmarks used to identify the pancreas.
9. The abbreviation SMV stands for the _____ vein.
10. The pancreas is commonly examined using a _____ transducer.
11. The recommended transducer frequency for abdominal imaging is _____ to _____ MHz.
12. Patients should fast _____ to _____ hours before a pancreatic ultrasound examination.
13. A normal pancreas has a _____ echotexture.
14. The pancreas is normally slightly _____ compared to the liver.
15. Bowel _____ is the most common obstacle to visualizing the pancreas.

16. A patient may be asked to take a deep _____ to improve visualization.
 17. Acute pancreatitis often causes the pancreas to appear enlarged and _____.
 18. Chronic pancreatitis may produce pancreatic _____.
 19. A simple pancreatic cyst appears _____ on ultrasound.
 20. The interpreting _____ is responsible for making the final diagnosis.
-

Assignment 2

Image Labeling Assignment

Directions

Using the diagrams provided in Lesson 4, label each anatomical structure.

Diagram 1 – Pancreatic Anatomy

Label the following:

- Head
 - Uncinate Process
 - Neck
 - Body
 - Tail
 - Duodenum
-

Diagram 2 – Pancreatic Landmarks

Label the following:

- Splenic Vein
- Superior Mesenteric Vein (SMV)
- Superior Mesenteric Artery (SMA)
- Aorta
- Inferior Vena Cava (IVC)
- Left Lobe of Liver

Diagram 3 – Pancreatic Scanning Planes

Label the following:

- Transverse Plane
- Longitudinal Plane
- Pancreatic Head
- Pancreatic Body
- Pancreatic Tail

Diagram 4 – Normal vs. Pancreatitis

Label the following:

- Normal Pancreas
- Enlarged Pancreas
- Pancreatic Edema
- Surrounding Fluid Collection

Assignment 3

Lesson Takeaway Reflection

Directions

After completing Lesson 4, write a brief reflection describing what you learned.

Prompt

Please explain what you learned in Lesson 4: Pancreas Sonography: Anatomy, Scanning Techniques & Common Pathology.

Your reflection should include:

- Pancreatic anatomy
 - Functions of the pancreas
 - Anatomical landmarks
 - Patient preparation
 - Patient positioning
 - Scanning techniques
 - Normal sonographic appearance
 - Common pancreatic pathology
 - Documentation requirements
-

Requirements

- Minimum: **1 paragraph**
 - Maximum: **500 words**
 - Write in your own words.
 - Use complete sentences.
 - Demonstrate your understanding of the lesson.
-

Assignment 4

Lesson 4 Chapter Examination

Instructions

Select the **one best answer** for each question.

1.

The pancreas is located:

- A. Above the diaphragm
- B. Behind the stomach
- C. Inside the liver
- D. Behind the kidneys

2.

The pancreas performs:

- A. One function
 - B. Two major functions
 - C. Three major functions
 - D. Four major functions
-

3.

The digestive function of the pancreas is called:

- A. Endocrine
 - B. Exocrine
 - C. Hepatic
 - D. Renal
-

4.

Which hormone is produced by the pancreas?

- A. Bile
 - B. Albumin
 - C. Insulin
 - D. Hemoglobin
-

5.

The head of the pancreas is located within the:

- A. Liver
 - B. Stomach
 - C. Duodenum
 - D. Spleen
-

6.

The tail of the pancreas extends toward the:

- A. Gallbladder
 - B. Spleen
 - C. Right Kidney
 - D. Bladder
-

7.

Which vessel is an important landmark beneath the pancreas?

- A. Hepatic Vein
 - B. Splenic Vein
 - C. Renal Artery
 - D. Femoral Vein
-

8.

SMV stands for:

- A. Superior Mesenteric Vein

- B. Splenic Mesenteric Vessel
 - C. Superior Medical Vessel
 - D. Systemic Mesenteric Vein
-

9.

The pancreas is usually examined with which transducer?

- A. Linear
 - B. Endocavity
 - C. Curvilinear
 - D. Phased Array
-

10.

Patients should generally fast:

- A. 2 hours
 - B. 4 hours
 - C. 6–8 hours
 - D. 24 hours
-

11.

A normal pancreas is usually:

- A. Heterogeneous
- B. Slightly hyperechoic to the liver
- C. Completely anechoic

D. Filled with fluid

12.

The most common reason the pancreas is difficult to visualize is:

- A. Bone
 - B. Lung tissue
 - C. Bowel gas
 - D. Skin thickness
-

13.

Deep inspiration helps:

- A. Increase blood pressure
 - B. Improve visualization of the pancreas
 - C. Change the pancreas size
 - D. Slow blood flow
-

14.

Acute pancreatitis often causes the pancreas to appear:

- A. Smaller
 - B. Enlarged and hypoechoic
 - C. Bright white with calcifications
 - D. Invisible
-

15.

Chronic pancreatitis commonly causes:

- A. Gallstones
 - B. Calcifications
 - C. Kidney cysts
 - D. Liver enlargement
-

16.

A simple pancreatic cyst appears:

- A. Anechoic
 - B. Hyperechoic
 - C. Calcified
 - D. Solid
-

17.

The pancreatic duct should be documented:

- A. Only if surgery is planned
 - B. Whenever it is visualized
 - C. Never
 - D. Only in children
-

18.

The sonographer is responsible for:

- A. Performing surgery
 - B. Prescribing medications
 - C. Obtaining diagnostic-quality images
 - D. Making the final diagnosis
-

19.

The interpreting physician is responsible for:

- A. Image acquisition
 - B. Final diagnosis
 - C. Patient positioning
 - D. Equipment maintenance
-

20.

The primary focus of Lesson 4 was:

- A. Cardiac anatomy
- B. Pancreatic anatomy, scanning techniques, and common pathology
- C. Gallbladder surgery
- D. Obstetric imaging