# Oncology Certified Nurse (OCN) Nursing Practice Test (Sample)

## Study Guide


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# Questions

**1. What medication can be used to protect the heart against the effects of doxorubicin?**

**A. Carvedilol**

**B. Dexrazoxane**

**C. Metoprolol**

**D. Amlodipine**

**2. How many chromosomes are typically found in the human body?**

**A. 46**

**B. 23**

**C. 48**

**D. 44**

**3. What is considered the gold standard for treating pancreatic cancer?**

**A. Chemotherapy**

**B. Radiation therapy**

**C. Surgery**

**D. Immunotherapy**

**4. What is most likely indicated by a raised, pearly lesion on a patient's upper chest?**

**A. Kaposi sarcoma**

**B. Basal cell carcinoma**

**C. Malignant melanoma**

**D. Leukemia cutis**

**5. What are some common causes of DIC?**

**A. Diabetes and hypertension**

**B. Delivery of a baby, infection, and cancer**

**C. High cholesterol and smoking**

**D. Trauma and obesity**

**6. Which diagnostic test is most commonly used for renal cell carcinoma?**

**A. CT scan**

**B. KUB radiography**

**C. Ultrasound**

**D. MRI**

**7. What is the preferred initial therapy for anal cancer?**

**A. Surgery**

**B. Chemoradiation**

**C. Radiation therapy**

**D. Chemotherapy**

**8. Which chemotherapy agent is administered orally for the treatment of malignant melanoma?**

**A. Bleomycin**

**B. Carmustine**

**C. Temozolomide**

**D. Adriamycin**

**9. What is characterized as noninvasive breast cancer?**

**A. Invasive Ductal Carcinoma**

**B. In-Situ Cancer**

**C. Inflammatory Breast Cancer**

**D. Aneuploidy**

**10. What is the recommended target PTT level when using Heparin for DIC treatment?**

**A. 10-15 seconds**

**B. 18-28 seconds**

**C. 30-40 seconds**

**D. 50-60 seconds**

# Answers

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

# Explanations

## 1. What medication can be used to protect the heart against the effects of doxorubicin?

**A. Carvedilol**

**B. Dexrazoxane**

**C. Metoprolol**

**D. Amlodipine**

**Dexrazoxane is utilized as a cardioprotective agent in patients undergoing treatment with doxorubicin. Doxorubicin, an anthracycline chemotherapy drug, is effective for a variety of cancers; however, one of its notable side effects is cardiotoxicity, which can lead to long-term heart damage. Dexrazoxane works by chelating iron and reducing the formation of free radicals that can cause oxidative stress, thus protecting cardiac cells from the harmful effects associated with doxorubicin. Given this context, dexrazoxane's mechanism of action differentiates it from other medications listed, which do not have the same established function in mitigating doxorubicin-induced cardiac toxicity. While carvedilol, metoprolol, and amlodipine are all medications that may play a role in managing heart failure or hypertension, they do not directly prevent the cardiac damage caused by doxorubicin. Therefore, dexrazoxane stands out as the optimal choice for protecting the heart during this chemotherapy regimen.**

## 2. How many chromosomes are typically found in the human body?

**A. 46**

**B. 23**

**C. 48**

**D. 44**

**The typical number of chromosomes found in the human body is 46. This composition includes 23 pairs of chromosomes, where one set of 23 is inherited from the mother and the other set from the father. This diploid state is essential for human development and functioning, as each chromosome carries genetic information critical for numerous biological processes. When examining this specific count, it's important to consider that variations such as having 23 chromosomes represents the haploid number, which is found in gametes (sperm and egg cells). The other counts listed, such as 48 or 44, are not standard for human somatic cells and could refer to specific cell types or conditions (like certain types of cancer), but they do not reflect the typical chromosomal structure in a normal human body. The established norm of 46 chromosomes is foundational in understanding genetic inheritance and the implications in oncological nursing when discussing cancer related to chromosomal abnormalities.**

## 3. What is considered the gold standard for treating pancreatic cancer?

**A. Chemotherapy**

**B. Radiation therapy**

**C. Surgery**

**D. Immunotherapy**

**Surgery is considered the gold standard for treating pancreatic cancer, particularly in cases where the cancer is localized and resectable. The primary surgical procedure for pancreatic cancer is a Whipple procedure (pancreaticoduodenectomy), which involves the removal of the head of the pancreas along with portions of the small intestine, stomach, bile duct, and nearby lymph nodes. Successful surgical intervention can potentially lead to the best outcomes, including the possibility of a cure in early-stage disease. While chemotherapy and radiation therapy are important components of the overall treatment plan for pancreatic cancer, particularly in adjuvant or neoadjuvant settings, they are generally not curative on their own. Chemotherapy is often used to manage advanced disease or as a follow-up to surgery to reduce the risk of recurrence. Radiation can also play a role in certain cases but usually is not a standalone treatment for pancreatic cancer. Immunotherapy is an emerging field in cancer treatment; however, it has not shown the same level of efficacy in pancreatic cancer as it has in other types of cancer. Therefore, among the treatment modalities available, surgery is the gold standard for the best potential outcome in suitable patients.**

## 4. What is most likely indicated by a raised, pearly lesion on a patient's upper chest?

**A. Kaposi sarcoma**

**B. Basal cell carcinoma**

**C. Malignant melanoma**

**D. Leukemia cutis**

**A raised, pearly lesion on the upper chest is most commonly associated with basal cell carcinoma. This skin cancer is characterized by its distinct appearance, often described as having a pearly or shiny lesion with a raised border. Basal cell carcinoma typically occurs in areas of the skin that are frequently exposed to the sun, which aligns with the location on the upper chest. Additionally, basal cell carcinoma tends to grow slowly and rarely metastasizes, making it less aggressive compared to other skin cancers. Its unique features, such as telangiectasia (small blood vessels surrounding the lesion) and sometimes a central ulceration, further differentiate it from other types of skin lesions. The characteristic visual attributes and growth behavior of basal cell carcinoma strongly support the conclusion that a raised, pearly lesion is indicative of this condition.**

## 5. What are some common causes of DIC?

**A. Diabetes and hypertension**

**B. Delivery of a baby, infection, and cancer**

**C. High cholesterol and smoking**

**D. Trauma and obesity**

**DIC, or disseminated intravascular coagulation, is a serious condition characterized by abnormal blood clotting throughout the small blood vessels, leading to complications such as organ dysfunction and bleeding. A primary aspect of understanding DIC is recognizing its common causes, which are often associated with significant medical events or conditions. Delivery of a baby can lead to DIC in cases where complications arise, such as placental abruption or fetal demise. Infection, particularly severe systemic infections such as sepsis, can trigger a widespread inflammatory response that leads to DIC. Additionally, certain cancers, especially those that are aggressive or advanced, are well-documented triggers due to the release of procoagulant factors into the bloodstream. The other choices include conditions that either do not relate to the mechanisms that induce DIC or are less directly connected to its onset. Diabetes and hypertension, while serious conditions, do not have a direct link to DIC as significant triggers. High cholesterol and smoking are risk factors for cardiovascular disease rather than DIC. Trauma and obesity might lead to other complications but are not primary or direct causes of DIC in the same way. In summary, B encompasses a focused and accurate list of conditions that directly contribute to the development of DIC.**

## 6. Which diagnostic test is most commonly used for renal cell carcinoma?

**A. CT scan**

**B. KUB radiography**

**C. Ultrasound**

**D. MRI**

**The most commonly used diagnostic test for renal cell carcinoma is a CT scan. This imaging technique provides detailed cross-sectional images of the kidney and surrounding structures, allowing for better visualization of the tumor and assessment of its size, location, and possible spread to nearby lymph nodes or organs. The high resolution and ability to distinguish between different types of tissues make CT scans instrumental in both the diagnosis and staging of renal cell carcinoma. KUB radiography primarily focuses on the kidneys, ureters, and bladder but lacks the detail and specificity needed for diagnosing renal tumors effectively. Ultrasound is useful for initial evaluations and can help identify masses, but it is less definitive than a CT scan for characterizing renal tumors or assessing metastasis. MRI is another imaging option that can be useful, especially in certain cases where there are concerns about renal function or when further characterization of a mass is needed, but it is not typically the first-line diagnostic tool for renal cell carcinoma. Thus, while various imaging techniques can play a role in the diagnosis and assessment of renal cell carcinoma, the CT scan is the standard approach used in clinical practice.**

## 7. What is the preferred initial therapy for anal cancer?

**A. Surgery**

**B. Chemoradiation**

**C. Radiation therapy**

**D. Chemotherapy**

**The preferred initial therapy for anal cancer is chemoradiation, which involves a combination of chemotherapy and radiation therapy. This approach is particularly effective for this type of cancer because it addresses the tumor locally through radiation while also targeting any potential systemic disease with chemotherapy. Anal cancer is often treated with chemoradiation because it has been shown to increase the chances of tumor control and can help preserve anal function, avoiding the need for more radical surgical interventions such as abdominoperineal resection that result in a permanent colostomy. The combination enhances the effectiveness of both modalities, yielding better outcomes compared to using either radiation therapy or chemotherapy alone. Surgery is typically not the first-line treatment for anal cancer due to the higher likelihood of complications and less favorable outcomes compared to combined chemoradiation. Radiation therapy alone may not provide the same level of tumor control as when combined with chemotherapy. Similarly, chemotherapy alone does not adequately address the local disease in the anal region, making it a less effective initial treatment without the adjunctive use of radiation. Thus, chemoradiation is favored as the standard care, establishing it as the preferred initial therapy for managing anal cancer effectively.**

## 8. Which chemotherapy agent is administered orally for the treatment of malignant melanoma?

**A. Bleomycin**

**B. Carmustine**

**C. Temozolomide**

**D. Adriamycin**

**Temozolomide is recognized for its oral administration in the treatment of malignant melanoma, particularly in patients with unresectable or metastatic disease. This alkylating agent works by interfering with the DNA synthesis, thereby hindering the ability of cancer cells to multiply effectively. The oral route of administration is advantageous as it enhances patient compliance and offers a more convenient option compared to intravenous administration, which is necessary for some other chemotherapy agents. Temozolomide has been used not only for melanoma but is also integrated into treatment regimens for other types of tumors, especially those where traditional therapies may not have been effective. In contrast, the other agents listed—Bleomycin, Carmustine, and Adriamycin—are typically administered through intravenous avenues. These methods can involve more complex processes, including the need for central venous access or monitoring for potential complications associated with intravenous chemotherapy. Therefore, the choice of Temozolomide as an oral agent is particularly significant in the context of treating malignant melanoma, demonstrating the progression towards more patient-friendly cancer treatment regimens.**

## 9. What is characterized as noninvasive breast cancer?

**A. Invasive Ductal Carcinoma**

**B. In-Situ Cancer**

**C. Inflammatory Breast Cancer**

**D. Aneuploidy**

**Noninvasive breast cancer is best characterized by in-situ cancer, which refers to cancer that has not invaded surrounding tissues and remains confined within the ducts or lobules of the breast. In-situ cases include ductal carcinoma in situ (DCIS) and lobular carcinoma in situ (LCIS). These types of cancer are significant because they indicate abnormal cell growth without the presence of invasive characteristics, meaning they have not spread outside their original location. Proper identification and management of in-situ breast cancer are critical, as they can precede invasive cancer if left untreated. Terms like invasive ductal carcinoma and inflammatory breast cancer refer to more aggressive forms of breast cancer that have invaded surrounding tissues and potentially spread to lymph nodes or other parts of the body. Aneuploidy, on the other hand, relates to abnormalities in chromosome number and is a genetic characteristic often found in cancers but does not define a type of cancer itself. Thus, in-situ cancer perfectly fits the definition of noninvasive breast cancer.**

## 10. What is the recommended target PTT level when using Heparin for DIC treatment?

**A. 10-15 seconds**

**B. 18-28 seconds**

**C. 30-40 seconds**

**D. 50-60 seconds**

**The recommended target PTT level when using Heparin for the treatment of Disseminated Intravascular Coagulation (DIC) is typically set to 1.5 to 2.5 times the normal range, which translates to a PTT of approximately 60 to 100 seconds depending on the laboratory's reference values. In this case, the correct answer of 18-28 seconds reflects a therapeutic range that is low, and it seems there may be a misunderstanding regarding the specific target PTT for Heparin. In DIC management, it is crucial to maintain effective anticoagulation, which generally requires a longer PTT, ensuring that excessive clotting is controlled while preventing bleeding complications. The precise targets can vary depending on institutional protocols and individual patient factors, but they often align with the need to adequately respond to the coagulopathy seen in DIC. Other ranges listed would not be appropriate for the anticoagulation needed in this condition, as they fall significantly below the therapeutic window necessary to manage DIC effectively.**