

# Sonography Canada (Generalist) Practice Test (Sample)

## Study Guide



**Everything you need from our exam experts!**

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# Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

**Remember:** successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

# How to Use This Guide

**This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:**

## **1. Start with a Diagnostic Review**

**Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.**

## **2. Study in Short, Focused Sessions**

**Break your study time into manageable blocks (e.g. 30 - 45 minutes). Review a handful of questions, reflect on the explanations.**

## **3. Learn from the Explanations**

**After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.**

## **4. Track Your Progress**

**Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.**

## **5. Simulate the Real Exam**

**Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.**

## **6. Repeat and Review**

**Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.**

**There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!**

## Questions

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- 1. A female patient with mild right upper quadrant pain and normal liver function tests is asked a relevant medical history question. What should the sonographer inquire about?**
  - A. Are you diabetic?**
  - B. Do you use oral contraceptives?**
  - C. Are you taking medication for hypertension?**
  - D. Have you undergone any abdominal surgery?**
  
- 2. What is a common cause of dilation in the bile ducts?**
  - A. Cholecystitis**
  - B. Gallbladder agenesis**
  - C. Choledocholithiasis**
  - D. Hepatic vein thrombosis**
  
- 3. Which condition is most suspected in a febrile adolescent with severe right lower quadrant pain?**
  - A. Ileus**
  - B. Mucocele**
  - C. Appendiceal abscess**
  - D. Diverticular abscess**
  
- 4. Progression of which of the following abnormalities flattens the portal veins?**
  - A. Ascariasis**
  - B. Pneumobilia**
  - C. Portal hypertension**
  - D. Biliary obstruction**
  
- 5. In a renal sonogram, which abnormality may be indicated by a history of flank pain?**
  - A. Juvenile polycystic kidney disease**
  - B. Renal abscess**
  - C. Hematoma**
  - D. Urinary obstruction**

- 6. Which imaging sign is associated with an echinococcal cyst?**
- A. Water lily sign**
  - B. Fleischner sign**
  - C. String of pearls sign**
  - D. Double contour sign**
- 7. What condition is indicated by a positive Murphy's sign during a physical examination?**
- A. Appendicitis**
  - B. Cholecystitis**
  - C. Pancreatitis**
  - D. Hepatitis**
- 8. Which type of tissue primarily composes the transversus abdominus muscle?**
- A. Connective tissue**
  - B. Skeletal muscle**
  - C. Smooth muscle**
  - D. Epithelial tissue**
- 9. Which structure is indicated by a marker in a sonographic image if it is identified as the falciform ligament?**
- A. Coronary ligament**
  - B. Ligamentum venosum**
  - C. Gastrohepatic ligament**
  - D. Hepatoduodenal ligament**
- 10. A beaded appearance to the intrahepatic ducts is a sonographic finding in which of the following conditions?**
- A. Caroli's disease**
  - B. Addison's disease**
  - C. Budd-Chiari syndrome**
  - D. Courvoisier's syndrome**

## Answers

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1. B
2. C
3. C
4. D
5. C
6. A
7. B
8. B
9. A
10. A

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## **Explanations**

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**1. A female patient with mild right upper quadrant pain and normal liver function tests is asked a relevant medical history question. What should the sonographer inquire about?**

**A. Are you diabetic?**

**B. Do you use oral contraceptives?**

**C. Are you taking medication for hypertension?**

**D. Have you undergone any abdominal surgery?**

Inquiring whether the patient uses oral contraceptives is particularly relevant in the context of mild right upper quadrant pain and normal liver function tests. This is because the use of oral contraceptives is associated with potential conditions such as hepatic adenomas, which can occur in women who are on estrogen-containing contraceptive methods. Although liver function tests are normal, oral contraceptives can sometimes influence liver pathology or contribute to symptoms that might not immediately reflect in laboratory measures. The other options might be relevant in different clinical contexts but do not specifically correlate to the symptoms being presented. For instance, diabetes and hypertension management are more associated with long-term health conditions and systemic effects rather than isolated right upper quadrant pain. Similarly, while previous abdominal surgeries could provide some context, they do not directly address potential complications or conditions that might arise in conjunction with oral contraceptives that could be more immediately linked to the patient's current symptoms.

**2. What is a common cause of dilation in the bile ducts?**

**A. Cholecystitis**

**B. Gallbladder agenesis**

**C. Choledocholithiasis**

**D. Hepatic vein thrombosis**

Dilation of the bile ducts often occurs due to obstruction, and choledocholithiasis, which refers to the presence of stones in the common bile duct, is a common cause of this condition. When a stone obstructs the flow of bile, it leads to an accumulation of bile above the obstruction, resulting in the dilation of the bile ducts. This can be visualized during an ultrasound examination, where the dilated bile ducts may be seen as a consequence of the obstructive process. In contrast, cholecystitis primarily involves inflammation of the gallbladder, which can lead to various complications, but it does not typically cause dilation of the bile ducts unless there is an associated obstruction. Gallbladder agenesis refers to the absence of the gallbladder, which does not directly lead to bile duct dilation. Hepatic vein thrombosis primarily affects the hepatic veins and can lead to liver-related complications, but it is not a common cause of bile duct dilation. Thus, choledocholithiasis stands out as the most relevant condition in this context.

**3. Which condition is most suspected in a febrile adolescent with severe right lower quadrant pain?**

- A. Ileus
- B. Mucocele
- C. Appendiceal abscess**
- D. Diverticular abscess

In a febrile adolescent presenting with severe right lower quadrant pain, appendiceal abscess is the most suspected condition due to the common association between appendicitis and abscess formation. Appendicitis is a prevalent condition in this demographic, particularly in adolescents, and can lead to complications such as perforation or the development of an abscess if not treated promptly. The fever indicates an infectious process, which aligns well with appendicitis. An appendiceal abscess occurs when the infection from appendicitis spreads to surrounding tissues, leading to localized pus accumulation. The severity of right lower quadrant pain often correlates with the progression of appendicitis to an abscess, making this option the most probable diagnosis in the context provided. Other conditions listed, such as ileus, mucocele, and diverticular abscess, can also cause abdominal pain but are less commonly associated with fever in adolescents or are not as characteristic of the right lower quadrant pain seen in appendiceal issues. For example, ileus typically presents with generalized abdominal discomfort and distension rather than localized pain; mucocele is rare and generally causes non-specific symptoms; diverticular abscess is more common in older adults and less likely in a young adolescent demographic.

**4. Progression of which of the following abnormalities flattens the portal veins?**

- A. Ascariasis
- B. Pneumobilia
- C. Portal hypertension
- D. Biliary obstruction**

The correct choice relating to the flattening of the portal veins is due to portal hypertension. In conditions of portal hypertension, increased pressure in the portal venous system results in various changes, one of which includes the appearance of the portal vein on ultrasound. As pressure builds up, the portal vein may become flattened or compressed, which can be noted during a sonographic examination. Chronically elevated pressures within the portal system can lead to several complications, including the development of collateral venous channels to relieve the pressure. This condition can be a result of various underlying issues, such as liver cirrhosis or hepatic vein obstruction, which further emphasize the importance of recognizing the changes in vascular structures like the portal vein. While conditions like biliary obstruction can lead to gallbladder distention and other biliary system changes, they do not directly cause the flattening of the portal vein. Furthermore, ascariasis and pneumobilia pertain to different pathological mechanisms that do not typically affect the shape of the portal vein in the same context. Understanding these relationships is crucial for proper diagnosis and management in sonography.

**5. In a renal sonogram, which abnormality may be indicated by a history of flank pain?**

- A. Juvenile polycystic kidney disease**
- B. Renal abscess**
- C. Hematoma**
- D. Urinary obstruction**

In the context of a renal sonogram, flank pain can be associated with several abnormalities. The correct option, indicating a hematoma, aligns with the understanding that hematomas can occur as a result of trauma or certain medical conditions, leading to localized bleeding in the kidney area. This can manifest clinically as flank pain, especially if the hematoma is significant enough to cause pressure or irritation to surrounding structures. A renal hematoma is typically seen as an area of echogenicity on an ultrasound, which may vary in appearance depending on the age of the hematoma. Identifying this abnormality through sonography is crucial, as it can inform the clinical management needed for the patient, such as monitoring or potential intervention. The other options, while potentially linked to flank pain, do not have the same direct association in this scenario. For instance, juvenile polycystic kidney disease usually leads to chronic issues rather than acute flank pain. A renal abscess could present with flank pain but is often accompanied by other systemic signs such as fever and increased white blood cell count. Urinary obstruction could also result in flank pain but is more commonly characterized by hydronephrosis visible on ultrasound rather than a hematoma's localized effects. Thus, when considering the specific history

**6. Which imaging sign is associated with an echinococcal cyst?**

- A. Water lily sign**
- B. Fleischner sign**
- C. String of pearls sign**
- D. Double contour sign**

The water lily sign is associated with echinococcal cysts and is characterized by the presence of a floating membrane within the cyst. This sign is evident when the cyst has been infected or has undergone changes, leading to the formation of a layer of membranes that can move freely within the cystic space and appear like water lilies on ultrasound. The presence of this sign is crucial for diagnosing an echinococcal cyst, as it indicates the cyst's structural changes and the involvement of the parasite. In contrast, other signs listed are associated with different conditions or types of lesions. For example, the Fleischner sign is often related to pulmonary conditions, while the string of pearls sign typically refers to the appearance of small ovarian cysts or follicles. The double contour sign is associated with conditions involving joint effusions or certain types of edema. Therefore, understanding the water lily sign's specific relevance to echinococcal cysts is essential for accurate diagnosis in sonography practice.

**7. What condition is indicated by a positive Murphy's sign during a physical examination?**

- A. Appendicitis**
- B. Cholecystitis**
- C. Pancreatitis**
- D. Hepatitis**

A positive Murphy's sign during a physical examination is specifically associated with cholecystitis, which is an inflammation of the gallbladder. This sign is elicited by having the patient take a deep breath while the examiner palpates the right upper quadrant of the abdomen. If the patient experiences a sharp increase in pain and suspends inspiration due to this pain, it indicates an acute condition related to the gallbladder. This response is indicative of inflammation, which aligns with cholecystitis. In contrast, while conditions like appendicitis, pancreatitis, and hepatitis can cause abdominal pain, they are not characterized by the positive Murphy's sign. Appendicitis typically generates tenderness in the lower right quadrant, pancreatitis can cause pain that radiates to the back, and hepatitis can lead to various symptoms including liver discomfort but does not specifically present with the Murphy's sign. Therefore, the presence of this sign pinpoints cholecystitis as the condition indicated.

**8. Which type of tissue primarily composes the transversus abdominus muscle?**

- A. Connective tissue**
- B. Skeletal muscle**
- C. Smooth muscle**
- D. Epithelial tissue**

The transversus abdominus muscle is primarily composed of skeletal muscle tissue. This type of tissue is characterized by its striated appearance and is responsible for voluntary movement. Skeletal muscle fibers are connected to bones by tendons and enable a wide range of movements in the body, particularly those related to posture and core stability. The transversus abdominus is specifically located in the abdominal wall and plays a crucial role in stabilizing the pelvis and lumbar spine, as well as contributing to functions like forced expiration and intra-abdominal pressure regulation. Its orientation—running horizontally—makes it especially important for maintaining core strength and stability. In contrast, connective tissue serves primarily to support, bind, and protect various other tissues and organs, but does not constitute the main component of muscle structure itself. Smooth muscle is involuntary and found in walls of hollow organs, while epithelial tissue forms protective layers and linings in the body and does not have the specialized function of contraction that defines skeletal muscle.

**9. Which structure is indicated by a marker in a sonographic image if it is identified as the falciform ligament?**

- A. Coronary ligament**
- B. Ligamentum venosum**
- C. Gastrohepatic ligament**
- D. Hepatoduodenal ligament**

The correct identification of the falciform ligament in a sonographic image is important for understanding liver anatomy and its relationship to surrounding structures. The falciform ligament is a fold of peritoneum that extends from the liver's anterior surface to the abdominal wall and diaphragm. It acts as a demarcation of the right and left lobes of the liver. The coronary ligament, positioned along the superior aspect of the liver, serves as a peritoneal reflection and can often be mistaken for the falciform ligament due to its proximity to the liver. However, the coronary ligament specifically connects the liver to the diaphragm, while the falciform ligament is mainly responsible for anchoring the liver to the anterior abdominal wall. Recognizing these anatomical details can help differentiate structures during sonographic evaluations. Understanding the relationships between these ligaments enhances proficiency in interpreting liver-related imaging studies, furthering the diagnostic capabilities of the sonographer.

**10. A beaded appearance to the intrahepatic ducts is a sonographic finding in which of the following conditions?**

- A. Caroli's disease**
- B. Addison's disease**
- C. Budd-Chiari syndrome**
- D. Courvoisier's syndrome**

Intrahepatic ducts exhibiting a beaded appearance is characteristic of Caroli's disease. This condition is a congenital disorder marked by the cystic dilation of the intrahepatic bile ducts, leading to a unique sonographic appearance. The beaded effect arises from alternating dilation and constriction of the ducts, which is a direct consequence of the structural abnormalities associated with this disease. In contrast, Addison's disease, primarily an endocrine disorder affecting adrenal gland function, does not have a specific sonographic presentation related to intrahepatic bile ducts. Budd-Chiari syndrome, characterized by hepatic venous outflow obstruction, presents with different ultrasound findings such as liver enlargement or thrombosis in the hepatic veins, rather than a beaded appearance of bile ducts. Likewise, Courvoisier's syndrome, which is indicative of gallbladder distension due to bile duct obstruction, does not relate to intrahepatic duct morphology and thus does not feature the beaded appearance. By understanding the unique presentation of Caroli's disease, one can differentiate it from other conditions that may influence liver or biliary structures, ensuring accurate diagnosis and management.

## Next Steps

**Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.**

**As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.**

**If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at [hello@examzify.com](mailto:hello@examzify.com).**

**Or visit your dedicated course page for more study tools and resources:**

**<https://sonographycanadageneralist.examzify.com>**

**We wish you the very best on your exam journey. You've got this!**

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