

LANGE MAMMOGRAPHY PRACTICE EXAM (SAMPLE)

STUDY GUIDE



**SAMPLE STUDY GUIDE
WITH LIMITED QUESTIONS**

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THE FULL VERSION STUDY GUIDE**

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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. Which statement about the IMF on the MLO projection is correct?**
 - A. The IMF should be closed
 - B. The IMF is irrelevant
 - C. The IMF should be elevated
 - D. The IMF should be open

- 2. Which lesion is a large encapsulated mass most commonly associated with a benign lipomatous tumor?**
 - A. Fat necrosis
 - B. Calcifications
 - C. Lipoma
 - D. Ductal carcinoma

- 3. If the focal spot size of a mammography unit is 0.3 mm, what does this indicate about the effective focal spot?**
 - A. The actual focal spot is 0.3 mm
 - B. The beam size on the receptor is 0.3 mm
 - C. The distance to the receptor is 0.3 mm
 - D. The effective focal spot size is 0.3 mm

- 4. If the backup time stops a breast exposure, the technologist can repeat the radiograph using what adjustment?**
 - A. Higher peak KVP setting
 - B. Increase mA
 - C. Longer exposure time
 - D. Increase filtration

- 5. Which lesion is commonly mistaken for carcinoma but is typically not associated with skin changes?**
 - A. Inflammatory carcinoma
 - B. Fat necrosis
 - C. Postoperative scarring
 - D. Galactocele

- 6. A routine series on patients with encapsulated implants could include an additional projection, such as what view?**
- A. CC
 - B. ML
 - C. Lateral
 - D. Oblique
- 7. Magnification can be used to assess what aspect of a lesion?**
- A. Margins
 - B. Size
 - C. Depth
 - D. Vascularity
- 8. Which projection is described as likely to miss the posterior breast area?**
- A. From below projection
 - B. From above projection
 - C. Oblique projection
 - D. Lateral projection
- 9. Which imaging method uses magnets and radio waves?**
- A. Ultrasonography
 - B. Mammography
 - C. MRI
 - D. CT
- 10. What feature of high transmission cellular grids allows them to maintain equal or less radiation dose to the patient compared with linear grids?**
- A. They have copper as the strips and air for interspace material
 - B. They use silver for strips and water for interspaces
 - C. They use nickel strips and plastic interspaces
 - D. They use lead strips and foam interspaces

Answers

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

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Explanations

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1. Which statement about the IMF on the MLO projection is correct?

- A. The IMF should be closed
- B. The IMF is irrelevant
- C. The IMF should be elevated
- D. The IMF should be open**

On the MLO projection, the inframammary fold should be open to visualize the full thickness of the breast, especially the inferior and lateral portions and the tail of Spence. An open IMF means there's no folding or crease along the inferior edge that would obscure tissue or cause overlap on the image. This positioning ensures that the breast tissue near the chest wall and along the inframammary boundary is captured clearly, improving detection of lesions and reducing distortion from tissue overlap. Achieving an open IMF involves proper positioning and compression so the breast lies smoothly against the receptor, with the fold not folded over itself. When the IMF is closed or creased, tissue on the inferior margin can be hidden or overlapped, compromising image quality. Therefore, the best practice is to have the IMF open on the MLO view.

2. Which lesion is a large encapsulated mass most commonly associated with a benign lipomatous tumor?

- A. Fat necrosis
- B. Calcifications
- C. Lipoma**
- D. Ductal carcinoma

A large encapsulated mass in the breast is most characteristic of a lipoma, a benign tumor made of fat tissue. Lipomas are typically well circumscribed and often have a thin fibrous capsule, giving them a smooth, encapsulated appearance on imaging. This clear boundary helps distinguish them from other findings. Fat necrosis can produce calcifications or oil cysts after trauma, but its appearance is usually more irregular and associated with a history of injury, rather than a large, uniform encapsulated mass. Calcifications themselves are deposits of mineral material and do not form a sizable mass. Ductal carcinoma tends to present as an irregular, spiculated mass or with suspicious microcalcifications, not a large, well-defined encapsulated lesion. Therefore, the large encapsulated mass most commonly linked with a benign lipomatous tumor is lipoma.

3. If the focal spot size of a mammography unit is 0.3 mm, what does this indicate about the effective focal spot?

- A. The actual focal spot is 0.3 mm
- B. The beam size on the receptor is 0.3 mm
- C. The distance to the receptor is 0.3 mm
- D. The effective focal spot size is 0.3 mm**

In mammography, the focal spot size you see listed is the effective focal spot—the size of the focal spot projected onto the image receptor, which directly influences geometric unsharpness and image sharpness. Because the x-ray beam diverges from the focal spot, the actual focal spot (the physical size at the anode) can be smaller, but the geometry of the setup magnifies its appearance on the receptor. A stated focal spot size of 0.3 mm therefore indicates that the effective focal spot at the receptor is 0.3 mm, the dimension that governs resolution in the image. The actual focal spot could be smaller, and the beam footprint on the receptor depends on magnification, not just the raw focal spot size.

4. If the backup time stops a breast exposure, the technologist can repeat the radiograph using what adjustment?

- A. Higher peak KVP setting**
- B. Increase mA
- C. Longer exposure time
- D. Increase filtration

The backup timer stops an exposure after a preset time, so if the exposure would exceed that limit you need to deliver the needed receptor exposure in less time. Raising the peak kVp increases beam energy and the dose delivered to the detector per unit time, allowing the same image quality to be achieved with a shorter on-time. That shortens the exposure enough to finish before the timer cuts off. Be mindful that higher kVp can reduce image contrast, but it's the effective way to prevent a reset or repeat due to the timer. Other options either reduce beam intensity, extend exposure time, or increase dose without addressing the timer trigger.

5. Which lesion is commonly mistaken for carcinoma but is typically not associated with skin changes?

- A. Inflammatory carcinoma
- B. Fat necrosis
- C. Postoperative scarring**
- D. Galactoceles

Postoperative scarring can imitate the look of cancer on imaging because scar tissue causes architectural distortion and irregular densities. The key distinction is that it usually carries no skin changes, unlike inflammatory cancer which presents with skin thickening, edema, or erythema. A strong clue is a history of prior breast surgery and stability of the scar over time on serial studies. Fat necrosis and galactoceles can also mimic lesions, but they have different imaging features (oil cysts or fatty calcifications for fat necrosis, and a milk-filled cyst for galactoceles). The absence of skin changes makes postoperative scarring the best match for a lesion commonly mistaken for carcinoma but not associated with skin involvement.

6. A routine series on patients with encapsulated implants could include an additional projection, such as what view?

- A. CC
- B. ML**
- C. Lateral
- D. Oblique

When imaging breasts with implants, you often need an extra angle to see tissue that the implant can obscure in the standard views. The mediolateral projection, taken from the side, provides a different plane that helps separate the implant from the surrounding breast tissue. This angle is especially useful when using implant-displacement techniques (the Eklund approach) to visualize tissue behind and around the implant. By adding this view, you improve the chances of detecting any abnormalities that might be hidden in the implant shadow, making it the best choice for an additional projection in routine series with encapsulated implants.

7. Magnification can be used to assess what aspect of a lesion?

- A. Margins
- B. Size
- C. Depth
- D. Vascularity

Magnification views sharpen the visualization of a lesion's borders, so you can see exactly how the edges appear—whether they are well circumscribed, irregular, or spiculated. This detail is central to characterizing a lesion and guiding management, because margin appearance often helps distinguish benign processes from malignancy and influences biopsy decisions. While you can infer size from standard views, magnification doesn't fundamentally change how large the lesion is, and depth isn't assessed with this technique. Vascularity requires Doppler or contrast imaging, not magnification. So the aspect best assessed with magnification is the margins.

8. Which projection is described as likely to miss the posterior breast area?

- A. From below projection
- B. From above projection
- C. Oblique projection
- D. Lateral projection

The key idea is how the direction of the X-ray beam affects which parts of the breast are seen clearly. The posterior portion of the breast sits closest to the chest wall. When you image from below, the beam travels from inferior to superior, which tends to push the posterior tissue toward the chest wall and into a position where it can be overlapped by tissue in front of it or fall closer to the edge of the image. This geometry makes the posterior edge more likely to be obscured or missed on the image. In contrast, projections from above and the oblique or lateral views are arranged to reduce this overlap and keep posterior tissue better visualized, so imaging from below is the projection most likely to miss the posterior breast area.

9. Which imaging method uses magnets and radio waves?

- A. Ultrasonography
- B. Mammography
- C. MRI
- D. CT

This question tests understanding of how different imaging modalities generate images based on their energy sources. The method that uses magnets and radio waves is MRI. In MRI, a strong external magnetic field aligns the hydrogen nuclei in body tissues. A radiofrequency pulse then perturbs that alignment, and as the nuclei return to equilibrium they emit signals that are detected and transformed into detailed images. This technique relies on magnetic fields and radio waves and does not involve ionizing radiation. By contrast, ultrasound uses sound waves, while CT and mammography rely on X-rays. So the imaging method that uses magnets and radio waves is MRI.

10. What feature of high transmission cellular grids allows them to maintain equal or less radiation dose to the patient compared with linear grids?

A. They have copper as the strips and air for interspace material

B. They use silver for strips and water for interspaces

C. They use nickel strips and plastic interspaces

D. They use lead strips and foam interspaces

High transmission grids are designed to let as much of the primary x-ray beam through as possible while still removing scatter. They achieve this by using interspaces filled with air, which adds almost no attenuation, and by employing thin metal strips (such as copper) that block scatter but are not as absorption-heavy as lead. The result is a grid that transmits the primary beam very efficiently, so the patient dose can be the same or even lower than with a traditional linear grid, because there's less grid attenuation of the incoming photons. Using materials like silver, nickel, lead, or interspaces filled with water, plastic, or foam would absorb more of the primary radiation, increasing the dose needed to achieve the same image receptor exposure. Air interspaces and copper strips strike the right balance to maximize primary transmission while still providing scatter rejection, which is why this option is the best fit.

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.

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

<https://langemammography.examzify.com>

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

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