

Dr. Tarek M. Mostafa (Q#1-70)

1. Which of the following is correct about cancer?

- A. Cancer is considered as a disease
- B. Lung cancer is the second common cause of death for both sexes
- C. Biological carcinogen is the most common cause of breast and prostate cancer
- D. Sophisticated oral contraceptive pills have no risk for causing breast cancer

2. Which of the following is correct about biological carcinogen?

- A. Epstein virus causes hepato-cellular cancer
- B. Hepatitis B virus causes lymphoma
- C. Human papilloma virus causes uterine carcinoma
- D. Human herpes virus 8 (HHV8) causes melanoma

3. Which of the following steps seems reversible during carcinogenesis?

- A. Initiation and promotion
- B. Conversion
- C. Progression
- D. Metastasis

4. Which of the following is involved in the incidence of cancer?

- A. Anti-metastatic gene
- B. Oncogene
- C. P53 gene
- D. Protooncogene

5. Which of the following is correct?

- A. In early stage cancer, tumor growth is un-exponential
- B. Early stage is characterized by angiogenesis
- C. The doubling time seems short during late stage cancer
- D. Cell kill theory assumes that, no cure of cancer with chemotherapy

6. Select the true statement

- A. Immunoglobulin may represent a screening tool for leukemia
- B. Excess dietary fat may be risk factor for both breast and prostate cancers
- C. Galactosyl Transferase-II is inferior to CA 19-9 for screening pancreatic cancer
- D. ACTH and ADH are natural hormones used for screening lung cancer

7. Concerning response criteria for cancer, select the true statement:

- A. Cure means five years free survival including breast cancer
- B. Complete response means cure
- C. Hematological profile can be used as response criteria for leukemia
- D. Partial response means 25% reduction in cancer mass

8. Anticancer drugs resistance may occur through:

- A. Increased activation of pro-drug
- B. Decreased drug inactivation
- C. Mutation of MDR1
- D. Mutation in renal transport

9. Select the true answer

- A. The maximum total dose of anthracycline should not exceed 500 mg/m²
- B. Etoposide should be used as etoposide base
- C. Amphotircin can be used safely in patients on cis-platin
- D. Carboplatin causes blood dyscrasias

10. Which of the following seems correct?

- A. Radiofrequency ablation is used for thrombocytopenia in patient without hypersplenism
- B. Finasteride can be used for preventing prostate cancer but we must answer 5 W questions
- C. Delay of administration of chemotherapy courses is caused mainly by anemia
- D. Definitive treatment of cancer could be started without biopsy

11. Thalidomide has been approved by FDA as:

- A. Adjuvant therapy with chemotherapy for managing stage C prostate cancer
- B. Adjuvant therapy with chemotherapy for managing stage A prostate cancer
- C. Adjuvant therapy with chemotherapy for managing stage B prostate cancer
- D. Protective agent against chemotherapy induced gonadal toxicity

12. Select the true answer

- A. Ethyl chloride is recommended for managing extravasations
- B. Vinca extravasations can be treated by hot pack and use of hyaluronidase
- C. Gonadotoxicity is age, dose and duration independent
- D. Corticosteroids are not recommended for treatment of extravasations

13. Select the true answer

- A. Hypersensitivity is common with L-asparaginase
- B. Pulmonary toxicity is common with Hydroxyurea
- C. Secondary malignancy is common with ARA-C
- D. Hepatotoxicity is common with interferon

14. Which of the following is correct?

- A. I^{131} is preferred than TC-99m for bone scan
- B. HER₂ can be assessed in blood
- C. Tumor burden of 1 gram mass, 1 cm diameter can be clinically detected
- D. Surgical implication is useful for Hodgkin's lymphoma

15. Which of the following is correct?

- A. Burkett's lymphoma has a doubling time of 2-3 months
- B. Metastasis occurs mainly through hematological spread
- C. Corticosteroid therapy is valid for HCL
- D. Folate is necessary to maintain therapeutic effect of 5-FU

16. Which of the following anticancer drugs acts via enzyme inhibition?

- A. Ara-C
- B. 6-MP
- C. Cis-platin
- D. Aldoseleukin

17. Which of the following anti-cancers act via free radicals formation?

- A. VM-26
- B. Bleomycin
- C. Cladribine
- D. 6-TG

18. Which of the following is myelosuppressive?

- A. Bleomycin
- B. Vincristine
- C. Cyclophosphamide
- D. L-Asparaginase

19. Which of the following is approved to manage ovarian cancer?

- A. 5-FU
- B. Cladribine
- C. DACT
- D. Carboplatin

20. Which of the following is cell cycle phase specific?

- A. Mitomycin-C
- B. DACT
- C. MXT
- D. Chlorambucil

- 21. Which of the following is used for Kaposis sarcoma?**
A. Carboplatin B. Hydroxyura C. Doxorubicin D. Bleomycin
- 22. Which of the following is used for brain tumor?**
A. Mecloroethamine B. Vinblastine C. Streptazocin D. Epirubicin
- 23. Which of the following undergoes resistance via decreased activation of pro-drug?**
A. 5-FU B. Hydroxurea C. Cytarabine D. Paclitaxel
- 24. Which of the following is correct?**
A. Erythropoietin has antigenicity and can be dialysed
B. Avobenzone sun screen protects against melanoma by blocking UVB
C. Dexrazoxane is an ideal antidot for treating doxorubicin extravasation
D. Sargramostim seems safe to correct neutropenia in patients with renal insufficiency
- 25. To minimize Cis-platin toxicity, the patient on Cis-platin should:**
A. Undergo liver function test B. Undergo regular EEG
C. Undergo regular Fundosopy D. Undergo regular plantar test
- 26. Which of the following shows dose independent toxicity?**
A. 5-FU B. Vincristine C. Doxorubicin D. Cytarabine
- 27. Myelosuppression is indicated by:**
A. WBCs count of $7000/\text{mm}^3$ B. Neutrophil count of $< 500/\text{mm}^3$
C. Platelets count of $100,000/\text{mm}^3$ D. RBCs count of $4500/\text{mm}^3$
- 28. Which of the following is correct about alopecia ?**
A. It is premenant and embrassing condition
B. It takes place with all classess of chemotherapy
C. It can be managed with vitamin D3
D. It occurs immediately after use of chemotherapy
- 29. Which of the following should be avoided during treatment of extravasation?**
A. Intravenous hyrocortisone B. Use of cool or hot pad
C. Left the needle in place D. Application of local lidocaine
- 30. Which of the following seems risk factor for breast cancer?**
A. Early menarche B. Excess vegeterian diet
C. Exposure to alanine D. Smoking
- 31. Which of the following seems typical feature for breast cancer mass?**
A. Bilateral B. Regular in shape C. Mobile D. Hard
- 32. Which of the following is an most critical indicator for breast biopsy?**
A. There is a palpable painful mass up on physical exam
B. Presence of calcification with mammography
C. Elevation of CEA D. Elevation of CA125

33. Which of the following is correct about stages of breast cancer?

- A. Stage 0 is in situ stage that can easily diagnosed
- B. Stage I is localised small primary tumor with lymph node involvement
- C. Stage II is micrometastatic disease to axillary lymph nodes
- D. Stage IV is locally advanced disease

34. Which of the following is correct about tamoxifen therapy for breast cancer?

- A. Its daily dose should be fixed at 30 mg to maintain therapeutic benefit
- B. It has angiogenic effect
- C. Its maximal beneficial effect is observed 2 weeks after initiation of therapy
- D. It results in hot flashes and joint pain

35. Which of the following is correct about Megesterol?

- A. It is LHRH agonist
- B. It inhibits aromatase enzyme
- C. It has anti-androgenic effect and can be used also for prostate cancer
- D. Weight gain is the less common side effect

36. Which of the following is correct about aminoglutethimide?

- A. Hydrocortisone supplement is necessary when aminoglutethimide is on route
- B. CNS toxicity is less common as compared to letrozole
- C. It is considered as a second line hormonal therapy for breast cancer
- D. It is not valid to be used against prostate cancer

37. Which of the following is correct about trastuzumab targeted therapy?

- A. It is a monoclonal antibody targeting HER₂ protein and can be administered orally
- B. It is contraindicated in patients with history of cardiovascular diseases
- C. Hand-foot syndrome is common adverse effect for trastuzumab
- D. It can be safely used by pregnant women

38. Which of the following is correct about Prostate cancer?

- A. Age, occupational factor and BPH are risk factors for prostate cancer
- B. Prostate cancer is characterised by high growth rate
- C. Prostate cancer is characterised by metastasis commonly to lung and brain
- D. Prostate cancer is common in young adult as well as elderly

39. Which of the following is the most sensitive indicator for prostate biopsy?

- A. Abnormal DR
- B. Elevated PSA
- C. Elevated acid phosphatase
- D. Clinical presentation

40. Palpable mass (< 1.5 cm) confined to one prostate and lobe is:

- A. Stage A₂
- B. Stage B₂
- C. Stage C₁
- D. Stage B₁

41. Radiation plus hormonal plus chemotherapy therapies is used for:

- A. Stage A prostate cancer
- B. Stage B prostate cancer
- C. Stage C prostate cancer
- D. Stage D prostate cancer

42. Gleason score of 3+2 means:

- A. Few darker glands and still formed glands with more spaces between themselves
- B. Uniform glands like normal ones & formed glands with more space between them
- C. Few darker glands and irregular masses with few gland
- D. Well formed gland that have more space between cells and many sheets of cells

43. Conjugated estrogen is used as prostate cancer hormonal therapy since

- A. Increase steroid binding globulin level
- B. It inhibits 5- α -Reductase enzyme
- C. It inhibits aromatase enzyme
- D. It hinders DHT-Receptor complex formation

44. Select the true answer about LHRH agonists

- A. High dose regular LHRH agonists intake causes sustained release of LH & FSH
- B. Ideal use of LHRH agonists decrease circulating level of androgen
- C. LHRH agonists have no value against breast cancer
- D. Goserlin acetate is more preferred than Leuprolide depot

45. Which of the following inhibit DHT- receptor complex formation?

- A. Ketokenazole
- B. Tamsolusin
- C. Finasteride
- D. Cypreterone

46. Select the true answer about prostate cancer

- A. Cryo-therapy is used for advanced prostate cancer
- B. Prostate cancer vaccine is used for prevention of prostate cancer
- C. Adernalectomy is the best way for hormonal ablation in early stage prostate cancer
- D. Mortality in early stage prostate cancer is not linked to prostate cancer itself

47. Which of the following is correct about characters of hodgkin lymphom?

- A. Very low growth rate with better response to treatment
- B. Absence of RSCs up-on biopsy
- C. Strong corelation with mononucleosis provoked by Epstein Bar Virus (EBV)
- D. Unimodal age distribution

48. Which of the following is correct about Hodgkin's lymphoma?

- A. It is characterized by lymph generalized adenopathy mainly
- B. It is a solid tumor
- C. It is characterized by B-Symptoms in 25 % of cases
- D. It is characterized by Richeter syndrome

49. Presence of (1) above and (2) lymph nodes below diaphragm is considered:

- A. Stage I₃ hodgkin lymphoma
- B. Stage II₃ hodgkin lymphoma
- C. Stage III₃ hodgkin lymphoma
- D. Stage IV₃ hodgkin lymphoma

50. Radio-therapy is effective for what stage of Hodgkin's lymphoma

- A. Stage IIIB hodgkin lymphoma
- B. Stage III A hodgkin lymphoma
- C. Stage IV A hodgkin lymphoma
- D. Stage IV B hodgkin lymphoma

51. ChVPP is an attractive alternative to MOPP for since:

- A. It is more active to MOPP
- B. It causes less myelosupressin
- C. It causes less nausea and vomiting
- D. It causes less extravasation

52. Select the true answer about non- hodgkin lymphoma

- A. Trastuzumab is a therapeutic option for non- hodgkin lymphoma
- B. Non- Hodgkin`s lymphoma is mainly a cancer of T- lymphocytes
- C. Recurrent infection is less common with Non- hodgkin lymphoma
- D. Biologic response modifiers has neglected role for non- hodgkin lymphoma

53. Radio-therapy is valid for.....

- A. Stages I & II A and B intermediate grade non- hodgkin lymphoma
- B. Stages III & IV A and B intermediate grade non- hodgkin lymphoma
- C. Stages I & II A and B low grade non- hodgkin lymphoma
- D. Stages III & IV A and B low grade non- hodgkin lymphoma

54. Select the true statement about autolog bone marrow transplantation

- A. It is valid for early stages cancer patients
- B. It can not counteract the dose limiting myelosupression
- C. It requires implication of immunosupressant
- D. It allows the use of high doses chemotherapeutics

55. Select the correct about bone marrow transplantation (BMT)?

- A. BMT is common before Hybrdized chemotherapy for lymphoma patients
- B. Removal of cancerous cells is required allogenic BMT
- C. During engraftment, patient is at need to antibiotic, platelets and blood transfusion
- D. BMT is valid for all patients regardless their health condition

56. Finasteride clinical application is dose dependent. When it is used for prostate cancer its dose should be fixed at 5 mg daily and when used to manage androgenic alopecia its dose should be fixed at 1 mg daily

- A. True
- B. False

Match the following to its corresponding MOA

- | | | |
|-----------------|--------------------------|-----------------|
| 57. Hydroxyurea | 58. Interferon- α | 59. Mitomycin-C |
| 60. VP-16 | 61. Docetaxel | |

- A. Alkylating agent
- B. Inhibits ribonucleotide reductase
- C. Inhibits Topoisomerase II
- D. Inhibits ornithine decarboxylase
- E. Inhibits formation of mitotic spindle apparatus

Match the following to its corresponding clinical application

- | | | |
|-----------------|------------------------|-------------------|
| 62. 6- TG | 63. L-Asparaginase | 64. Interleukin-2 |
| 65. Vinblastine | 66. Megasterol acetate | |

- A. Metastatic renal cancer
- B. Lymphoma
- C. ANLL
- D. ALL
- E. Breast cancer

Case analysis questions

**A 59 years-old patient who was diagnosed with cancer of myeloid blood cells line characterized by rapid growth of abnormal white blood cells with excess lymphoblast. The patient past medical history revealed angle closure glaucoma

67. What is the exact diagnosis of the patient disease?

- A. Acute lymphoblastic leukemia (ALL)
- B. Acute non lymphoblastic leukemia (ANLL)
- C. Hairy Cell Leukemia (HCL)
- D. Chronic lymphocytic leukemia

68. Select the best treatment option (s) for the patient condition?

- A. Cytarabine
- B. 6-MP+ Methotroxate
- C. 6-TG
- D. Melphalan

**A 55 years-old patient who was diagnosed with meningioma for which the patients took a decision to start radiation therapy

69. What type of radiation therapy the patient will be exposed to?

- A. External beam radiation
- B. Systemic radiation therapy with P³²
- C. Yttrium⁹⁰ PRRT
- D. Systemic radiation therapy with I¹³¹

70. The type of radiation you select above has:

- A. Activation of P53 gene
- B. Indirect inhibition of RNA synthesis through free radical release
- C. Direct inhibition of RNA synthesis
- D. Direct inhibition of DNA synthesis

Dr. Gamal El-Azab (Q#71-100)

71. The most cancer death rate among cancer types, (the following are right except one)

- a) Small cell lung cancer (SCLC)
- b) Large cell lung carcinoma (LCLC)
- c) Lung cancer with metastasis
- d) Ovarian cancer.

72. The meaning, cured from lung cancer is one of the following:

- a) No signs of cancer 3 years following treatment.
- b) No signs of cancer 7 years following treatment.
- c) No signs of cancer 1 year following treatment
- d) No signs of cancer 10 years following treatment

73. Nagging cough and hoarseness indicate one of the following:

- a) Neck cancer
- b) Lymphoma
- c) Lung cancer
- d) None of the above

74. The right lung contains 3 lobes while the left one contains 2lobes.

- A. Agree
- B. Disagree

75. Lung cancer (90----95%) can arise from cells, and the cells lining the larger and smaller airways.

- A. Agree
- B. Disagree

76. Small cell lung cancer acts as 80% of lung cancer.

- A. Agree
- B. Disagree

77. Non-small cell lung carcinoma can be divided into (the following right except one):

- a) Adenocarcinoma.
- b) Small cell lung carcinoma.
- c) Squamous cell carcinoma
- d) Large cell carcinoma.

- 78. Surgery is contraindicated as a model of therapy for NSCLC with stage one a/b.**
A. Agree
B. Disagree
- 79. Combination of chemotherapy and radiotherapy may be treatment option for stage 3/b of NSCLC**
A. Agree
B. Disagree
- 80. Extensive stage of small cell lung cancer can be treated with one of the following modality:**
a) Palliative chemotherapy
b) Surgery
c) Surgery followed by chemotherapy
d) Cisplatin & etoposide
e) A & D.
- 81. Changing in bowel habits in adult indicate one of the following:**
a) Breast cancer
b) Lung cancer
c) Ovarian cancer
d) Prostatic cancer
- 82. Nagging cough or hoarseness indicate one of the following:**
a) Neck cancer
b) Lymphoma
c) SCLC
d) Colorectal cancer
- 83. Pain and loss of appetite indicated one of the following:**
a) Rectal cancer
b) Lymphoma
c) Breast cancer
d) All of the above
- 84. Regular Plantar reflex test should be performed for patients on carboplatin**
A. Agree
B. Disagree
- 85. Lung cancer can arise in any part of the lung but 90---95 % arise from one of the following:**
a) Tracheal tissues
b) Epithelial cells
c) The cell lining the larger and smaller air ways
d) All of the above
e) b & c
- 86. SCLC is characterized by:**
a) Most aggressive
b) Rapidly growing
c) Strongly related to smoking
d) All of the above
- 87. NSCLC is characterized by one of the following:**
a) More aggressive
b) About 80% lung cancer
c) Chemotherapy in contraindicated
d) None of the above
- 88. The treatment options for NSCLC stage 1 a/b is one of the following:**
a) Chemotherapy followed by surgery
b) Chemotherapy by radiotherapy
c) Chemotherapy only
d) Surgery only
- 89. SCLC can be treated by one of the following**
a) Surgery followed by chemotherapy
b) Chemotherapy followed by surgery
c) Radiotherapy followed by surgery
d) Chemo concurrently with radiotherapy.

- 90. NSCLC stage4 for treatment option are one of the following:**
a) Surgery only
b) Chemotherapy followed by radiation or surgery
c) Chemotherapy or palliative maintenance care
d) All of the above
- 91. Management of small cell lung cancer (limited stage) by one of the following:**
a) Concurrent chemotherapy with radiotherapy
b) Chemotherapy followed by radiotherapy
c) Surgery followed by chemotherapy
d) Nothing to do
- 92. The right specific chemotherapy used for SCLC (limited stage) is one of the following:**
a) Methotraxate with cyclophosphamide
b) Cisplatin with etoposide
c) Hormonal therapy with chemotherapy.
d) None of the above.
- 93. Immunotherapy provides another means to deliver systemic anticancer therapy by one of the following:**
a) Stimulate antigen to fight against cancer.
b) Stimulate the host immune system to fight against cancer.
c) Reported good news for lung cancer.
d) B&C.
- 94. Larger tumor has a high responsiveness toward chemo therapy**
a) True
b) False
- 95. Attenuation of the dose of chemo therapy has no effect on the killing rate of cancer cells.**
a) True
b) False
- 96. Combined chemo therapy protocol depends on one of the following:**
a) Select agent that is active against specific tumor.
b) Select agents with different mechanisms of action.
c) Select agents with non-overlapping toxicity, when possible.
d) All of the above.
- 97. Lung cancer is the second leading cause of death among patients all over the world.**
a) True
b) False
- 98. In Egypt, breast cancer is the first type of cancer among women.**
a) True
b) False
- 99. Hormonal therapy can be used alone in treatment of colorectal cancer**
a) True
b) False
- 100. Cis-platin dose should be calculated on the basis of Cr.CL not on BSA**
a) True
b) False

ALL THE BEST