

DM Medical Oncology-Final key

- 1 In which clinical subtype of adult T cell Leukemia/Lymphoma are Flower cells absent in the peripheral blood
- A) Acute
B) Chronic
C) Smouldering
D) Lymphoma
- 2 Which of the following is not an example of a cutaneous T cell Lymphoma
- A) Pagetoid reticulosis
B) Follicular Mycosis Fungoides
C) Cutaneous follicular centre cell lymphoma
D) Granulomatous slack skin
- 3 CD 5 is absent in all the subtypes of B cell NHL **except**
- A) MALT lymphoma
B) Marginal zone lymphoma
C) Mantle cell lymphoma
D) Burkitt's lymphoma
- 4 Which cytogenetic abnormality is characteristic of mantle cell lymphoma
- A) t(14;18)(q32;q21)
B) t(11;14)(q13;q32)
C) t(11;18)(q21;q21)
D) t(8;14)(q24;q32)
- 5 The international prognostic score for aggressive lymphoma in the high intermediate risk group would be
- A) 4
B) 3
C) 1
D) 2
- 6 Lymphomas associated with HIV include all the following **except**
- A) Diffuse large B cell lymphoma
B) Burkitt's lymphoma
C) Primary effusion lymphoma
D) Lymphoblastic lymphoma
- 7 The following statements about Brentuximab vedotin are true **except**
- A) It is an Antibody – drug conjugate
B) Used in refractory Hodgkin's disease
C) It is a Bi alkylating agent
D) Peripheral neuropathy is an important toxicity

- 8 A patient with pulmonary fibrosis, seen as a late effect of chemotherapy received as a child would most likely have received which of the following chemotherapeutic agents?
- A) Carmustine**
 B) Doxorubicin
 C) Etoposide
 D) Gemcitabine
- 9 Which of the following is a high risk cytogenetic abnormality as per the Mayo Clinic risk – stratification of myeloma
- A) t(11;14)
 B) t(6;14)
C) t(14;16)
 D) t(4;14)
- 10 On flow cytometry, plasma cells in multiple myeloma typically stain positive for all the following **except**
- A) CD38
B) CD19
 C) CD56
 D) CD138
- 11 The putative primary teratogenic target of thalidomide is
- A) NK –cell
 B) Proteasome
C) Cereblon
 D) Histone
- 12 Which of the following is an example of histone deacetylase inhibitor
- A) Carfilizomib
 B) Alemtuzumab
C) Panobinostat
 D) Bendamustine
- 13 The following statement are true of cladribine (2-chlorodeoxyadenosine) **except**
- A) It is resistant to adenosine deaminase
 B) It accumulates in lymphoid cells
 C) DNA synthesis is impaired by it
D) It is a pyrimidine analogue
- 14 Hairy cell strongly express all of the following pan – B-cell antigens **except**
- A) CD19
 B) CD20
 C) CD22
D) CD23
- 15 A young male with chronic lymphatic leukemia has no lymphadenopathy, no palpable hepatosplenomegaly, no lymphocytosis, Hb 8gm/dl and platelet count of 2.5 lakhs. The stage as per the Rai staging would be
- A) 1
 B) 2
C) 3
 D) 4

- 16 The most common organism causing infectious complications in chronic lymphatic leukemia is
- A) Pneumocystis carinii
 - B) Escherichia coli
 - C) Staphylococcus aureus
 - D) Streptococcus pneumonia**
- 17 Most common secondary malignancy in subjects with chronic lymphatic leukemia is
- A) Lung cancer
 - B) Leukemia
 - C) Renal cancers
 - D) Skin cancer**
- 18 Poor prognostic factors for Chronic Lymphocytic Leukemia include all of the following **except**
- A) del(17p13.1)
 - B) del(11q22.3)
 - C) Mutated IGHV1**
 - D) High LDH
- 19 The Philadelphia chromosome abnormality is present in all the following cells of the marrow **except**
- A) Monocytes
 - B) B lymphocytes
 - C) Fibroblasts**
 - D) Megakaryocytes
- 20 All the following are adverse prognostic factors in subjects with chronic myeloid leukemia on treatment with tyrosine kinase inhibitors **except**
- A) Severe basophilia
 - B) High peripheral blast percent
 - C) Thrombocytosis**
 - D) Massive splenomegaly
- 21 Genital Warts is associated with which subtype of human papilloma virus
- A) 5
 - B) 6**
 - C) 8
 - D) 16
- 22 Busulfan is an example of
- A) Nitrosoureas
 - B) Epoxides
 - C) Alkyl sulfonates**
 - D) Nitrogen mustards
- 23 cis-diamminecyclobutanedicarboxylate platinum is the chemical name of which of the following
- A) Cisplatin
 - B) Carboplatin**
 - C) Oxaliplatin
 - D) Lobaplatin

- 24 Which of the following agents is used for the management of refractory pediatric Acute Lymphoblastic Leukemia
- A) Cladribine
 - B) Fludarabine
 - C) Methotrexate
 - D) Clofarabine**
- 25 Capecitabine and its metabolites are primarily excreted by the
- A) Liver
 - B) Gut
 - C) Skin
 - D) Kidney**
- 26 Methotrexate accumulation in tumor cells is enhanced in vitro by which one of the following drugs
- A) Bleomycin
 - B) Doxorubicin
 - C) Vincristine**
 - D) Mitomycin
- 27 The target of vemurafenib is
- A) BTK
 - B) MEK
 - C) BRAF**
 - D) P13K delta
- 28 Single strand DNA breaks following treatment are repaired by the following methods **except**
- A) Base – excision repair
 - B) Homologous recombination**
 - C) Nucleotide – excision repair
 - D) Mismatch repair
- 29 L-asparaginase can antagonize the antineoplastic effects of which of the following drug if given concurrently
- A) Cyclophosphamide
 - B) Methotrexate**
 - C) Doxorubicin
 - D) 6-mercaptopurine
- 30 Bleomycin related toxicity can be aggravated by all of the following **except**
- A) Brentuximab Vedotin
 - B) High concentration of oxygen
 - C) Granulocyte colony –stimulating factor
 - D) Etoposide**
- 31 Which of the following statements about Vismodigeb is true **except**
- A) Used in metastatic basal cell carcinoma
 - B) inhibits Hedgehog pathway
 - C) It is a small molecule inhibitor
 - D) Has antiangiogenesis activity**

- 32 The most common toxicity of Tamoxifen is
- A) Depression
 - B) Hot flashes**
 - C) Hypertension
 - D) Cataract
- 33 Estrogen receptor antagonist with no known agonist activity
- A) Tamoxifen
 - B) Toremifene
 - C) Fluvestrant**
 - D) Raloxifene
- 34 Which of the following agents is an aromatase inactivator
- A) Anastrozole
 - B) Letrozole
 - C) Exemestane**
 - D) Fadrozole
- 35 All of the following possess anti VEGF activity **except**
- A) Sorafenib
 - B) Axitinib
 - C) Regorafenib
 - D) Homoharringtonine**
- 36 Which of the following is an example of a chimeric monoclonal antibody
- A) Rituximab**
 - B) Alemtuzumab
 - C) Trastuzumab
 - D) Bevacizumab
- 37 Which of the following is a fully human IgG2 RANK ligand neutralizing antibody?
- A) Panitumab
 - B) Bretuximab Vedotin
 - C) Denosumab**
 - D) Trastuzumab
- 38 Former smoking is typically defined as no current cigarette use, within the past
- A) 1 week
 - B) 6 months
 - C) 1 year**
 - D) 8 months

- 39 The genetic abnormality associated with more than 90% of patients diagnosed with polycythemia vera
- A) BCR ABL mutation
 - B) JAK2 mutation**
 - C) EGFR mutation
 - D) NFκB mutation
- 40 Which of the following subtype is an example of high risk human papilloma virus
- A) 6
 - B) 7
 - C) 11
 - D) 16**
- 41 Patients with high – risk human papilloma virus positive head and neck cancers tend to have all of the follow
- A) Are young
 - B) Strong history of tobacco use**
 - C) Less likely to have ethanol use
 - D) Low rate of second primary tumors
- 42 All of the following sites in the head and neck have sparse lymphatics **except**
- A) Paranasal sinuses
 - B) Middle ear
 - C) Vocal chords
 - D) Hard palate**
- 43 Verrucous carcinoma is most seen in the
- A) Floor of the mouth
 - B) Hard palate
 - C) Gingiva**
 - D) Tongue
- 44 In head and neck cancer, metastasis in multiple ipsilateral lymph nodes, none more than 6 cm in greatest dimension, would be classified as per 2010 American Joint Committee on Cancer Stages of Regional Lymph Node Involvement as
- A) N2a
 - B) N2b**
 - C) N2c
 - D) N3
- 45 Which of the following biochemical imbalances is not included in defining tumor lysis syndrome
- A) Hypocalcemia
 - B) Hypernatremia**
 - C) Hyperkalemia
 - D) Hyperuricemia
- 46 The most common histological subtype of lung cancer is
- A) Squamous cell Ca
 - B) Adenocarcinoma**
 - C) Adeno-squamous Ca
 - D) Small cell carcinoma

- 47 Necitumumab is used in the management of which subtype of lung cancer
- A) Adenocarcinoma
 - B) Squamous cell Carcinoma**
 - C) Small cell carcinoma
 - D) Neuroendocrine carcinoma
- 48 The following drugs are used in EGFR mutation bearing lung cancers **except**
- A) Gefitinib
 - B) Ceritinib**
 - C) Erlotinib
 - D) Afatinib
- 49 The most common histological type of carcinoma of the esophagus is
- A) Adenocarcinoma
 - B) Squamous cell Carcinoma**
 - C) Small cell carcinoma
 - D) Adeno squamous Carcinoma
- 50 Metronomic chemotherapy is hypothesized to act by
- A) Stem cell destruction
 - B) Anti-angiogenic effect**
 - C) Immunological effect
 - D) Radiation sensitizer
- 51 Which is the most common mesenchymal tumor that affects the esophagus
- A) Leiomyosarcoma**
 - B) Fibrosarcoma
 - C) Synovial sarcoma
 - D) Clear cell sarcoma
- 52 The greatest risk factor for pancreatic cancer is
- A) Pancreatitis
 - B) Diabetes
 - C) Strong family history**
 - D) Alcohol consumption
- 53 The following chemotherapeutic agents are used in the treatment of gastrointestinal stromal tumors **except**
- A) Imatinib
 - B) Sunitinib
 - C) Regorafenib
 - D) Sorafenib**
- 54 Which one of the following mutations in exon 18 in gastrointestinal stromal tumors is resistant to imatinib
- A) D842V**
 - B) D846Y
 - C) N848K
 - D) Y849K

- 55 Which of these brain tumors are associated with familial Adenomatous Polyposis Coli
- A) Meningioma
 - B) Glioma
 - C) Medulloblastoma**
 - D) Pinealocytoma
- 56 Which of the following is the commonest cancer arising in the small intestine
- A) Adenocarcinoma
 - B) Lymphoma
 - C) Carcinoid tumor**
 - D) Gastrointestinal stromal tumor
- 57 Most common site of gastrointestinal lymphoma is
- A) Colon
 - B) Rectum
 - C) Stomach**
 - D) Duodenum
- 58 The commonest subtype of lymphoma affecting the small bowel is
- A) Diffuse large B cell
 - B) Marginal zone lymphoma**
 - C) Burkitt's lymphoma
 - D) Mantle Cell Lymphoma
- 59 The most common mesenchymal tumor of the small bowel
- A) Leiomyoma
 - B) Leiomyosarcoma
 - C) Gastro intestinal stromal tumor**
 - D) Schwannoma
- 60 The most common tumor to metastasize to the small bowel is
- A) Ca lung
 - B) Ca ovary
 - C) Melanoma**
 - D) Ovary
- 61 Which of the following is not a VEGF receptor inhibitor used in metastatic renal cell cancer
- A) Sunitinib
 - B) Sorafenib
 - C) Bevacizumab**
 - D) Pazopanib
- 62 The most undifferentiated type of testicular germ cell tumor
- A) Seminoma
 - B) Teratoma
 - C) Embryonal carcinoma**
 - D) Yolk Sac tumor

- 63 The half – life of AFP(Alpha Feto Protein) is
- A) 1-2 days
 - B) 3-4 days
 - C) 5-7 days**
 - D) 8-9 days
- 64 Psammoma bodies are encountered in which of the following subtypes of ovarian tumors
- A) Mucinous tumors
 - B) Papillary serous cystadenocarcinoma**
 - C) Endometroid tumors
 - D) Clear cell tumors
- 65 Galactomannan assay is used for diagnosis of
- A) Aspergillosis**
 - B) Mucormycosis
 - C) Pneumocystis jirovecii
 - D) Gram negative bacterial infection
- 66 Which of the following drugs is used in management of hypercalcemia due to malignancy
- A) Rituximab
 - B) Zoledronate**
 - C) Tamoxifen
 - D) Anastrozole
- 67 On histopathology examination of the uterus of a postmenopausal lady who underwent total hysterectomy and bilateral salpingo oophorectomy for cancer endometrium, the tumor was found to involve the pelvic nodes. The FIGO stage would be
- A) III A
 - B) III B
 - C) III C1**
 - D) III C2
- 68 Which of the following multiple endocrine neoplasia syndromes is associated with mutations of the menin gene
- A) MEN1**
 - B) MEN2
 - C) MEN3
 - D) FMTC (Familial Medullary Thyroid Cancer)
- 69 A patient with IgG Myeloma with serum β_2 microglobulin 4.5mg/L and serum albumin of 5g/dL would be staged as per international staging system as
- A) I
 - B) II**
 - C) III
 - D) Unclassifiable

- 70 All of the following multiple endocrine neoplastic syndromes are caused by mutations in the RET proto-oncogenes **except**
- A) MEN1**
B) MEN2
C) MEN3
D) Familial medullary thyroid cancer
- 71 The typical Karyotype of a partial Hydatidiform mole is
- A) 46XX
B) 46XO
C) 46XY
D) 69XXY
- 72 The following statements regarding placental site trophoblastic tumors are true **except**
- A) Slow growing
B) High free beta HCG
C) Low beta HCG
D) Commonly occurs after molar pregnancy
- 73 The characteristic cytogenetic abnormality seen in synovial sarcoma is
- A) t(12;16)(q13;q11)
B) t(2;13)(q35;q14)
C) t(X;18)(p11;q11)
D) t(11;12)(p13;q12)
- 74 The characteristic cytogenetic abnormality seen in alveolar rhabdomyosarcoma is
- A) t(2;13)(q35;q14)**
B) t(9;22)(q22;q12)
C) t(1;2)(q25;p23)
D) t(12;15)(p13;q25)
- 75 Kaplan Meier plots are statistical methods used for
- A) Descriptive statistics
B) Regression analysis
C) Survival analysis
D) Comparing means
- 76 The drug Rasburicase used for treating tumor lysis syndrome is
- A) Recombinant urate Oxidase**
B) Recombinant Xanthine Oxidase
C) Recombinant Ribonucleotide Reductase
D) Recombinant Thymidine synthetase
- 77 The most common pediatric cancer is
- A) Leukemia**
B) Brain tumor
C) Nephroblastoma
D) Neuroblastoma

- 78 CA 19-9 is widely used as serum marker in
- A) Breast cancer
 - B) Ovarian cancer
 - C) Pancreatic cancer**
 - D) hepatocellular carcinoma
- 79 All of the following conditions are associated with the development of Wilms tumor **except**
- A) Simpson – Golabi-Behmel syndrome
 - B) Sotos syndrome
 - C) Perlman syndrome
 - D) Bloom syndrome**
- 80 A young child with a solitary retinoblastoma and the tumor is 8 disc diameters in size and anterior to the equator; it would then be staged as per Rees Ellsworth classification as
- A) IIA
 - B) IIB
 - C) IIIA**
 - D) IIIB
- 81 Small-cell osteosarcoma can be histologically commonly confused with which round cell tumor
- A) Non-Hodgkin's lymphoma
 - B) Neuroblastoma
 - C) Ewing's sarcoma**
 - D) Rhabdomyosarcoma
- 82 Which of the following subtypes of osteosarcoma tends to occur in older patients, has an indolent course, and is more often associated with local recurrences than with distant metastases
- A) Extra osseous osteosarcoma
 - B) Small cell osteosarcoma
 - C) Osteosarcoma of the jaw**
 - D) Periosteal osteosarcoma
- 83 Which of these cancers has not been conclusively associated with tobacco exposure?
- A) Lung
 - B) Bladder
 - C) Oesophagus
 - D) Breast**
- 84 All the following are risk factors for the development of hepatoblastoma **except**
- A) Low birth weight
 - B) Familial adenomatous polyposis coli
 - C) Trisomy 21**
 - D) Beckwith Wiedemann syndrome
- 85 The most common Germ Cell tumors in the pediatric population is
- A) Seminoma
 - B) Teratoma**
 - C) Embryonal carcinoma
 - D) Choriocarcinoma

- 86 All the following are considered favorable parameters in pediatric ALL (Acute lymphoblastic leukemia) **except**
- A) Age: 1-9 years
 - B) White blood cell count <50,000/cumm
 - C) ETV6-RUNX1- positivity
 - D) MLL gene rearrangement**
- 87 All of the following are unfavorable factors in pediatric AML (Acute myelogenous leukemia) **except**
- A) Monosomy 5
 - B) Monosomy 7
 - C) Inv(16)**
 - D) FLT3 internal tandem duplication
- 88 Which of the following is not an acceptable agent for pleurodesis in a patient with malignant pleural effusion
- A) Talc
 - B) Bleomycin
 - C) Vincristine**
 - D) Doxycycline
- 89 All the following syndromes are associated with thymoma **except**
- A) Addison's disease
 - B) Pure red cell aplasia
 - C) Limbic encephalopathy
 - D) Opsoclonus myoclonus syndrome**
- 90 Which of the following is not a known risk factor for the development of melanomas?
- A) White race
 - B) Ultraviolet –B exposure
 - C) Use of hair dyes**
 - D) Heritable predisposition
- 91 Cofactors for cardiotoxicity of anthracyclines include all of the following **except**
- A) Known coronary artery disease
 - B) Antecedent Valvular heart disease
 - C) Hypertension
 - D) Bronchial asthma**
- 92 Which of the following is not a feature of the international prognostic index for Hodgkin's lymphoma also known as the Hasenclever index?
- A) Serum albumin
 - B) Lactate dehydrogenase**
 - C) Lymphocyte count
 - D) Leukocyte count
- 93 The most common histopathological type of primary CNS lymphoma is
- A) Burkitt's lymphoma
 - B) Plasmablastic lymphoma
 - C) Diffuse large B cell lymphoma**
 - D) T Cell lymphoma

- 94 Risk factors for skin cancer following allogeneic bone marrow transplantation include all of the following **except**
- A) Total body irradiation
 - B) GVHD (Graft Versus Host Disease)
 - C) Females**
 - D) Allo-transplant at an early age
- 95 Modified Chang system of tumor staging is used in
- A) Wilms tumor
 - B) Neuroblastoma
 - C) Hepatoblastoma
 - D) Medulloblastoma**
- 96 Plerixafor
- A) Is an anti-emetic
 - B) Is an antibiotic
 - C) Is a stem cell mobilizing agent**
 - D) Is a tyrosine kinase inhibitor
- 97 Which is the most common histological type of Hodgkin's lymphoma seen following allogeneic transplant
- A) Lymphocyte predominant
 - B) Mixed cellularity**
 - C) Lymphocyte depleted
 - D) Nodular sclerosis
- 98 Hemolytic uremic syndrome is commonly associated with
- A) Mitoxantrone
 - B) Dacarbazine
 - C) Mustine hydrochloride
 - D) Mitomycin C**
- 99 Functional or surgical splenectomy is associated with risk of sepsis with the following organisms **except**
- A) Streptococcus pneumoniae
 - B) Hemophilus influenza
 - C) Nisseria meningitidis
 - D) Escherichia coli**
- 100 Which organism is associated with the pathogenesis of post –transplant lymphoproliferative disease
- A) Cytomegalovirus
 - B) Ebstein Barr virus**
 - C) Human T lymphoma virus
 - D) Varicella Zoster virus

Note: This is the final key. No further queries or objections from the candidates will be entertained under any circumstances.