

CPHON CHEMOTHERAPY PRACTICE TEST (SAMPLE)

STUDY GUIDE



Prepare with structure. Pass with confidence



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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. In a Phase I trial, what must be verified first before administering the investigational agent?**
 - A. Calculate Body Surface Area (BSA)
 - B. Ensure that appropriate blood product transfusion consent was obtained
 - C. Verify necessary blood work has been obtained
 - D. Verify informed consent has been obtained
- 2. Capillary leak syndrome is most likely to develop following the administration of which agent?**
 - A. cladribine
 - B. trans-retinoic acid
 - C. interleukin-2
 - D. epoetin alpha
- 3. What steps ensure safe drug administration for immunocompromised pediatric patients during hospitalization?**
 - A. Strict hand hygiene, appropriate PPE, isolation if needed, minimize invasive procedures, prophylactic antibiotics as indicated, and close monitoring.
 - B. Standard precautions only; no special infection control measures needed.
 - C. PPE is optional in most pediatric units.
 - D. Only isolation is required; hand hygiene is not essential.
- 4. Which statement best defines late effects in the context of cancer therapy?**
 - A. Immediate adverse effects during treatment.
 - B. Acute effects only during the initial treatment phase.
 - C. Long-term adverse effects that may occur after completion of therapy.
 - D. Effects limited to the treated tumor site.
- 5. How does weight measurement influence chemotherapy dosing in pediatric patients?**
 - A. Dosing is often based on weight or body surface area; accurate weight measurement is essential to ensure proper dosing.
 - B. Dosing is always based on age, not weight.
 - C. Dosing is based on body surface area; weight is not considered.
 - D. Dosing ignores weight entirely.

- 6. Among vinca alkaloids, which is more likely to cause severe bone marrow suppression?**
- A. Vincristine has greater myelosuppression
 - B. Vinblastine has greater myelosuppression
 - C. Both cause no myelosuppression
 - D. Neither cause myelosuppression
- 7. What special consideration is required before using rasburicase in TLS?**
- A. Indicated for high risk TLS or significant uric acid elevation; screen for G6PD deficiency prior to use
 - B. Rasburicase is not used in TLS and no screening is needed
 - C. Rasburicase can be used regardless of uric acid levels
 - D. Rasburicase should be used only after hydration fails
- 8. What central venous access device is commonly used for long term pediatric chemotherapy to facilitate frequent dosing and vesicant administration?**
- A. Peripheral IV catheter
 - B. Implanted venous port
 - C. Umbilical venous catheter
 - D. Arterial line
- 9. How should chemotherapy dosing be adjusted in a patient with significant renal or hepatic impairment?**
- A. Dose reduction or schedule modification based on organ function; use pharmacology guidelines and monitor toxicity closely.
 - B. Dose increase.
 - C. Ignore organ function and proceed.
 - D. Stop chemotherapy permanently.
- 10. Which route is used to deliver chemotherapy directly into the cerebrospinal fluid?**
- A. Intrathecal
 - B. Intravenous
 - C. Oral
 - D. Intraperitoneal

Answers

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

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Explanations

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1. In a Phase I trial, what must be verified first before administering the investigational agent?

- A. Calculate Body Surface Area (BSA)
- B. Ensure that appropriate blood product transfusion consent was obtained
- C. Verify necessary blood work has been obtained
- D. Verify informed consent has been obtained**

Before giving any investigational drug in a Phase I trial, informed consent must be obtained and documented. This ensures the patient fully understands the study, including risks, potential benefits, alternatives, and the right to withdraw, and confirms that participation is voluntary. Without valid informed consent, no trial procedures or dosing should proceed, regardless of other preparatory steps. While baseline labs, eligibility criteria, or protocol-specific consents (like transfusion) may be required, they do not replace the fundamental need for informed consent.

2. Capillary leak syndrome is most likely to develop following the administration of which agent?

- A. cladribine
- B. trans-retinoic acid
- C. interleukin-2**
- D. epoetin alpha

Capillary leak syndrome happens when cytokines cause the small vessels to become overly permeable, so fluid and proteins move from the bloodstream into interstitial spaces. This leads to edema, low blood pressure, and can affect organ function. The classic setting for this syndrome is high-dose interleukin-2 therapy, used in certain cancers, where IL-2 activates immune cells and drives a surge of inflammatory cytokines like TNF-alpha and IL-1 that loosen endothelial tight junctions. Because of this, patients can develop hypotension and edema during the infusion and require careful monitoring, with treatment focusing on stopping IL-2 and supporting blood pressure and fluids as needed. Other agents don't typically produce this capillary leak pattern. Cladribine mainly causes myelosuppression and cytopenias; epoetin alfa can cause hypertension and thrombotic events without the characteristic capillary leakage; trans-retinoic acid can cause a differentiation syndrome with edema and effusions, but the classic capillary leak described in this context is most strongly associated with interleukin-2.

3. What steps ensure safe drug administration for immunocompromised pediatric patients during hospitalization?

- A. Strict hand hygiene, appropriate PPE, isolation if needed, minimize invasive procedures, prophylactic antibiotics as indicated, and close monitoring.
- B. Standard precautions only; no special infection control measures needed.
- C. PPE is optional in most pediatric units.
- D. Only isolation is required; hand hygiene is not essential.

Infection prevention and vigilant monitoring are essential when giving therapies to immunocompromised pediatric patients in the hospital. Protecting these kids from infections is as important as the medications themselves because their immune systems are weakened, so even small breaches can lead to serious, life-threatening problems. Strict hand hygiene and appropriate personal protective equipment reduce the chance that harmful microbes are transmitted to the patient during every contact or procedure. Isolation when needed helps prevent the spread of contagious organisms to others and protects the patient from acquiring new infections. Minimizing invasive procedures lowers the number of entry points for pathogens and reduces the risk of introducing infection during care. Prophylactic antibiotics, when indicated by the patient's risk factors (such as prolonged neutropenia or specific exposure risks), can prevent certain infections, though they must be used judiciously to balance benefits with the risks of resistance and adverse effects. Close monitoring ensures early detection of fever, sepsis, organ toxicity from drugs, and other adverse events, allowing rapid intervention and adjustment of therapy. While standard precautions are foundational, the heightened infection-control measures described here align with the needs of immunocompromised children, providing layered protection during drug administration and hospitalization.

4. Which statement best defines late effects in the context of cancer therapy?

- A. Immediate adverse effects during treatment.
- B. Acute effects only during the initial treatment phase.
- C. Long-term adverse effects that may occur after completion of therapy.
- D. Effects limited to the treated tumor site.

Late effects are long-term adverse effects that can surface months or years after cancer therapy has ended. They arise from damage to healthy tissues exposed to treatment and may involve the heart, lungs, kidneys, fertility, growth, endocrine function, neurocognition, or the risk of secondary cancers. This timing—after completion of therapy—is what sets late effects apart from adverse effects that occur during treatment or soon after. They're not confined to the treated tumor site; the impact can involve multiple organ systems and may require ongoing survivorship care. Examples include late cardiotoxicity after certain chemotherapies, infertility after gonadal exposure, growth or cognitive issues after cranial irradiation, and secondary cancers developing years later.

5. How does weight measurement influence chemotherapy dosing in pediatric patients?

A. Dosing is often based on weight or body surface area; accurate weight measurement is essential to ensure proper dosing.

B. Dosing is always based on age, not weight.

C. Dosing is based on body surface area; weight is not considered.

D. Dosing ignores weight entirely.

Chemotherapy dosing in children is guided by body size, because drug exposure is closely tied to how big the patient is. In pediatric regimens, many drugs are dosed by weight (mg per kg) or by body surface area (mg per m²) to account for differences in distribution and metabolism between kids. Therefore, an accurate weight measurement is essential: even a small error can lead to a dose that is too high and risks toxicity, or too low and reduces effectiveness. Age alone doesn't reliably predict dose because maturation of organs and drug-processing pathways varies widely among children, making weight-based and BSA-based dosing the safer, more precise approach. Ignoring weight would undermine how these drugs are intended to reach the right exposure level in pediatric patients.

6. Among vinca alkaloids, which is more likely to cause severe bone marrow suppression?

A. Vincristine has greater myelosuppression

B. Vinblastine has greater myelosuppression

C. Both cause no myelosuppression

D. Neither cause myelosuppression

Toxicity patterns differ within the vinca alkaloids. Bone marrow suppression is the dose-limiting toxicity for several chemotherapies, and among these agents it is most prominent with vinblastine. Vincristine, while it inhibits mitosis, is delivered with relatively less impact on hematopoietic cells and is mainly limited by neurotoxicity. Vinblastine, on the other hand, markedly affects rapidly dividing bone marrow progenitors, leading to significant neutropenia and other marrow suppression. So, vinblastine is the one more likely to cause severe bone marrow suppression. (Vinorelbine also causes marrow suppression but generally not as severely as vinblastine.)

7. What special consideration is required before using rasburicase in TLS?

A. Indicated for high risk TLS or significant uric acid elevation; screen for G6PD deficiency prior to use

B. Rasburicase is not used in TLS and no screening is needed

C. Rasburicase can be used regardless of uric acid levels

D. Rasburicase should be used only after hydration fails

Rasburicase rapidly lowers uric acid levels, which is crucial in tumor lysis syndrome when there's a high risk or significant uric acid elevation. A key precaution is screening for G6PD deficiency before giving rasburicase, because the drug can cause oxidative stress leading to acute hemolysis in G6PD-deficient individuals. If G6PD deficiency is present, rasburicase should be avoided and alternative management chosen. So, the best approach combines using rasburicase for high-risk TLS or significant hyperuricemia with performing G6PD deficiency screening prior to use.

8. What central venous access device is commonly used for long term pediatric chemotherapy to facilitate frequent dosing and vesicant administration?

- A. Peripheral IV catheter
- B. Implanted venous port**
- C. Umbilical venous catheter
- D. Arterial line

Long-term pediatric chemotherapy relies on a durable venous access device that can be accessed repeatedly for frequent dosing and the administration of vesicants. An implanted venous port fits this need by sitting under the skin and connecting to a central vein, allowing treatment through a small hub with a non-coring needle during each session. Because it remains in place for months to years, it minimizes painful needle sticks, reduces the risk of repeated vein damage, and can be used for both regular infusions and vesicant chemotherapies. In contrast, a peripheral IV is not ideal for long-term use or vesicant administration due to limited durability and higher risk of infiltration. An umbilical venous catheter is typically a short-term option used in newborns in specific settings, not for ongoing chemotherapy, and an arterial line is for arterial monitoring, not for venous drug delivery.

9. How should chemotherapy dosing be adjusted in a patient with significant renal or hepatic impairment?

- A. Dose reduction or schedule modification based on organ function; use pharmacology guidelines and monitor toxicity closely.**
- B. Dose increase.
- C. Ignore organ function and proceed.
- D. Stop chemotherapy permanently.

Adjusting chemotherapy dosing in patients with significant renal or hepatic impairment hinges on how organ function affects drug clearance and toxicity. Many chemotherapeutic agents are eliminated by the kidneys or liver, so when these organs are impaired, drugs can accumulate, increasing the risk of severe adverse effects. The best approach is to reduce the dose or alter the dosing schedule based on the patient's level of organ dysfunction, using pharmacology guidelines and institutional protocols. This strategy allows continued treatment while keeping drug exposure within safe limits and is paired with close monitoring for hematologic, hepatic, and renal toxicity, with further adjustments as needed. Increasing the dose would elevate toxicity risk in the setting of organ impairment. Ignoring organ function and proceeding as if nothing were altered contradicts how pharmacokinetics change with organ failure. Stopping chemotherapy permanently is not the default; many regimens can be continued with appropriate dose modifications or temporary holds if toxicity arises, tailored to the individual patient and treatment goals.

10. Which route is used to deliver chemotherapy directly into the cerebrospinal fluid?

A. Intrathecal

B. Intravenous

C. Oral

D. Intraperitoneal

Directly into the cerebrospinal fluid means delivering the drug where it can act on the brain and spinal cord spaces, bypassing the protective blood-brain barrier. The intrathecal route accomplishes this by injecting chemotherapy into the CSF via a lumbar puncture or through an implanted reservoir. This approach allows higher local concentrations of drugs like methotrexate or cytarabine to treat or prevent CNS involvement from malignancy. Other routes place the drug into the bloodstream, the gastrointestinal tract, or the peritoneal cavity and do not place it in the CSF, so they're not effective for delivering therapy directly to CSF. Intravenous administration distributes systemically with limited CSF penetration; oral administration is swallowed and absorbed through the GI tract; intraperitoneal administration targets the peritoneal cavity.

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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://cphonchemo.examzify.com>

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

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