

ONS CHEMOTHERAPY IMMUNOTHERAPY CERTIFICATE PRACTICE TEST (SAMPLE) STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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. What distinguishes immunotherapy from traditional chemotherapy?**
 - A. Less effective against tumors
 - B. Higher risk of side effects
 - C. Highly specific in targeting cancer cells
 - D. More general and broad in effect
- 2. Which of the following is NOT a step of interphase?**
 - A. First growth phase (G1)
 - B. Synthesis phase (S phase)
 - C. Second growth phase (G2)
 - D. Mitotic phase
- 3. What is the definition of refractory CINV?**
 - A. Occurs despite treatment efforts
 - B. Occurs when subsequent cycles fail
 - C. Occurs within 12 hours of chemotherapy
 - D. Occurs only in patients with previous nausea
- 4. What is neoadjuvant therapy used for?**
 - A. To treat cancer post-surgery
 - B. To prepare a patient for stem cell transplantation
 - C. To shrink a tumor prior to surgery
 - D. To provide palliative care
- 5. Which SERM is well-known for treating breast cancer?**
 - A. Fulvestrant
 - B. Bazedoxifene
 - C. Raloxifene
 - D. Tamoxifen
- 6. Which of the following is NOT a common side effect of aromatase inhibitors?**
 - A. Hot flashes
 - B. Increased sweating
 - C. Memory loss
 - D. Dizziness

7. How do targeted therapies primarily work?

- A. By destroying all cells indiscriminately
- B. By blocking blood supply to tumors
- C. By enhancing the overall immune system
- D. By delivering toxins and blocking signals

8. What systemic condition is caused by histamine release?

- A. Hypersensitivity reaction
- B. Chronic inflammation
- C. Anaphylaxis
- D. Localized infection

9. Which of the following is NOT a type of nonspecific immunotherapy?

- A. Cytokines
- B. Checkpoint inhibitors
- C. Cancer vaccines
- D. Monoclonal antibodies

10. In what manner does nonspecific immunotherapy typically act?

- A. By specifically targeting cancer stem cells
- B. By stimulating a large immune response
- C. By increasing the number of healthy cells
- D. By decomposing tumor tissues

Answers

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

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Explanations

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1. What distinguishes immunotherapy from traditional chemotherapy?

- A. Less effective against tumors
- B. Higher risk of side effects
- C. Highly specific in targeting cancer cells**
- D. More general and broad in effect

Immunotherapy is distinguished from traditional chemotherapy primarily due to its highly specific targeting of cancer cells. This specificity arises because immunotherapy leverages the body's immune system to identify and attack cancer cells more selectively, as opposed to chemotherapy, which often indiscriminately targets rapidly dividing cells, including both cancerous and healthy cells. This targeted approach allows immunotherapy to reduce damage to normal tissues, leading to potentially fewer side effects compared to traditional chemotherapy. Additionally, the mechanism of action for immunotherapy can lead to lasting immune memory, imparting more durable responses against the cancer. In contrast, chemotherapy is generally broader and can affect a wide array of cells, contributing to the common adverse effects associated with its use. The specificity of immunotherapy is crucial in developing personalized treatment plans, often leading to more effective outcomes for selected patient populations. This is a significant advancement in cancer treatment as it opens avenues for therapies that are less toxic and more tailored to individual tumor characteristics.

2. Which of the following is NOT a step of interphase?

- A. First growth phase (G1)
- B. Synthesis phase (S phase)
- C. Second growth phase (G2)
- D. Mitotic phase**

Interphase is a crucial part of the cell cycle, distinguished from the mitotic phase. It consists of three main stages: the first growth phase (G1), the synthesis phase (S), and the second growth phase (G2). Each of these stages prepares the cell for division by contributing to its growth and the replication of its DNA. The mitotic phase, in contrast, is where actual cell division occurs, involving processes such as mitosis and cytokinesis. This phase is separate from interphase and is responsible for distributing the duplicated chromosomes into two daughter cells. Therefore, identifying the mitotic phase as not a part of interphase is correct. By understanding the functions of interphase and distinguishing it from the mitotic phase, one can appreciate the complete cell cycle and the role of each phase in cell replication and growth.

3. What is the definition of refractory CINV?

- A. Occurs despite treatment efforts
- B. Occurs when subsequent cycles fail**
- C. Occurs within 12 hours of chemotherapy
- D. Occurs only in patients with previous nausea

Refractory chemotherapy-induced nausea and vomiting (CINV) is characterized by the occurrence of nausea and vomiting that persists despite treatment efforts in subsequent chemotherapy cycles. This means that a patient who has previously experienced nausea and vomiting unresponsive to antiemetic medications during earlier cycles continues to experience these symptoms during later cycles, indicating a challenge in managing their symptoms effectively. In the context of cancer treatment, understanding refractory CINV is crucial, as it signals the need for potential adjustments in treatment plans or supportive care, especially if the patient's experience is negatively impacting their quality of life or treatment adherence. The focus is on recognizing persistent symptoms across cycles and addressing them through potentially different medication approaches or more aggressive treatment strategies. While other definitions of CINV pertain to the timing of symptoms or the specific patient history concerning nausea, they do not encapsulate the ongoing treatment challenge that refractory CINV represents. The term specifically highlights the ineffectiveness of previously used antiemetic therapies despite attempted interventions in subsequent cycles.

4. What is neoadjuvant therapy used for?

- A. To treat cancer post-surgery
- B. To prepare a patient for stem cell transplantation
- C. To shrink a tumor prior to surgery**
- D. To provide palliative care

Neoadjuvant therapy is specifically utilized to shrink a tumor prior to surgery. This approach is particularly important in oncology, as it aims to reduce the size of the tumor, making it easier to remove surgically and potentially increasing the likelihood of a successful outcome. By applying chemotherapy, radiation therapy, or a combination of these treatments before surgical intervention, healthcare providers can also evaluate how the cancer responds to the therapy, which can help inform subsequent treatment decisions. When neoadjuvant therapy is effective, it can lead to a less extensive surgical procedure, minimizing the amount of surrounding healthy tissue that needs to be removed. Additionally, reducing the tumor size may help in attaining clearer margins during surgery, which is crucial for preventing recurrence. Ultimately, the goal of neoadjuvant therapy aligns with improving surgical outcomes and optimizing overall patient prognosis in the management of cancer.

5. Which SERM is well-known for treating breast cancer?

- A. Fulvestrant
- B. Bazedoxifene
- C. Raloxifene
- D. Tamoxifen**

Tamoxifen is a selective estrogen receptor modulator (SERM) that is extensively used in the treatment of breast cancer, particularly in hormone receptor-positive breast cancer. It works by competitively binding to estrogen receptors on cancer cells, inhibiting the action of estrogen, which can promote the growth of these tumors. This mechanism is crucial in patients with cancers that are driven by estrogen, making Tamoxifen a cornerstone of therapy for both early-stage and advanced breast cancer. In addition to its effectiveness in treating breast cancer, Tamoxifen also plays a role in reducing the risk of developing breast cancer in high-risk women, further solidifying its place as an important therapeutic agent in oncology. Its ability to disrupt estrogen signaling in breast tissue specifically is what makes it particularly valuable in clinical practice for managing breast cancer.

6. Which of the following is NOT a common side effect of aromatase inhibitors?

- A. Hot flashes
- B. Increased sweating
- C. Memory loss**
- D. Dizziness

Aromatase inhibitors are commonly used in the treatment of hormone receptor-positive breast cancer in postmenopausal women. These medications work by reducing estrogen levels in the body, which can lead to various side effects. Hot flashes and increased sweating are well-recognized side effects associated with aromatase inhibitors due to the lower estrogen levels, which can affect temperature regulation and cause vasomotor symptoms. Dizziness can also occur, potentially due to hormonal changes or other underlying factors. Memory loss, however, is not typically recognized as a common side effect of aromatase inhibitors. While some patients undergoing cancer treatment may report cognitive changes (often referred to as "chemo brain"), this phenomenon is more complex and not directly linked to aromatase inhibitors themselves. Therefore, identifying memory loss as a non-common side effect helps clarify that it is not a direct consequence of these medications.

7. How do targeted therapies primarily work?

- A. By destroying all cells indiscriminately
- B. By blocking blood supply to tumors
- C. By enhancing the overall immune system
- D. By delivering toxins and blocking signals**

Targeted therapies represent a sophisticated approach to cancer treatment, focusing on specific molecular targets associated with cancer cells. They primarily work by delivering toxins directly to the targeted cancer cells and blocking the signals that help those cells grow and survive. By interfering with specific pathways that are vital for the cancer cells' proliferation and survival, targeted therapies can be more effective and cause less harm to normal, healthy cells compared to traditional chemotherapy. This mechanism allows for a more precise treatment, as targeted therapies can specifically identify and attack cancer cells, while leaving normal cells mostly unharmed. The ability to disrupt signaling pathways involved in cancer progression, along with the potential delivery of cytotoxic agents directly to cancerous tissues, illustrates how these therapies can improve therapeutic outcomes while minimizing side effects. Other approaches mentioned, such as destroying all cells indiscriminately or enhancing the overall immune system, do not align with the specific and selective action of targeted therapies. These therapies are distinct from methods that broadly affect all rapidly dividing cells or solely bolster immune responses, highlighting their unique role in modern oncological treatment strategies.

8. What systemic condition is caused by histamine release?

- A. Hypersensitivity reaction
- B. Chronic inflammation
- C. Anaphylaxis**
- D. Localized infection

Anaphylaxis is a severe and potentially life-threatening systemic allergic reaction that can occur rapidly after exposure to an allergen. This condition is characterized by widespread histamine release from mast cells and basophils, leading to a cascade of physiological responses. The release of histamine causes vasodilation, increased vascular permeability, and bronchoconstriction, which can result in symptoms such as swelling, difficulty breathing, a drop in blood pressure, and potential shock. The significance of histamine in anaphylaxis highlights its role as a mediator of allergic responses. While hypersensitivity reactions can encompass a range of allergic responses, anaphylaxis specifically refers to the acute, systemic reaction triggered by histamine release. Chronic inflammation and localized infections involve different mechanisms and responses not primarily attributed to histamine. Therefore, anaphylaxis is the most accurate condition related to systemic effects from histamine release.

9. Which of the following is NOT a type of nonspecific immunotherapy?

- A. Cytokines
- B. Checkpoint inhibitors
- C. Cancer vaccines**
- D. Monoclonal antibodies

C. Cancer vaccines are classified as a specific type of immunotherapy rather than nonspecific immunotherapy. This is because cancer vaccines are designed to elicit an immune response specifically targeting cancer cells. They typically work by introducing antigens associated with the cancer cells to the immune system, allowing it to distinguish between normal and malignant cells. In contrast, nonspecific immunotherapies aim to enhance the overall immune response without directing it towards a specific target. Cytokines, for instance, are signaling proteins that can boost various immune responses, while checkpoint inhibitors work by blocking proteins that inhibit immune activation. Monoclonal antibodies can also act nonspecifically by marking cancer cells to enhance immune system recognition and response. However, their design can sometimes allow for targeted responses, but they form part of a broader nonspecific category when used to activate general immune pathways. This differentiation highlights why cancer vaccines are the correct choice for a type of immunotherapy that is not considered nonspecific.

10. In what manner does nonspecific immunotherapy typically act?

- A. By specifically targeting cancer stem cells
- B. By stimulating a large immune response**
- C. By increasing the number of healthy cells
- D. By decomposing tumor tissues

Nonspecific immunotherapy acts primarily by stimulating a large immune response. This type of therapy enhances the overall activity of the immune system rather than targeting specific cancer cells directly. It utilizes various strategies to boost the body's natural defenses against cancer, which can include enhancing the activity of immune cells like T-cells and natural killer cells, increasing the production of cytokines, and activating various pathways that strengthen immune responses. The approach fundamentally differs from specific immunotherapy, which seeks to target molecular or cellular markers unique to cancer cells. By promoting a broader immune response, nonspecific immunotherapy can have a more generalized effect across various types of tumors, leading to potential targeting of diverse cancer cells without necessarily pinpointing their specific characteristics. While the other options present plausible mechanisms of action in different contexts, they do not accurately represent the core methodology of nonspecific immunotherapy. For example, increasing the number of healthy cells doesn't align with the therapeutic intent of nonspecific immunotherapy, which focuses more on enhancing the immune system itself rather than rebuilding or repairing normal cells. Similarly, decomposing tumor tissues is a more targeted approach that does not reflect the broad immunological activation seen in nonspecific therapy.

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://onschemotherapyimmunotherapy.examzify.com>

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

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