

पुस्तिका में पृष्ठों की संख्या : 32  
Number of Pages in Booklet : 32

प्रश्न-पत्र पुस्तिका संख्या /

Question Paper Booklet No.

5203461

पुस्तिका में प्रश्नों की संख्या : 180  
No. of Questions in Booklet : 180

**SSAPSo-02**

Paper Code : 31

SUBJECT : Surgical Oncology

परीक्षा दिनांक :- 14/08/2020

समय : 3.00 घण्टे

Time : 3.00 Hours

परीक्षा समय :- 9:00 To 12:00

अधिकतम अंक : 180

Maximum Marks : 180

प्रश्न-पत्र पुस्तिका एवं उत्तर पत्रक के पेपर सील/पोलिथीन बैग को खोलने के बाद परीक्षार्थी प्रश्न-पत्र पुस्तिका संख्या को उत्तर पत्रक पर सावधानीपूर्वक अंकित करें। इसमें किसी भी प्रकार की त्रुटि होने पर जिम्मेदारी अभ्यर्थी की होगी।

The candidate fill the Question Paper Booklet No. on Answer Sheet carefully after opening the Paper Seal / Polythene bag. Candidate himself shall be responsible for any error.

**परीक्षार्थियों के लिए निर्देश**

1. सभी प्रश्नों के उत्तर दीजिए।
2. सभी प्रश्नों के अंक समान हैं।
3. प्रत्येक प्रश्न का केवल एक ही उत्तर दीजिए।
4. एक से अधिक उत्तर देने की दशा में प्रश्न के उत्तर को गलत माना जाएगा।
5. प्रत्येक प्रश्न के चार वैकल्पिक उत्तर दिये गये हैं, जिन्हें क्रमशः 1, 2, 3, 4 अंकित किया गया है। अभ्यर्थी को सही उत्तर निर्दिष्ट करते हुए उनमें से केवल एक गोले अथवा बबल को उत्तर पत्रक पर नीले बॉल प्वाइंट पेन से गहरा करना है।
6. OMR उत्तर पत्रक इस परीक्षा पुस्तिका के अन्दर रखा है। जब आपको परीक्षा पुस्तिका खोलने को कहा जाए, तो उत्तर-पत्र निकाल कर ध्यान से केवल नीले बॉल प्वाइंट पेन से विवरण भरें।
7. प्रत्येक गलत उत्तर के लिए प्रश्न अंक का 1/3 भाग काटा जायेगा। गलत उत्तर से तात्पर्य अशुद्ध उत्तर अथवा किसी भी प्रश्न के एक से अधिक उत्तर से है। किसी भी प्रश्न से संबंधित गोले या बबल को खाली छोड़ना गलत उत्तर नहीं माना जायेगा।
8. मोबाइल फोन अथवा इलेक्ट्रॉनिक यंत्र का परीक्षा हॉल में प्रयोग पूर्णतया वर्जित है। यदि किसी अभ्यर्थी के पास ऐसी कोई वर्जित सामग्री मिलती है तो उसके विरुद्ध आयोग द्वारा नियमानुसार कार्यवाही की जायेगी।
9. कृपया अपना रोल नम्बर ओ.एम.आर. पत्रक पर सावधानीपूर्वक सही भरें। गलत अथवा अपूर्ण रोल नम्बर भरने पर 5 अंक कुल प्राप्तांकों में से काटे जा सकते हैं।

**चेतावनी :** अगर कोई अभ्यर्थी नकल करते पकड़ा जाता है या उसके पास से कोई अनधिकृत सामग्री पाई जाती है, तो उस अभ्यर्थी के विरुद्ध पुलिस में प्राथमिकी दर्ज कराते हुए विविध नियमों-प्रावधानों के तहत कार्यवाही की जाएगी। साथ ही विभाग ऐसे अभ्यर्थी को भविष्य में होने वाली विभाग की समस्त परीक्षाओं से विवर्जित कर सकता है।

**INSTRUCTIONS FOR CANDIDATES**

1. Answer all questions.
2. All questions carry equal marks.
3. Only one answer is to be given for each question.
4. If more than one answers are marked, it would be treated as wrong answer.
5. Each question has four alternative responses marked serially as 1, 2, 3, 4. You have to darken only one circle or bubble indicating the correct answer on the Answer Sheet using BLUE BALL POINT PEN.
6. The OMR Answer Sheet is inside this Test Booklet. When you are directed to open the Test Booklet, take out the Answer Sheet and fill in the particulars carefully with blue ball point pen only.
7. 1/3 part of the mark(s) of each question will be deducted for each wrong answer. A wrong answer means an incorrect answer or more than one answers for any question. Leaving all the relevant circles or bubbles of any question blank will not be considered as wrong answer.
8. Mobile Phone or any other electronic gadget in the examination hall is strictly prohibited. A candidate found with any of such objectionable material with him/her will be strictly dealt as per rules.
9. Please correctly fill your Roll Number in O.M.R. Sheet. 5 Marks can be deducted for filling wrong or incomplete Roll Number.

**Warning :** If a candidate is found copying or if any unauthorized material is found in his/her possession, F.I.R. would be lodged against him/her in the Police Station and he/she would liable to be prosecuted. Department may also debar him/her permanently from all future examinations.

इस परीक्षा पुस्तिका को तब तक न खोलें जब तक कहा न जाए।

Do not open this Test Booklet until you are asked to do so.

31 - □



1. The following neoplasias are an intraepithelial marker for invasive cancers except :
  - (1) Leukoplakia
  - (2) colorectal adenoma
  - (3) cervical ectropion
  - (4) actinic keratosis
  
2. True statement regarding tamoxifen and raloxifene is :
  - (1) raloxifene reduces breast cancer specific mortality rate
  - (2) tamoxifen reduces the risk of ER negative breast cancer
  - (3) tamoxifen is more effective than raloxifene in reducing breast cancer incidence
  - (4) both decrease the risk of in situ breast neoplasms
  
3. Raloxifene toxicity increases the chances of :
  - (1) Vertebral fracture
  - (2) stroke
  - (3) coronary artery disease
  - (4) endometrial cancer
  
4. Side effects of varenicline (Chantix) :
  - (1) Anorexia
  - (2) hypertension
  - (3) elevated liver enzymes
  - (4) suicidal ideation
  
5. Selenium supplementation in randomized clinical trials was associated with :
  - (1) reduced incidence of prostate cancer
  - (2) decreased risk of squamous cell carcinoma
  - (3) increased incidence of non melanoma skin cancer
  - (4) increased risk of prostate cancer
  
6. In Medullary thyroid carcinoma (MTC) which of the following preoperative basal calcitonin levels is an indication for ipsilateral and lateral neck dissection :
  - (1) 50 to 200 pg/ml
  - (2) 15 to 200 pg/ml
  - (3) 20 to 50 pg/ml
  - (4) 200 to 500 pg/ml

7. All are immunotherapy agents except

- (1) Nivolumab
- (2) Pembrolizumab
- (3) Atezolizumab
- (4) Pertuzumab

8. Which target therapy is not used in lung carcinoma ?

- (1) Dabrafenib
- (2) Osimertinib
- (3) Ribociclib
- (4) Afatinib

9. Mechanism of action of Etoposide

- (1) free radical production
- (2) Topoisomerase inhibition
- (3) Microtubules inhibition
- (4) Carbonic anhydrase 9 inhibition

10. Mechanism of action of Taxenes

- (1) Mismatch of DNA repair
- (2) Microtubules stabilization
- (3) G2 phase arrest
- (4) Mitochondria Inhibition

11. Mitotane inhibits following enzyme in steroid synthesis

- (1) 11 Beta hydroxylase
- (2) 21 Hydroxylase
- (3) Aromatase
- (4) 17- Hydroxylase

12. Screening tests for detection of high cortisol secretion includes all except :

- (1) 24 hrs urinary cortisol
- (2) Late night salivary cortisol
- (3) Overnight dexamethasone suppression test
- (4) CRH stimulation test

13. Pure Estrogen receptor antagonist used in treatment of breast cancer is

- (1) Tamoxifen
- (2) Fulvestrant
- (3) Raloxifene
- (4) Exemestane

14. Trial that compared use of tamoxifen for 5 yrs vs. 10 yrs as adjuvant treatment of breast cancer is

- (1) ATLAS trial
- (2) ATAC trial
- (3) TEAM trial
- (4) NSABP-B14 trial



15. "Pyrosequencing" as a sequencing method is used in which of the following Next- Generation sequencing platforms ?
- (1) Roche 454 GS FLX
  - (2) Illumina HiSeq 2000
  - (3) Polonator G.007
  - (4) Helicos BioSciences HeliScope
16. Regarding colorectal cancers, KRAS and BRAF mutations have been recently shown to impair responsiveness to which group of drugs ?
- (1) Anti-angiogenesis inhibitors
  - (2) Anti EGFR agents
  - (3) PDL-1 inhibitors
  - (4) 5-FU
17. Regulatory proteins used as "inhibitors of apoptosis" by cancer cells are :
- (1) Bcl-2
  - (2) Bcl-XL
  - (3) Bcl-W
  - (4) All of the above
18. Which of the following triggers suppressive signals that can counteract proangiogenic stimuli ?
- (1) TSP-1
  - (2) VEGF
  - (3) AANG-44
  - (4) All of the above
19. Which of the following diagnostic tests is most useful for determining the tumor stage of esophageal cancer ?
- (1) Esophagogastroduodenoscopy
  - (2) Endoscopic ultrasound
  - (3) PET scan
  - (4) CTscan
20. Which of the following is true with regard to the investigation of oral/oropharyngeal cancer ?
- (1) Artifacts from dental amalgam limit the usefulness of MRI.
  - (2) The sensitivity of MRI for detecting nodal metastasis greatly exceeds that of CT.
  - (3) MRI allows for better visualisation of soft-tissue infiltration than CT.
  - (4) MRI is more widely available than CT; it tends to be used for convenience.

21. Which of the following radiations are used for imaging purposes ?
- (1) Alpha
  - (2) Beta
  - (3) Gamma
  - (4) Delta
22. The smallest unit in the reconstruction/projection of an MRI image is called as
- (1) pixel
  - (2) voxel
  - (3) binary unit
  - (4) dot
23. ACS guidelines recommendation of MRI screening for ca breast is
- (1) BRDA1 or BRCA2 mutation.
  - (2) Lifetime risk more than or equal to 20%
  - (3) History of radiation to chest
  - (4) All of the above
24. Which of the following statements about video-assisted thoracic surgery for patients with lung cancer is **FALSE** ?
- (1) The postoperative period is shorter.
  - (2) It decreases the risk of intraoperative bleeding.
  - (3) It is a viable alternative to thoracotomy in patients who are frail.
  - (4) Locoregional recurrence is increased.

25. Which of the following is an advantage of a tracheostomy ?
- (1) Decrease in alveolar ventilation
  - (2) Increase in the work of breathing
  - (3) Increased rate of moisture exchange from the upper airway
  - (4) Reduction of anatomical dead space
26. A 72-year-old man was found to have an anterior rectal cancer at 2 cm from the anal verge.  
A CT scan of chest, abdomen and pelvis showed no evidence of metastatic disease. An MRI scan of pelvis showed an anterior tumor abutting the prostate gland, radiologically staged as a T3, N1, M0 cancer.  
What is the most appropriate next step in management ?
- (1) Abdominoperineal resection
  - (2) Total mesorectal excision
  - (3) Long-course chemoradiation
  - (4) Short-course radiotherapy
27. The most common organism responsible for central line associated blood stream infection (CLABSI) is
- (1) *Staphylococcus epidermidis*
  - (2) *Staphylococcus aureus*
  - (3) *Candida*
  - (4) *Streptococcus*

28. Radiotherapy has its most severe effects on which tissues ?
- (1) Liver
  - (2) Kidney
  - (3) Lung
  - (4) Bone marrow
29. Hypoxia adversely affects the treatment and management of cancers because it :
- (1) increases blood flow to the tumor.
  - (2) impedes adequate blood flow to the tumor.
  - (3) activates molecular pathways contributing to resistance.
  - (4) causes dyspnea and tachypnea in the patient.
30. Which of the following statements about radiation-induced fibrosis is true ?
- (1) It is usually irreversible.
  - (2) It can be easily managed by surgical excision.
  - (3) It can be effectively treated using hyperbaric oxygen.
  - (4) The severity is reduced with concurrent chemotherapy.
31. Which of the following cell cycle phase is most radiosensitive ?
- (1) M
  - (2) S
  - (3) G1
  - (4) G0
32. Young male with germ cell cancer. He is on bleomycin, etoposide and cisplatin. What side effect would make you stop the treatment ?
- (1) Peripheral neuropathy
  - (2) Neutropenic septicaemia
  - (3) Interstitial lung disease
  - (4) High tone hearing loss
33. Which of the following chemotherapy agents is most effective against soft tissue sarcoma ?
- (1) Thiotepa
  - (2) Cyclophosphamide
  - (3) Dactinomycin
  - (4) Doxorubicin
34. Which of the following chemotherapy agents recently has been shown to be effective in treating hormone-refractory prostate cancer ?
- (1) Docetaxel
  - (2) Gemcitabine
  - (3) Oxaliplatin
  - (4) Topotecan

35. Taxane derivatives elicit cytotoxic effects mainly by which of the following mechanisms ?

- (1) Stabilization of microtubules and prevention of their disassembly
- (2) Intercalation into DNA and inhibition of DNA replication
- (3) Inhibition of topoisomerases
- (4) Inhibition of DNA repair

36. Which is an example of humanized monoclonal antibody ?

- (1) Rituximab
- (2) Denosumab
- (3) Bevacizumab
- (4) Ramucirumab

37. Regarding G-CSF - the best description of its mechanism of action and role in chemotherapy is

- (1) reduced PMN nadir when used as prophylaxis
- (2) reduced duration of neutropenia when used as prophylaxis
- (3) not useful unless already neutropenic
- (4) reduce thrombocytopenia severity

38. Male with bone pain from metastatic prostate cancer will be started on LHRH antagonist. He refuses orchidectomy. His illness will show

- (1) immediate improvement
- (2) initially worse than improvement
- (3) immediate improvement than decline
- (4) slow improvement

39. Which of the following has been associated with death in trials of Nivolumab for lung cancer ?

- (1) Hepatitis
- (2) Neutropenia
- (3) Pneumonitis
- (4) Hypophysitis

40. Vaccination against HPV uses :

- (1) Killed HPV.
- (2) Live attenuated HPV.
- (3) L1 proteins from the viral capsid.
- (4) Bioengineered synthetic viral ribonucleic acid.



41. A 45 yr old male smoker presented with a 1.5 × 1.5 cm lesion on the lateral border of the tongue having 6 mm thickness. Clinically no enlarged neck nodes. Punch biopsy was done which revealed squamous cell carcinoma. What is the next step of management ?
- (1) Partial glossectomy
  - (2) Partial glossectomy + level I-IV lymph node dissection
  - (3) Partial glossectomy + level I-V lymph node dissection
  - (4) Partial glossectomy followed by RT
42. A 39 yr old male patient with history of tobacco chewing underwent surgery followed by RT for a T3N2aM0 lesion of the buccal mucosa. After the surgery, patient was given retinoids. What is the use of retinoids in such a scenario ?
- (1) Used as a maintenance therapy
  - (2) To decrease the nodal recurrence
  - (3) To prevent the recurrence of the primary
  - (4) To decrease the second primary after RT
43. All of the following regarding nasopharyngeal carcinoma (NPC) are true except
- (1) Fossae of Rosenmuller is the most common site
  - (2) Skip metastasis is common in NPC
  - (3) Bilateral metastasis in cervical lymph node(s), none more than 6 cm in greatest dimension is considered as N2.
  - (4) All are true statements.
44. Cranial nerve most commonly involved in nasopharyngeal carcinoma (NPC)
- (1) Cranial nerve V
  - (2) Cranial nerve VI
  - (3) Cranial nerve IV
  - (4) None of the above
45. Which among the following is not considered as high grade tumor in carcinoma parotid ?
- (1) Acinic cell carcinoma
  - (2) SCC
  - (3) Adenocarcinoma
  - (4) Malignant pleomorphic adenoma



46. Most common first metastatic site for ocular melanoma :
- (1) Liver
  - (2) Skin
  - (3) Brain
  - (4) Lung
47. As per AJCC 8<sup>th</sup> staging system for paranasal sinus tumors, orbital floor involvement comes under which T staging ?
- (1) T1
  - (2) T2
  - (3) T3
  - (4) T4
48. Kadish classification is used for
- (1) Nasopharyngeal carcinoma
  - (2) Carotid body tumor
  - (3) Thymoma
  - (4) Olfactory neuroblastoma
49. Marginal mandibulectomy is absolutely contraindicated in which of the following situations ?
- (1) When cartilaginous part of the bone is involved
  - (2) Old age patient
  - (3) Lesions in close proximity to bone
  - (4) Edentulous patients

50. Which of the following is not a vascular supply to sternomastoid flap ?
- (1) Occipital artery
  - (2) Facial artery
  - (3) Superior thyroid artery
  - (4) Transverse cervical artery
51. Shamblin classification is used for
- (1) Parapharyngeal tumors
  - (2) Nasopharyngeal tumors
  - (3) Carotid body tumors
  - (4) None of the above
52. Which of the following is not a part of oral cavity ?
- (1) Hard palate
  - (2) Soft palate
  - (3) Anterior 2/3<sup>rd</sup> tongue
  - (4) Retromolar trigone



53. Which of the following statements is **TRUE** ?

- (1) Radical neck dissections should be performed for the management of all locally advanced HNSCC.
- (2) Complications from neck dissections may include hematoma, Seroma, Lymphedema, wound infections and dehiscence, carotid artery exposure and rupture, and damage to the VII, X, XI and XII cranial nerves.
- (3) In a surgically treated tumor without radiographic evidence of lymph node metastasis, an elective neck dissection should be performed if the risk of occult metastasis to the neck nodes is greater than 50%.
- (4) For patients who have had a neck dissection for HNSCC, there is no benefit from postoperative adjuvant radiation therapy.

54. Which of the following are risk factors for head and neck squamous cell carcinoma ?

- (1) Tobacco use
- (2) Fanconi anemia
- (3) Alcohol use
- (4) All of the above

55. Which of the following is the most common site of distant metastasis from head and neck cancers ?

- (1) Bone
- (2) Lung
- (3) Thyroid
- (4) Liver

56. A 58 yr male with a history of smoking 30 cigarettes per day for the last 30 years, presented with chest pain and hemoptysis and history of recent weight loss. On evaluation, a node was found positive at level IV. HRCT chest was done which showed a lesion measuring 4 × 3 cm in the lower lobe of the right lung. What is the next line of the management ?

- (1) Open biopsy from the node
- (2) Bronchoscopy
- (3) CT guided biopsy from the lung lesion
- (4) PET-CT

57. Regarding segmental anatomy of the lung, all of the following are true except

- (1) Pulmonary artery and bronchial artery are central in location
- (2) Pulmonary vein lies in the intersegmental area.
- (3) Lymphatics lie in the intersegmental area
- (4) Bronchi lie in between the segments

58. A patient with a diagnosed case of NSCLC, primary measuring 5 cm, underwent PET-CT evaluation. On PET-CT subcarinal node was found to be enlarged and was FDG-avid. What is the treatment in such a case ?

- (1) CTRT
- (2) NACT followed by resection surgery
- (3) CT followed by response evaluation
- (4) RT

59. A Patient with a 4cm primary in the lung with enlarged hilar lymphadenopathy, on evaluation has ppoFEV1 = 36% of expected for age. Next step to decide the feasibility for resection is

- (1) V-P scan
- (2) Flight of stairs test
- (3) 6 minute walk exercise test
- (4) ABG analysis

60. Most important prognostic factor in malignant pleural mesothelioma is

- (1) Age of the patient
- (2) Resection status
- (3) Tumor histology
- (4) Lymph nodal status

61. Which gynecological cancer among the following, follows a relatively orderly pattern of metastatic progression, initially to primary echelon nodes in the pelvis and then to para-aortic nodes and distant sites ?

- (1) Uterus
- (2) Cervix
- (3) Ovary
- (4) Vulva

62. As per the American Cancer Society guidelines, when should cervical cancer screening should begin ?
- (1) At 21 years of age
  - (2) At first child birth
  - (3) At menarche
  - (4) Any of the above
63. Which of the following is FALSE regarding cervical cancer in pregnancy ?
- (1) Patients who are diagnosed with invasive cervical cancer shortly after a vaginal delivery and who had an episiotomy appear to be at risk for recurrence at the site of their episiotomy.
  - (2) Compared with other cervical cancer patients, those with cervical cancer during pregnancy have a poorer survival.
  - (3) Any suspicious cervical lesion observed during pregnancy should be biopsied.
  - (4) Conization in the first trimester of pregnancy is associated with an abortion rate of up to 33%.
64. In Lynch syndrome, which is most commonly found histology of endometrial cancer ?
- (1) Endometrioid carcinoma
  - (2) Clear cell carcinoma
  - (3) Serous carcinoma
  - (4) Carcinosarcoma
65. What is the risk of simple hyperplasia without atypia and complex hyperplasia with atypia progressing to endometrial cancer ?
- (1) 1%, 29%
  - (2) 3%, 15%
  - (3) 1%, 15%
  - (4) 3%, 29%
66. According to FIGO staging for endometrial cancer, positive pelvic and positive para-aortic lymph nodes belong to which stage ?
- (1) IIIB
  - (2) IIIC1
  - (3) IIIC2
  - (4) IIIC3

67. Maternal ingestion of Diethylstilbestrol (DES) during pregnancy is associated with which pathological type of vaginal cancer ?

- (1) Clear cell
- (2) Mucinous
- (3) Adenosquamous
- (4) Papillary

68. Which of the following does not fit in the criteria for a good candidate for sentinel lymph node biopsy (SLNB) in vulvar cancer ?

- (1) Tumor diameter of less than 4 cm
- (2) Tumor invasion more than 1 mm
- (3) No obvious metastatic disease
- (4) Poorly differentiated adenocarcinoma

69. The most prominent acute complication of radical radiotherapy for vulvar carcinoma is

- (1) Radiation enteritis
- (2) Radiation dermatitis
- (3) Radiation cystitis
- (4) Lymphedema of lower limb

70. Accepted uses of CA 125 include all EXCEPT :

- (1) Screening for ovarian cancer in general population
- (2) Assisting in determining whether a cancer of unknown primary origin has arisen from the ovary
- (3) Monitoring response of ovarian cancer to systemic chemotherapy
- (4) Helping to determine whether a pelvic mass is malignant

71. FALSE regarding risk reducing salpingo-oophorectomy (rrSO) is :

- (1) rrSO should be considered for women with germline BRCA1/2 and BRIP1 mutations
- (2) Women with a strong family history of either ovarian or breast cancer who have not undergone genetic testing should consider rrSO
- (3) rrSO in Lynch syndrome includes hysterectomy
- (4) Pathologic processing of rrSO includes serial sectioning of the entire fallopian tube and ovaries at 5-mm intervals

72. What percent of patients with advanced ovarian carcinoma who enter into remission after surgery and platinum- and taxane-based chemotherapy will ultimately experience relapse ?
- (1) 40%
  - (2) 50%
  - (3) 60%
  - (4) 70%
73. Which study among the following studies for ovarian cancer was not based on Anti-Angiogenesis inhibitors ?
- (1) AURELIA
  - (2) OCEANS
  - (3) ICON-7
  - (4) EORTC 5595
74. After molar evacuation, the diagnosis of GTN is based on the following FIGO guidelines except
- (1) A plateau in  $\beta$ -hCG values plus or minus 10% on four tests over 3 weeks
  - (2) A  $\geq 10\%$  increase in  $\beta$ -hCG levels for three or more tests over at least 2 weeks
  - (3) Persistence of  $\beta$ -hCG levels for  $>6$  months after molar evacuation
  - (4) Radiological evidence of choriocarcinoma
75. Smoking is associated with decreased risk of
- (1) Colonic carcinoma
  - (2) Cholangiocarcinoma
  - (3) Endometrial carcinoma
  - (4) Gall bladder carcinoma
76. Lifetime risk of breast cancer in BRCA 1/2 patients are :
- (1) 20-30%
  - (2)  $<10\%$
  - (3) 50-70%
  - (4) 100%
77. Criteria for referral for genetic counselling of individuals at increased risk for BRCA1/2 associated hereditary breast cancer except.
- (1) Personal history of breast cancer diagnosed  $\leq 45$  yrs
  - (2) Personal history of breast cancer and Ashkenazi Jewish ancestry
  - (3) Personal history of triple negative breast cancer  $\leq 60$  yrs
  - (4) Personal history of triple negative breast cancer  $\leq 40$  yrs

78. Gail Model includes all except

- (1) Age
- (2) Age at menarche
- (3) Age at menopause
- (4) Age at 1st child birth

79. 80-85% of cases with DCIS are detected because of

- (1) Palpable mass
- (2) Paget's disease
- (3) Associated Mammographic micro calcifications
- (4) Incidental microscopic finding in breast tissue removed for other abnormality

80. TAILORx trial [Trial Assigning Individualised Options for Treatment (Rx)] enrolled patients with all except

- (1) Hormone Receptors positive
- (2) Hormone Receptors negative
- (3) Node Negative
- (4) Her-2u negative

81. Absolute contraindications for Breast Conserving Surgery are all except

- (1) Active connective tissue disease involving the skin [esp. Scleroderma and Lupus]
- (2) Prior RT to the breast or chest wall
- (3) Diffuse suspicious, malignant appearing micro calcifications
- (4) Widespread disease that cannot be incorporated by excision through a single incision that achieves negative margins with satisfactory cosmetic result

82. Milan III Trial includes all except

- (1) Tumors of size 4 cm or less
- (2) Randomised cases to either QUART or only Quadrantectomy + Axillary dissection
- (3) 10yrs risk of in breast recurrence (IBTR) was compared
- (4) Conducted by Umberto Veronesi



- 83.** Indications for Sentinel Lymph Node Biopsy except :
- (1) Clinically Node negative axilla
  - (2) Inflammatory Breast cancer
  - (3) Unifocal or Multicentric disease
  - (4) Previous FNAC or core biopsy
- 84.** Most common site of phyllodes tumor metastasis is
- (1) Lung
  - (2) Liver
  - (3) Brain
  - (4) Bone
- 85.** High risk lesions of breast (R.R. = 4-5 times) includes all except
- (1) ADH- Atypical Ductal Hyperplasia
  - (2) ALH - Atypical Lobular Hyperplasia
  - (3) Papilloma
  - (4) None of the above
- 86.** Which gene mutation is associated in basal cell carcinoma ?
- (1) Sonic hedgehog
  - (2) MEK1
  - (3) Human patched gene
  - (4) NF1
- 87.** Organ transplant recipients have high risk of development of SCC than the general population by how many folds ?
- (1) 10-20 folds
  - (2) 30- 50 folds
  - (3) 60-250 folds
  - (4) None of the above
- 88.** Verrucos carcinoma is associated with which serotypes of HPV ?
- (1) Serotypes 16 & 18
  - (2) Serotypes 6 & 11
  - (3) Serotypes 31 & 52
  - (4) Serotypes 52 & 68
- 89.** What percentage of patients with non melanoma skin cancer (NMSC) will develop another NMSC within 5 years ?
- (1) 10%
  - (2) 20%
  - (3) 30%
  - (4) 40%

90. Genetic counseling referral criteria for hereditary melanoma :

- (1) Three or more siblings with actinic keratosis
- (2) Two relatives on the same side of the family with melanoma and prostate cancer
- (3) Pancreatic cancer and melanoma on the same side of the family
- (4) Parent with multiple skin cancers

91. Most important prognostic factor of primary melanoma is :

- (1) Breslow thickness
- (2) Clarke level
- (3) Mitotic rate
- (4) Anatomical location

92. Regarding biopsy of bone tumor, what is incorrect ?

- (1) Transverse incisions are avoided
- (2) In case of soft tissue extension of bone lesion, biopsy should be avoided
- (3) If a hole is made, it should be round
- (4) Wide retention sutures should not be used during closure

93. Myxoid/round cell liposarcomas characteristically have

- (1) t(12;16)
- (2) t(11;16)
- (3) t(16;16)
- (4) t(11;22)

94. True about Dermatofibrosarcoma Protuberans (DFSP) is

- (1) Affects females more than males
- (2) Upper extremities are more frequently involved
- (3) Widespread metastasis occurs during presentation
- (4) Often mistaken for hypertrophic scar or keloid

95. Which of these shows Good response to chemotherapy ?

- (1) Myxoid liposarcoma
- (2) Pleomorphic liposarcoma
- (3) Round cell liposarcoma
- (4) Dedifferentiated liposarcoma

96. Tumor with best prognosis among the following :

- (1) Embryonal Rhabdomyosarcoma
- (2) Botyroid Rhabdomyosarcoma
- (3) Sclerosing Rhabdomyosarcoma
- (4) Alveolar Rhabdomyosarcoma

97. Which of the following is not a B cell disorder ?

- (1) Hairy cell leukemia
- (2) Lymphoplasmacytic lymphoma
- (3) Anaplastic large cell lymphoma
- (4) Multicentric Castleman disease

98. Cryoprecipitate contains all of the following except

- (1) Factor 13
- (2) Factor 9
- (3) Fibrinogen
- (4) VWF

99. Which among the following is not an acute complication of blood transfusion ?

- (1) Febrile non hemolytic transfusion reaction
- (2) Post transfusion pupura
- (3) Transfusion related acute lung injury
- (4) Transfusion associated circulatory overload

100. In terms of risk of blood transfusion transmitted infection, which order is correct ?

- (1) HBV>HIV>HCV
- (2) HCV>HBV>HIV
- (3) HBV>HCV>HIV
- (4) HIV>HCV>HBV

101. Granular cell tumors of the esophagus are most commonly found in :

- (1) Distal 1/3<sup>rd</sup>
- (2) Proximal 1/3<sup>rd</sup>
- (3) Middle 1/3<sup>rd</sup>
- (4) Same incidence along the esophagus

102. Most common cause of death in esophageal cancer

- (1) Local recurrence
- (2) Post operative complications
- (3) Distal recurrence
- (4) Tumor biology

103. Colon transposition graft in esophageal reconstruction is most commonly based on :

- (1) Ascending branch of left colic
- (2) Right branch of Middle colic
- (3) Ascending branch of right colic
- (4) Left branch of middle colic

104. Risk factors for post operative pancreatic fistula are all except

- (1) Small pancreatic duct
- (2) Neoadjuvant therapy
- (3) Soft texture of parenchyma
- (4) Increased intraoperative blood loss

105. True about malignant transformation of anal fistula :

- (1) Fistula should be present for 5 yrs before malignancy
- (2) Commonly seen in crohn's associated anal fistula
- (3) Malignant transformation is common
- (4) None of these

106. Which of the following is not a sign of malignant gastric ulcer on radiographic studies ?

- (1) Carman sign
- (2) Hampton's line
- (3) Nodular gastric ulcer mound
- (4) Abrupt transition between normal and abnormal mucosa several centimeters away from ulcer

107. CLIP scoring system does not include :

- (1) Tumor morphology
- (2) AFP levels
- (3) Portal vein thrombosis
- (4) Albumin levels

108. Following are true about fibrolamellar HCC except :

- (1) Occurs in younger patients
- (2) Tumor is encapsulated
- (3) Presence of central scar
- (4) AFP positive in 80% patients

109. Number of Lymph Nodes to be sampled for adequate staging in perihilar cholangiocarcinoma :

- (1) 6
- (2) 7
- (3) 12
- (4) 15

110. Treatment of choice for multifocal HCC without portal invasion is :

- (1) Radiofrequency ablation
- (2) Liver transplantation
- (3) Transarterial chemoembolization (TACE)
- (4) Sorafenib

111. Least common complication after pancreaticoduodenectomy.

- (1) Cardiac events
- (2) Delayed gastric emptying
- (3) Pancreatic fistula
- (4) Bile leak

112. All these are worrisome features of Intraductal papillary mucinous neoplasm (IPMN) except :

- (1) Lymphadenopathy
- (2) Jaundice
- (3) Nonenhancing mural nodule
- (4) Pancreatitis

113. Cloaca divides into rectum and vagina at :

- (1) 4 weeks
- (2) 6 weeks
- (3) 8 weeks
- (4) 10 weeks

114. False regarding carcinoma of rectum :

- (1) Immediate surgery following short course RT
- (2) Most local recurrences are situated extra rectal
- (3) Local recurrences are high after sphincter saving resection than APR
- (4) 80% recurrences develop within 2 years of surgery

115. Which of the following is least commonly associated with risk of cholangiocarcinoma ?

- (1) Clinorchissinensis infection
- (2) Hepatolithiasis
- (3) HIV infection
- (4) Hepatitis C virus infection

116. True about spermatocytic tumor :

- (1) Metastatic potential is high
- (2) Seen generally in older men
- (3) Express placental alkaline phosphatase
- (4) Secretes high amount of AFP

117. A patient underwent orchidectomy and was diagnosed as a case of seminoma. No further treatment was given and patient was kept on a regular follow up. On follow up, a retroperitoneal lymph node was found to be enlarged measuring 2 cm. What is the next step of management ?

- (1) Dog leg field radiotherapy
- (2) Observation
- (3) Chemotherapy
- (4) RPLND

118. Regarding partial nephrectomy true statement is :

- (1) In patients with an absolute indication for nephron-sparing surgery, Partial nephrectomy can even be performed for tumors that deeply invest the renal vascular structures or with limited venous thrombus.
- (2) Margin clearance is not required.
- (3) Posterior segmental arteries are not end arteries.
- (4) Transplant backup is necessary.

119. Which of the following is the most common molecular abnormality seen in patients with prostate cancer ?

- (1) KRAS mutation
- (2) BRAF mutation
- (3) Chromosomal translocations involving TMRSS2
- (4) P53 mutation

120. Hereditary papillary renal cancer syndrome is an autosomal dominant hereditary cancer syndrome, leading to increased risk of bilateral papillary type 1 kidney cancer. The disease locus is on chromosome 7q. The mutation responsible for this disorder involves :

- (1) RET
- (2) MET
- (3) RAS
- (4) RAF



121. A 45 yr old patient presented with neck swelling. On examination, multiple level IV lymph nodes were enlarged and fixed. FNA from the node revealed poorly differentiated histology. Even after complete evaluation including triple endoscopy, site of primary could not be identified. What is the preferred management in such a scenario ?

- (1) Neck dissection f/b Chemotherapy
- (2) CRT
- (3) Neck dissection alone
- (4) Chemotherapy

122. In case of a metastatic lymphadenopathy, if the site of the primary tumor is unknown, then it is staged as T0 if the site of primary on clinical suspicion belongs to all of the following sites except

- (1) Breast
- (2) Lung
- (3) Hypopharynx
- (4) None of the above

123. In case of a metastatic lymphadenopathy, if the site of the primary tumor is unknown, then it is staged as T0 if the site of primary on clinical suspicion belongs to which of the following sites ?

- (1) HPV – Oropharynx
- (2) HPV + Oropharynx
- (3) EBV – nasopharynx
- (4) Hypopharynx

124. A 62 yr old patient presented with multiple bilateral inguinal lymphadenopathy. FNA revealed squamous cell carcinoma. Even after complete evaluation, site of primary could not be identified. What is the preferred management in such a case ?

- (1) Bilateral lymph node dissection alone
- (2) Bilateral lymph node dissection f/b RT
- (3) Bilateral lymph node dissection f/b CT
- (4) Bilateral lymph node dissection f/b RT + CT



125. Most common leukaemia in children with Down's syndrome is

- (1) CML
- (2) AML-M3
- (3) AML-M7
- (4) CLL

126. All-trans-retinoic acid (ATRA) is a major component of preferred chemotherapy regime in which type of leukaemia ?

- (1) AML-M3
- (2) ALL
- (3) CLL
- (4) CML

127. What is the peak incidence of radiation pneumonitis while treating lung cancer by radiation therapy ?

- (1) 2 weeks
- (2) 4 weeks
- (3) 2 months
- (4) 4 months

128. Which is the drug of choice for radiation pneumonitis ?

- (1) Glucocorticoids
- (2) Pentoxifylin
- (3) Captopril
- (4) Amifostine

129. What is the incidence of second primary lung cancer after the primary tumor has been successfully cured ?

- (1) 1%
- (2) 2%
- (3) 5%
- (4) 10%

130. Most common cause of blood stream of infection in early course of neutropenia during the first week is :

- (1) Gram positive bacteria
- (2) Gram positive and Gram negative bacteria
- (3) Gram negative bacteria
- (4) Candidiasis

131. Which of the following malignancies is considered to be an acquired immunodeficiency syndrome (AIDS) - defining cancer in an HIV infected patient ?

- (1) Colon cancer
- (2) Penile cancer
- (3) Anal cancer
- (4) Cervical cancer



132. In asplenia patients, the common infective agent in cancer patients is all except :

- (1) Streptococcus pneumoniae
- (2) Haemophilus influenza
- (3) Clostridium botulinum
- (4) Babesia microti

133. Drug of choice for prophylaxis in neutropenic patients is :

- (1) Penicillin
- (2) Levofloxacin
- (3) Cefuroxime
- (4) Amoxicillin+clavulanic acid

134. Earliest fundoscopic sign of increased intracranial pressure is

- (1) Papilledema with blurring of disc margin
- (2) Foster Kennedy syndrome
- (3) Disc hemorrhage
- (4) Absence of venous pulsation within the centre of optic disc

135. What is the mechanism of action of denosumab ?

- (1) Inhibits active form of vitamin D 1, 25 dihydroxy vitamin D and prevents intestinal absorption
- (2) Inhibits osteoclasts by binding RANKL (receptors activates of nuclear factor KB ligand) to prevent RANKL activation by RANK
- (3) Activates osteoblasts by binding RANKL
- (4) Impedes protein prenylation and bans resorption by osteoclasts by inhibiting the mevalonate pathway

136. A 57 year old man presents with severe back pain and bilateral leg weakness for 3 days. MRI of the spine reveals metastasis at T10 vertebral body with significant cord compression. Which of the following is the most likely primary cancer in this patient ?

- (1) Lung cancer and breast cancer ,
- (2) Lung cancer and lymphoma
- (3) Colon cancer and lymphoma
- (4) Colon cancer and prostate cancer

137. What is the most appropriate initial therapy for the patient with malignant spinal cord compression ?

- (1) Chemotherapy
- (2) Radiation therapy
- (3) Dexamethasone
- (4) Strontium 89

138. Which of the following tumors exhibit contrast enhancement on magnetic resonance imaging (MRI) scan ?

- (1) Pilocytic astrocytoma
- (2) Grade 2 oligodendroglioma
- (3) Grade 2 astrocytoma
- (4) Craniopharyngioma

139. Most important prognostic factor in both high and low grade adult glioma is

- (1) Age of the patient
- (2) Functional status of the patient
- (3) Extent of surgical resection
- (4) None of the above

140. Risk of Malignancy (%) associated with Bethesda Category IV

- (1) 0-3%
- (2) 10-30%
- (3) 25-40%
- (4) 50-75%

141. Highest risk RET mutation associated with Hereditary Medullary Thyroid cancer is

- (1) RET -Codon C620F
- (2) RET - Codon A883F
- (3) RET-Codon M918T
- (4) RET - Codon C634F

142. Earliest Manifestation of MEN 2A is usually

- (1) Medullary Thyroid Cancer
- (2) Pheochromocytoma
- (3) Primary Hyperparathyroidism
- (4) Lichen Planus Amyloidosis

143. Biochemical diagnosis of insulinoma include all except

- (1) Fasting plasma glucose <45-50 mg/dl
- (2) Elevated insulin level >50 uU/mL by IRMA
- (3) Negative screening levels for oral hypoglycemic agents - sulphonylureas or meglitinides
- (4) Low Beta -Hydroxybutyrate level < 2.7mmol/L

144. Adrenal tumors most commonly metastasise to :

- (1) Lung
- (2) Bone
- (3) Brain
- (4) Contralateral adrenal

145. Which of the following is true regarding a clinical trial ?

- (1) The sample size of a clinical trial is fixed and determined before the trials begin
- (2) Clinical trials are proportionately planned experiments involving only animals
- (3) Using tumor registry data to compare the survival rate of prostate cancer patients treated with surgery to those of patients who received radiotherapy is an example of clinical trial
- (4) Clinical trials test a clearly stated hypothesis using a predefined analysis plan

146. Which statement is true regarding PHASE II trials ?

- (1) PHASE II trials performed in patients with a wide variety of tumor types
- (2) Patient eligibility should not be restricted by biomarker testing
- (3) Two stage designs allow for early elimination of ineffective drugs
- (4) PHASE II cannot help develop predictive biomarkers for the study drug

147. In cancer cachexia, all are effects of tumor necrosis factor except :

- (1) lipolysis
- (2) peripheral proteolysis
- (3) muscle degradation
- (4) increased glucose turn over

148. All are neuroablative procedures at nerve root site except :

- (1) rhizotomy
- (2) dorsal root entry zone lesion
- (3) myelotomy
- (4) cordotomy

**149.** Which of the following is not true about operating room integration system ?

- (1) OR Integration also involves suspending monitors and imaging modalities within the OR, removing trip-hazards caused by cabling and allowing for easy access and visibility to surgical video.
- (2) Designed to simplify and streamline the access to data & video, and controls for all of these devices at a central command station, allowing the surgical staff to perform many of their tasks efficiently without needing to move around the OR.
- (3) Integration provides increased mobility of the patient in and out of the OR and increases patient safety.
- (4) OR Integration Systems consolidate and organize all patient data for the surgical staff during a procedure, minimizing congestion and streamlining information across multiple platforms

**150.** Population based cancer registry collects data from the following :

- (1) Door to door collection of data & screening programs
- (2) Major hospitals & laboratories in the region.
- (3) Private and General Practitioners.
- (4) All of the above

**151.** Case Control Study mean which of the following ?

- (1) Comparison of cases of two types of similar diseases in a limited time.
- (2) Prospective study of Normal (control) and patients (case) comparing outcomes.
- (3) Retrospective study of two groups of people with and without disease to study risk factors.
- (4) Interventional type of comparative study to find risk factors for causation of disease

**152.** Which of the following is the correct statement regarding Medical ethics ?

- (1) Time and culture dependent obligations of the doctors and the hospital to the patient.
- (2) Set rules applicable at all times between doctors and patients regarding treatment, taking of proper consent and conduct of clinical trials.
- (3) Ethics deals with the right choices of conduct considering the patient interest in all circumstances.
- (4) Ethics are global rules applicable uniformly to all groups of health professionals and health-care institutions.

153. Which of the following is **not** true regarding oncogenic viruses ?

- (1) Human papilloma virus an etiological agent for carcinoma of cervix, vulva, vagina, bladder and base of tongue.
- (2) Hepatitis C virus is enveloped single stranded DNA virus belonging to Hepadnaviridae family causing HCC.
- (3) BK polyoma viruses non-enveloped circular double-stranded DNA virus resides in bladder epithelium.
- (4) Epstein-Barr virus is a causative factor for Burkitt's lymphoma.

154. Which of the following pathogen is associated with colorectal cancer ?

- (1) Helicobacter pylori
- (2) Salmonella typhi
- (3) Human herpes virus
- (4) Streptococcus bovis

155. Which wavelength of ultra-violet rays is more damaging to DNA ?

- (1) UV-A
- (2) UV-B
- (3) UV-C
- (4) All have equal damaging effect.

156. According to *GLOBOCAN 2018*, most common site of new cancer in females in India is :

- (1) Carcinoma lip and oral cavity
- (2) Carcinoma cervix
- (3) Carcinoma breast
- (4) Carcinoma lung

157. Cellular loss of which molecule leads to decreased cellular attachment and enhanced tumor invasion / mobility ?

- (1) E-cadherin
- (2)  $\beta$ -catenin
- (3)  $\alpha$ -tubulin
- (4) ankyrin

158. Which of the following statement is **correct** about the association of primary sclerosing cholangitis-inflammatory bowel disease (PSC-IBD) and colorectal cancer ?

- (1) PSC-IBD confers nearly a 5 fold increased risk of colorectal cancer compared to IBD alone.
- (2) PSC alone is also a well established risk factor for colorectal cancer.
- (3) Urso-deoxycholic acid has no chemopreventive role in colorectal cancer in PSC-IBD.
- (4) All of the above.

159. Which of the following is incorrect statement ?
- (1) Adenoma is precursor lesion in sporadic colorectal cancer.
  - (2) Early mutation in sporadic colorectal cancer is APC gene mutation whereas TP53 mutation is late event.
  - (3) Flat dysplasia is precursor lesion in colitis associated cancer in which TP53 mutation is early event.
  - (4) SMAD4 mutation is associated with conversion from early adenoma to intermediate adenoma in Vogelstein adenoma carcinoma sequence.
160. All of the following are tumor suppressor gene except
- (1) PTEN
  - (2) STK 11
  - (3) SMAD4
  - (4) K-RAS
161. Which of the following statement is correct regarding endometrial cancer ?
- (1) Type 2 endometrial cancer exhibit microsatellite instability more frequently than type I.
  - (2) Microsatellite stable/copy number low endometrial cancer exhibit high frequency of beta catenin (CTNNB1) mutation.
  - (3) Microsatellite stable/copy number high endometrial cancer have infrequent TP53 mutation.
  - (4) Type 2 endometrial cancer has favourable prognosis

162. All of the following are molecular subtype of gastric carcinoma except :
- (1) Epstein-Barr virus positive
  - (2) Microsatellite instability
  - (3) Genomically instability
  - (4) Chromosomal instability
163. Most common mutation in hereditary ovarian cancer is
- (1) BRCA1
  - (2) BRCA2
  - (3) TP53
  - (4) RAD51C
164. Which of the following will induce a quiescent state ?
- (1) Telomere shortening
  - (2) Prolonged DNA damage
  - (3) High-density growth
  - (4) Oncogene activation
165. Interferon  $\alpha$  is used in the treatment of
- (1) Metastatic renal cell carcinoma
  - (2) AIDS related Kaposi sarcoma
  - (3) Chronic myeloid leukaemia
  - (4) All of the above



166. Which of the following result in inhibition of T-cell ?

- (1) CTLA-4
- (2) CD-28
- (3) B7-1
- (4) B7-2

167. Which of the following have antitumor effect ?

- (1) Cytotoxic T lymphocyte
- (2) Natural killer cells
- (3) Macrophage
- (4) All of the above

168. Which of the following types of immunity is most responsible for the host response to tumor development ?

- (1) Humoral immunity
- (2) B-cell-mediated immunity
- (3) T-cell-mediated immunity
- (4) Antibody-mediated immunity

169. What is the cost of one tobacco related cancer treatment in India ?

- (1) ₹ 1,50,000
- (2) ₹ 3,50,000
- (3) ₹ 5,00,000
- (4) None of the above

170. Most cost effective cervical cancer screening test is :

- (1) Pap smear
- (2) VIA test
- (3) Colposcopy examination
- (4) Cervical biopsy

171. All statements regarding HPV cervical cancer vaccine are true except

- (1) Bivalent-HPV 16/18
- (2) Quadrivalent HPV 6/12/16/18
- (3) Recommended for ages 9 to 26
- (4) Does not eliminate the need for the cervical cytology screening

172. In analyzing a randomized control trial of a screening test, which is the best indicator of effectiveness ?

- (1) Absolute reduction in mortality
- (2) Evidence of stage shift
- (3) Increased 5 year survival
- (4) Relative reduction in mortality

173. Inhibitory activity in cell cycle is by :

- (1) E2F
- (2) p16 / INK4A
- (3) Cyclin dependent kinase 4
- (4) Cyclin D1

174. Invasion and metastasis are prevented by :

- (1) angiogenesis
- (2) senescence
- (3) evasion of apoptosis
- (4) self sufficiency in growth signals

175. Interindividual pharmacokinetic / pharmacodynamic variability can be a result of which of the following principles ?

- (1) Sex dependence
- (2) Dose proportionality
- (3) Feedback-controlled dosing
- (4) Therapeutic drug monitoring

176. Which one is the receptor tyrosine kinase ?

- (1) Platelet derived growth factor
- (2) Insulin like growth factor
- (3) c KIT
- (4) all of the above

177. What is the definition of Never Smoker category ?

- (1) Never smoked in lifetime
- (2) Smoked less than 100 cigarettes in a person's lifetime
- (3) Smoked less than 50 cigarettes in a person's lifetime
- (4) No current cigarette use having quit for more than 10 years

178. Mechanism of Bupropion for treatment of nicotine dependency

- (1) Dopaminergic reward and partial nicotinic receptor antagonist
- (2) Short term nicotinic replacement therapy
- (3) Blocks nicotinic receptor and reduces reward
- (4) None of the above

179. The following genes are association with hereditary breast cancer except :

- (1) BRCA1
- (2) p53
- (3) PALB2
- (4) SMARCA4

180. The lifetime penetrance of medullary thyroid cancer in carriers of RET mutation associated MEN2 syndrome is :

- (1) 20%
- (2) 80%
- (3) 50%
- (4) 100%

रफ कार्य के लिए स्थान / SPACE FOR ROUGH WORK

