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39	A	B	C	D	E

PRACTICE QUESTIONS

UAE Ministry Of Health And Prevention

HMNOC

Hematology and Oncology exam

EDITION

Demo

QUESTIONS

9

FORMAT

Limited Edition PDF

Before you begin

What this is

9 practice questions for UAE Ministry Of Health And Prevention **HMNOC**, each with its answer key and an explanation. Answer a question before you read its key — the explanation is worth more once you have committed.

If something looks wrong

Send us three things and we will check it:

- the exam code, **HMNOC**
- the question number
- the email address on your order

Write to **support@mometrix.net**. We reply within one business day.

QUESTION 1

MULTIPLE CHOICE

A 45-year-old patient presents with fatigue and pallor. Laboratory results show: hemoglobin 8.5 g/dL, MCV 70 fL, serum iron 30 µg/dL (low), TIBC 450 µg/dL (high), and ferritin 10 ng/mL (low). Which of the following are characteristic findings of iron deficiency anemia? (Choose two.)

- ☒ **A** Microcytic, hypochromic red blood cells
- ☐ **B** Elevated ferritin level
- ☒ **C** Increased total iron-binding capacity (TIBC)
- ☐ **D** Elevated serum iron level

ANSWER A - C

WHY Iron deficiency anemia characteristically presents with microcytic (low MCV), hypochromic red blood cells, low serum iron, low ferritin, and elevated TIBC as the body upregulates transferrin to capture more iron. Low ferritin (option B) and low serum iron (option D) reflect iron deficiency, making their elevated values incorrect.

QUESTION 2

MULTIPLE CHOICE

A nurse is preparing to administer doxorubicin through a peripheral IV. During infusion, the patient complains of burning at the site and erythema is noted. Which of the following actions should be taken immediately? (Choose two.)

- ☒ **A** Stop the infusion immediately and leave the catheter in place
- ☐ **B** Apply cold compresses to the affected area
- ☐ **C** Continue the infusion at a slower rate to complete the dose
- ☒ **D** Aspirate residual drug from the catheter before removal

ANSWER A - D

WHY For suspected extravasation of doxorubicin (a vesicant), the infusion must be stopped immediately while leaving the catheter in place to aspirate residual drug. Cold compresses are applied for anthracyclines like doxorubicin (warm compresses are used for vinca alkaloids). Continuing the infusion would worsen tissue injury.

QUESTION 3

TRUE/FALSE

Tumor lysis syndrome (TLS) is characterized by hyperuricemia, hyperkalemia, hyperphosphatemia, and hypocalcemia, and is most commonly associated with the initiation of cytotoxic therapy in highly chemosensitive malignancies such as Burkitt lymphoma and acute lymphoblastic leukemia.

☒ **A** True☐ **B** False**ANSWER A**

WHY True. TLS results from rapid tumor cell lysis releasing intracellular contents, producing the classic metabolic tetrad: hyperuricemia, hyperkalemia, hyperphosphatemia, and secondary hypocalcemia. It is most commonly seen with initiation of therapy in highly proliferative, chemosensitive malignancies including Burkitt lymphoma, ALL, and other high-grade lymphomas.

QUESTION 4

SINGLE CHOICE

A peripheral blood smear shows numerous large, fragile lymphocytes that are smudged during slide preparation. Which hematologic malignancy is most characteristically associated with this finding?

☐ **A** Acute myeloid leukemia☒ **B** Chronic lymphocytic leukemia (CLL)☐ **C** Hodgkin lymphoma☐ **D** Multiple myeloma**ANSWER B**

WHY Smudge cells (also called Gumprecht shadows) are the hallmark morphological finding in chronic lymphocytic leukemia (CLL). They result from the fragility of the neoplastic mature B-lymphocytes, which rupture during the smear preparation process. While present in other conditions, they are most characteristically associated with CLL.

QUESTION 5

SINGLE CHOICE

Which of the following genetic mutations is most specifically associated with chronic myeloid leukemia (CML)?

- ☒ **A BCR-ABL1 fusion gene (Philadelphia chromosome)**
- ☐ B JAK2 V617F mutation
- ☐ C PML-RARA fusion gene
- ☐ D FLT3 internal tandem duplication

ANSWER A

WHY The BCR-ABL1 fusion gene, formed by the t(9;22) translocation creating the Philadelphia chromosome, is the defining genetic abnormality of CML and is the target of tyrosine kinase inhibitors such as imatinib. JAK2 V617F is associated with polycythemia vera and other myeloproliferative neoplasms; PML-RARA characterizes acute promyelocytic leukemia; FLT3-ITD is seen in AML.

QUESTION 6

SINGLE CHOICE

A chemotherapy nurse is reviewing safe handling guidelines. Which personal protective equipment (PPE) is recommended when handling chemotherapy agents and excreta of patients within 48 hours of chemotherapy administration?

- ☐ A Single pair of latex gloves
- ☒ **B Double chemotherapy-rated gloves and a chemotherapy-rated gown**
- ☐ C Standard exam gloves and a surgical mask
- ☐ D No PPE is required if a biological safety cabinet is used

ANSWER B

WHY OSHA and ASHP guidelines recommend double chemotherapy-rated gloves (ASTM standard) and a chemotherapy-rated, impervious gown when handling chemotherapy drugs and the excreta of patients who have received chemotherapy within 48 hours. Single gloves, standard exam gloves, or reliance on a safety cabinet alone are inadequate for personnel protection.

QUESTION 7

SINGLE CHOICE

In the TNM staging system for solid tumors, the 'N' component refers to which of the following?

- ☐ A Tumor size and local extension
- ☐ B Presence of distant metastasis
- ☒ C Regional lymph node involvement
- ☐ D Histologic grade of the tumor

ANSWER C

WHY In the TNM system, T describes the size and extent of the primary tumor, N describes the involvement of regional lymph nodes, and M indicates the presence of distant metastasis. Histologic grade (G) is evaluated separately from TNM staging.

QUESTION 8

SINGLE CHOICE

A patient receiving chemotherapy develops fever of 38.9°C and an absolute neutrophil count (ANC) of 350 cells/μL. What is the most appropriate initial intervention?

- ☐ A Outpatient oral amoxicillin and follow-up in 48 hours
- ☒ B Immediate hospitalization and empiric broad-spectrum IV antibiotics
- ☐ C Administer pegfilgrastim and observe at home
- ☐ D Transfuse platelets and reassess

ANSWER B

WHY Febrile neutropenia (fever $\geq 38.3^{\circ}\text{C}$ or $\geq 38.0^{\circ}\text{C}$ sustained, with ANC $< 500/\mu\text{L}$ or expected to fall below 500) is a medical emergency requiring immediate hospitalization and empiric broad-spectrum IV antibiotics (e.g., antipseudomonal beta-lactam) within one hour of presentation. Outpatient management, G-CSF alone, or platelet transfusion is insufficient and inappropriate.

QUESTION 9

SINGLE CHOICE

Which antineoplastic agent class is associated with dose-dependent cardiotoxicity (cardiomyopathy) and requires baseline and serial echocardiogram monitoring of left ventricular ejection fraction (LVEF)?

- ☐ A Taxanes (e.g., paclitaxel)
- ☒ B Anthracyclines (e.g., doxorubicin)
- ☐ C Antimetabolites (e.g., methotrexate)
- ☐ D Vinca alkaloids (e.g., vincristine)

ANSWER B

WHY Anthracyclines (doxorubicin, epirubicin) cause dose-dependent, cumulative cardiotoxicity leading to dilated cardiomyopathy and reduced LVEF. Baseline echocardiogram (or MUGA scan) and periodic monitoring of LVEF are required, with consideration of cardioprotectants such as dexrazoxane at high cumulative doses. Taxanes cause neuropathy; antimetabolites cause myelosuppression and mucositis; vinca alkaloids cause neuropathy.