

# Lymphology Association of North America (LANA) Practice Exam (Sample)

## Study Guide



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

**This is a sample study guide. To access the full version with hundreds of questions,**

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**SAMPLE**

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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. Don't worry about getting everything right, 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, and take breaks to retain information better.**

## **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.**

## **7. Use Other Tools**

**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!**

SAMPLE

## **Questions**

- 1. A patient presents with edema of the lower extremities and recent bloodwork reveals a lower than normal plasma albumin level. What is the most likely cause of this patient's edema?**
  - A. Hyperproteinemia**
  - B. Decreased capillary filtration**
  - C. Hypoproteinemia**
  - D. Increased capillary diffusion**
  
- 2. What anastomoses pathways should be used during MLD for a patient with left, lower-extremity lymphedema and a history of left inguinal lymph-node dissection?**
  - A. Right inguinal-axillary and interinguinal**
  - B. Intinguinal only**
  - C. Bilateral inguinal-axillary and interinguinal**
  - D. Left inguinal-axillary and interinguinal**
  
- 3. When treating a patient in a palliative setting, which of the following is true?**
  - A. Patients must be seen at least 5 times a week for success through CDT.**
  - B. Palliative lymphedema care should focus on comfort measures and maximizing quality of life, to the extent possible.**
  - C. Bandaging pressure must be tighter than usual to prevent the progression of the edema.**
  - D. Lymphedema should never be treated in a palliative care setting due to the risk of spreading cancer.**
  
- 4. What is one consequence of increased capillary permeability?**
  - A. Decreased risk of infection**
  - B. Reduced edema formation**
  - C. Increased fluid retention in interstitial space**
  - D. Improved lymphatic drainage**



- 5. Which lymph trunks enter the thoracic duct just before it enters the subclavian vein?**
- A. Left subclavian, left jugular, and left bronchomediastinal trunks**
  - B. Left subclavian and left and right jugular trunks**
  - C. Bilateral subclavian trunks**
  - D. Bilateral jugular trunks**
- 6. What kind of electrical current is used in bioimpedance?**
- A. Very high frequency**
  - B. Medium frequency**
  - C. High frequency**
  - D. Low frequency**
- 7. How should you address a reddish-brown discoloration and induration in a post-surgical patient?**
- A. Ignore the area during treatment**
  - B. Treat with deep tissue friction to soften the induration**
  - C. Treat with gentle MLD and stretching to soften the induration**
  - D. Apply heat and E-stim treatment**
- 8. What is a potential outcome of neglecting regular assessments in lymphedema care?**
- A. Improved condition**
  - B. Better management options**
  - C. Worsening symptoms**
  - D. Increased patient awareness**
- 9. How does a deep venous thrombosis (DVT) affect microcirculation distal to the affected area?**
- A. Filtration is increased because of decreased blood capillary pressure**
  - B. A DVT doesn't influence microcirculation**
  - C. Filtration is decreased because of increased blood capillary pressure**
  - D. Filtration is increased because of increased blood capillary pressure**

**10. How does hypoproteinemia affect Starling's equilibrium of fluid exchange?**

- A. It will decrease blood capillary pressure**
- B. It will increase plasma colloid osmotic pressure (COP)**
- C. It will reduce plasma colloid osmotic pressure (COP)**
- D. It will increase blood capillary pressure**

## **Answers**

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

SAMPLE

## **Explanations**

**1. A patient presents with edema of the lower extremities and recent bloodwork reveals a lower than normal plasma albumin level. What is the most likely cause of this patient's edema?**

- A. Hyperproteinemia**
- B. Decreased capillary filtration**
- C. Hypoproteinemia**
- D. Increased capillary diffusion**

In this scenario, the patient's edema in the lower extremities is most likely caused by hypoproteinemia, which refers to a lower than normal concentration of proteins, particularly albumin, in the plasma. Albumin plays a critical role in maintaining oncotic pressure within the blood vessels; it helps to hold water in the bloodstream. When the albumin level decreases, as indicated by the recent bloodwork, it leads to a reduction in oncotic pressure. This drop allows fluid to leak out of the blood vessels and accumulate in the interstitial tissues, resulting in edema. Understanding the role of albumin is vital in recognizing how hypoproteinemia can lead to edema. In conditions where serum albumin is low, such as malnutrition, liver disease, or nephrotic syndrome, fluid shifts occur that can cause swelling in various parts of the body, including the lower extremities. The other options involve mechanisms that do not directly explain the cause of edema stemming from a low plasma albumin level. For example, hyperproteinemia would typically lead to increased oncotic pressure, helping to retain fluid within the vascular system, while decreased capillary filtration is associated with reduced fluid movement out of the capillaries, and increased capillary diffusion would

**2. What anastomoses pathways should be used during MLD for a patient with left, lower-extremity lymphedema and a history of left inguinal lymph-node dissection?**

- A. Right inguinal-axillary and interinguinal**
- B. Intinguinal only**
- C. Bilateral inguinal-axillary and interinguinal**
- D. Left inguinal-axillary and interinguinal**

The choice of pathways for manual lymph drainage (MLD) in a patient with left lower-extremity lymphedema and a history of left inguinal lymph-node dissection is crucial for effective treatment. In this scenario, utilizing the left inguinal-axillary and interinguinal anastomoses is appropriate because these routes provide the most direct way to facilitate lymphatic drainage from the affected area. The left inguinal-axillary pathway allows for the movement of lymph from the left leg, which is experiencing lymphedema, to the axillary region. This is particularly important when the primary lymphatic drainage route has been compromised due to the surgical removal of lymph nodes in the left inguinal region. The interinguinal anastomoses, which connect the left and right inguinal regions, can also help to reroute lymph flow in a way that compensates for the disrupted lymphatic system on the left side. By focusing on these pathways, the treatment aims to lessen the fluid accumulation in the left lower extremity and promote better lymphatic drainage, enhancing patient outcomes. In cases of lymphedema, it's essential to use the pathways that provide the best alternative routes for lymph to

**3. When treating a patient in a palliative setting, which of the following is true?**

- A. Patients must be seen at least 5 times a week for success through CDT.**
- B. Palliative lymphedema care should focus on comfort measures and maximizing quality of life, to the extent possible.**
- C. Bandaging pressure must be tighter than usual to prevent the progression of the edema.**
- D. Lymphedema should never be treated in a palliative care setting due to the risk of spreading cancer.**

In a palliative care setting, the primary focus is on enhancing the quality of life and providing comfort for patients who may be facing serious or terminal illnesses. Therefore, the statement emphasizing that palliative lymphedema care should focus on comfort measures and maximizing quality of life is indeed accurate. The goal is to alleviate suffering and improve the patient's overall well-being, rather than pursuing aggressive treatment strategies that might not be beneficial in the context of the patient's broader condition. In this light, while other treatment options and considerations may exist, the essence of palliative care is about addressing symptoms and providing supportive care tailored to the patient's preferences and needs. This philosophy underscores the importance of using interventions that prioritize the patient's comfort, rather than strictly adhering to traditional treatment regimens that might be more relevant in curative settings.

**4. What is one consequence of increased capillary permeability?**

- A. Decreased risk of infection**
- B. Reduced edema formation**
- C. Increased fluid retention in interstitial space**
- D. Improved lymphatic drainage**

Increased capillary permeability allows for a greater exchange of fluids and proteins between the bloodstream and the interstitial space. This heightened permeability means that more fluid can leak out of the capillaries and accumulate in the surrounding tissues, leading to a condition known as edema. As fluid moves into the interstitial space, it can result in swelling, which is a direct consequence of this process. This phenomenon is often seen in various inflammatory responses or injuries, where the body increases the permeability of capillaries to allow immune cells and proteins to reach affected areas more easily. Thus, the consequence of increased capillary permeability is a notable increase in fluid retention in the interstitial space, leading to swelling or edema, making this answer accurate within the context provided.

**5. Which lymph trunks enter the thoracic duct just before it enters the subclavian vein?**

**A. Left subclavian, left jugular, and left bronchomediastinal trunks**

**B. Left subclavian and left and right jugular trunks**

**C. Bilateral subclavian trunks**

**D. Bilateral jugular trunks**

The correct answer identifies the specific lymphatic trunks that converge into the thoracic duct just before it drains into the subclavian vein. The thoracic duct is the main vessel responsible for transporting lymph from the left side of the body and areas of the right side above the diaphragm. The left subclavian trunk, left jugular trunk, and left bronchomediastinal trunk are crucial as they collect lymph from significant regions: the left subclavian trunk gathers lymph from the left upper limb; the left jugular trunk collects lymph from the left side of the head and neck; and the left bronchomediastinal trunk drains lymph primarily from the thoracic organs, including the lungs and the heart. These trunks empty their lymph into the thoracic duct, ensuring that the fluid is ultimately transported to the bloodstream via the subclavian vein. This anatomical arrangement is vital for the proper function of the lymphatic system and maintains fluid balance within the body. Understanding which trunks join the thoracic duct reinforces the importance of lymphatic drainage from various body regions and highlights the specialization of lymphatic pathways.

**6. What kind of electrical current is used in bioimpedance?**

**A. Very high frequency**

**B. Medium frequency**

**C. High frequency**

**D. Low frequency**

Bioimpedance employs a low-frequency alternating current to assess body composition and fluid distribution. This low frequency is crucial because it allows for better measurement of intracellular and extracellular fluids, enhancing the accuracy of lymphatic assessments. At low frequencies, the electrical impedance of the tissues can be measured with respect to how the different compartments (such as the fluid in the lymphatic system) react to the current. In this context, low-frequency current effectively penetrates various tissue types, allowing practitioners to obtain insights into fluid levels and distribution within the body, making it particularly effective in managing conditions such as lymphedema. Higher frequencies tend to penetrate less deeply into tissues and can alter the distribution of currents, leading to less reliable readings for lymphatic assessments. Thus, the choice of low frequency is intentional to optimize the diagnostic capabilities of bioimpedance in understanding lymphatic health and function.



**7. How should you address a reddish-brown discoloration and induration in a post-surgical patient?**

- A. Ignore the area during treatment**
- B. Treat with deep tissue friction to soften the induration**
- C. Treat with gentle MLD and stretching to soften the induration**
- D. Apply heat and E-stim treatment**

The appropriate way to address a reddish-brown discoloration and induration in a post-surgical patient is through gentle Manual Lymphatic Drainage (MLD) and stretching to soften the induration. This approach is beneficial because it promotes lymphatic circulation, which helps in reducing swelling and softening the tissue. MLD is specifically designed to assist in the removal of excess interstitial fluid and waste, thereby addressing issues related to post-surgical recovery. Gentle techniques are important in such cases, as deep tissue manipulation could exacerbate inflammation or cause additional trauma to sensitive or healing tissue. Stretching in conjunction with MLD can improve flexibility and promote better movement in the affected area, which is crucial for the overall rehabilitation process. Considering the context of post-surgical care, treating the area with excessive techniques such as deep tissue friction might lead to additional pain or complications, while methods like heat and electro-stimulation may not directly address the lymphatic issues caused by the post-surgical state. Thus, a combination of gentle MLD and stretching not only aids in recovery but also aligns with best practices for managing lymphatic health.

**8. What is a potential outcome of neglecting regular assessments in lymphedema care?**

- A. Improved condition**
- B. Better management options**
- C. Worsening symptoms**
- D. Increased patient awareness**

In lymphedema care, regular assessments are crucial for monitoring the patient's condition, adapting treatment plans, and preventing complications. When regular assessments are neglected, one of the most significant potential outcomes is the worsening of symptoms. This occurs because without consistent evaluation, health care providers may not be able to detect changes in the patient's lymphedema status, such as increased swelling, changes in skin condition, or the development of associated complications like infections or fibrosis. Worsening symptoms can lead to a decreased quality of life as patients may experience increased discomfort and limitations in mobility. Early detection of any worsening condition through assessments allows for timely intervention, whereas neglecting these evaluations can result in unaddressed complications and progressive deterioration. Regular assessments also empower patients by keeping them informed about their condition, allowing for proactive management and enhancing compliance with treatment protocols.

- 9. How does a deep venous thrombosis (DVT) affect microcirculation distal to the affected area?**
- A. Filtration is increased because of decreased blood capillary pressure**
  - B. A DVT doesn't influence microcirculation**
  - C. Filtration is decreased because of increased blood capillary pressure**
  - D. Filtration is increased because of increased blood capillary pressure**

When considering the effects of a deep venous thrombosis (DVT) on microcirculation distal to the affected area, it's important to understand the role of blood capillary pressure and its impact on filtration processes. In the case of a DVT, blood flow is obstructed in the affected vein. This obstruction can lead to increased blood pressure in the capillaries upstream from the clot. When blood capillary pressure is elevated, it causes a rise in the hydrostatic pressure within those capillaries. This situation generally promotes an increased tendency for fluid to be filtered out of the capillaries into the surrounding interstitial space, which could lead to edema. However, at the distal site of the DVT, the increased hydrostatic pressure can also result in decreased effective perfusion of the capillaries located after the obstruction. The overall consequence of this can present as decreased net filtration due to the fact that if the capillary pressure is influenced substantially by the blockage, it could lead to less effective circulation and poor fluid exchange distal to the DVT. Additionally, as the pressure becomes elevated, the lymphatic system could also struggle to manage the excess interstitial fluid. Therefore, understanding that increased capillary pressure leads to a decrease in effective filtration

- 10. How does hypoproteinemia affect Starling's equilibrium of fluid exchange?**
- A. It will decrease blood capillary pressure**
  - B. It will increase plasma colloid osmotic pressure (COP)**
  - C. It will reduce plasma colloid osmotic pressure (COP)**
  - D. It will increase blood capillary pressure**

Hypoproteinemia, which refers to an abnormally low level of protein in the blood, particularly albumin, leads to a reduction in plasma colloid osmotic pressure (COP). Colloid osmotic pressure is primarily influenced by the concentration of proteins in the blood, which play a crucial role in pulling water into the bloodstream and preventing excessive fluid movement out of the capillaries into the interstitial space. When hypoproteinemia occurs, the lower concentration of proteins results in decreased osmotic pressure, impairing the ability of the blood vessels to retain fluid within the intravascular space. Consequently, this imbalance in Starling's forces (which dictates fluid exchange between capillaries and interstitial fluid) can result in increased movement of fluid out of the capillaries, leading to edema and other related issues. Understanding this concept is essential for assessing fluid dynamics in clinical scenarios involving patients with low protein levels in the blood, guiding appropriate interventions to manage fluid balance within the body.

## 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://lymphologyassociationofnorthamerica-lana.examzify.com>**

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