Past Papers

بسم الله الرحمن الرحيم

FINAL – Lecture 4 to 7

pathology

﴿ وَإِن تَتَوَلَّوْا يَسْتَبْدِلْ قَوْمًا غَيْرَكُمْ ثُمَّ لَا يَكُونُوا أَمْثَالَكُم ﴾

اللهم استعملنا ولا تستبدلنا

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First we will start with (31) past Qs
Then, (0) Book's Qs
and finally, (0) test bank Qs

(all Qs will be by default past unless it is written to be test bank)

Q1: One of the following is considered a mixed tumor:

A) Cystadenoma

B) Hamartoma

C) Choristoma

D) Pleomorphic adenoma

Answer: D

Q2: Which is **Not** true about neoplasia?

A) Abnormal growth of cells

B) Depends on the nutrition status

C) Resistant for negative feedback

D) None of the above

Answer: B

Q3: Crystal violet is a stain that tests for cell cycle activity and mitosis. In which cancer would this stain have low positive rate?

A) Mesothelioma

B) Seminoma

C) Lymphoma

D) Leiomyoma

Answer: D

Q4: Which of the following definitions regarding neoplasms is incorrect?

A) Tumor autonomy: ability of tumors to proliferate regardless of normal regulatory mechanism.

B) Clonality: tumor cells originating from one mutated cell.

C) Sarcoma: Malignant tumor originating from epithelial tissue.

D) Polyp: mass projecting above mucosal surface.

E) Tumor differentiation: The extent to which tumors resemble their cell of origin.

Answer : C

Q5: A mass described histologically as: infiltrative and composed of glandular structures lined by pleomorphic cells with prominent nuclei and abnormal mitotic figures is a/an:

A) Adenoma
B) Papilloma
C) Lymphoma
D) Adenocarcinoma
E) Adenosarcoma

Answer: D

Q6: Which of the following tumors can metastasize?

- A) Melanoma
- B) lipoma
- C) Adenoma
- D) fibroma
- E) Choristoma

Answer: A

Q7: Sarcomas usually metastasize through:

A) Blood vessels
B) Lymphatics
C) Peritoneal seedings
D) Needle tracts and surgical operations
E) none of the above

Answer: A

Q8: MIB 1 is an immunohistochemical stain used to highlight mitotically active cells. Of the following tumors, which one will show low staining with MIB 1?

A) mature teratoma
B) liposarcoma
C) grade 3 adenocarcinoma
D) seminoma
E) lymphoma

Answer: A

Q9: Which of the following incorrectly matched with its definition?

A) Polyp: benign epithelial neoplasm producing macroscopic or microscopic finger like projections

B) Teratoma: is a mixed tumor containing elements of more than one germ cell layer.

C) Adenoma: benign tumor arising from glandular epithelium regardless if it retains its glandular morphology or not

D) Carcinomas: malignant tumors arising from epithelial cells.

Answer: A

Q10: Which is NOT true about dysplasia?

A) Upper part mitotic division

B) Clonal mutation

C) Dysplasia precedes malignancy

D) Mild and moderate dysplasia can regress if initial insult removed

Answer: A

Q11: Most prognostic stage of cancer?

A) Presence of metastasis

B) Dangerous location of the primary tumor

C) Advanced histological grade

d) Large tumor size

Answer: A

Q12: Most prognostic stage of cancer?

A) lung cancer
B) breast cancer
C) ovary cancer
D) colorectal cancer

Answer: B

Q13 : Li-Fraumeni syndrome is related to which gene?

A. P16

B. P53

C. Rb

D. BRCA1

E. NF1

Answer : B

Q14 : 1-A 38-year-old woman has abdominal distention that has been worsening for the past 6 weeks. An abdominal CT scan shows bowel obstruction caused by a 6-cm mass in the jejunum. At laparotomy, a portion of the small bowel is resected. Flow cytometric analysis of a portion of the tumor shows a clonal population of B lymphocytes with high Sphase. Translocation with activation of which of the following nuclear oncogenes is most likely to be present in this

A. APC
B. EGF
C. MYC
D. p53
E. RAS

Answer : C

Q15 : A 70-year-old woman reported a 4-month history of a 4-kg weight loss and increasing generalized icterus. On physical examination, she has mi epigastric tenderness on palpation. An abdominal CT scan shows a 5-cm mass in the head of the pancreas. Fine-needle aspiration of the mass is performed. On biochemical analysis, the neoplastic cells show continued activation of cytoplasmic kinases. Which of the following
genes is most likely to be involved in this process?

A. APC

B. MYC

C. p53

D. RAS

E. RET

F. sis

Answer : D

Q16 : A 55-year-old male, a heavy smoker, developed a squamous cell carcinoma of the right lower love of the lung.
Which of the following is the most likely precursor (premalignant lesion) of his cancer.

A. Moderate dysplasia of metaplastic squamous epithelium
B. Mild dysplasia of goblet cells
C. Reactive hyperplasia of the bronchial mucosa
D. Severe dysplasia of the respiratory system
E. Carcinoma in situ of the pseudostratified columnar epithelium

Answer : A

Q17 : Which of the following mutation can cause cancer?

A. Decreased BCL2 expression

B. A translocation resulting in downregulation of RAS protein

C. MYC amplification

D. Increased expression of TP53

E. Deletion of a single RB allele.

Answer : C

Q18 : A 55-year-old man had increasing fatigue for the past 6 months. Laboratory studies show a WBC count of 189,000/microliter. The peripheral blood smear shows many mature and immature myeloid cells present. Cytogenetic analysis of cells obtained via bone marrow aspiration reveals a t (9:22) translocation. This translocation leads to formation of a hybrid
gene that causes cancer through which of the following mechanisms?.

A. Downregulation of p53

B. Increased activity of tyrosine kinase

C. Downregulation of ABL gene

D. Increased cyclin D activity

E. MYC amplification

Answer : B

Q19 : Tumors can become self-sufficient in growth signals through all of the following mechanisms except:

A. Increased expression of Cyclin Dependent Kinase 4.

B. Increased Cyclin D expression

C. RAF over-expression

D. Increased GTPase

E. ABL-BRC translocation

Answer : D

Q20: Neurofibrumin is a GAP (GTPase activating protein). Inactivation mutations in this protein cause cancer by activating which of the following?

A. ABL
B. ALK
C. RAS
D. BCL2
E. p53

Answer : C

Q21 : Which of the following is incorrect regarding well differentiated masses?

A. Are generally considered to be low grade

B. Are composed of cells that closely resemble the normal tissue

C. Are generally associated with a better prognosis than poorly differentiated ones

D. Grade 3 is considered to be well differentiated

Answer : D

Q22 : A 26-year-old woman has a lump in her left breast. On physical examination, she has an irregular, firm, 2-cm mass in the upper inner quadrant of the breast. No axillary adenopathy is noted. A fine-needle aspirate of the mass shows anaplastic ductal cells. The patient's 30-year-old sister was recently diagnosed with ovarian cancer, and 3 years ago her maternal aunt was diagnosed with ductal carcinoma of the breast and had a mastectomy. Mutation involving which of the following genes is most likely present in this family?

A. BCL2 (anti-apoptosis gene)

B. BRCA1 (DNA repair gene)

C. ERBB2 (growth factor receptor gene)

D. HST1 (fibroblast growth factor gene)

E. IL2 (growth factor gene)

Answer : B

Q23 : 11-A 3-year-old child has exhibited difficulty with vision in her right eye. On physical examination, there is leukocoria of the right eye, consistent with a mass in the posterior chamber. MR imaging shows a mass that nearly fills the globe. The child undergoes enucleation of the right eye. Molecular analysis of the neoplastic cells indicates absence of both copies of a gene that contributes to control of the cell cycle. Which of the following genes has most likely undergone mutation in this neoplasm?

A.BCR-ABL

B.BCL2

C.RB

D.K-RAS

E.NF1

F.p53

Answer : C

Q24：35-year-old man living in a southern region of Africa presents with increasing abdominal pain and jaundice. He has worked as a farmer for many years, and sometimes his grain has become moldy. Physical examination reveals a large mass involving the right side of his liver, and a biopsy specimen from this mass confirms the diagnosis of liver cancer (hepatocellular carcinoma). Which of the following substances is most closely associated with the pathogenesis of this tumor?

A. Aflatoxin B1

B. Direct-acting alkylating agents

C. Vinyl chloride

D. Azo dyes

E. β-naphthylamine

Answer : A

Q25: A 54-year-old woman notes a lump in her right breast. Physical examination shows a 2-cm mass fixed to the underlying tissues beneath the areola and three firm, nontender, lymph nodes palpable in the right axilla. There is no family history of cancer. An excisional breast biopsy is performed, and microscopic examination shows the findings in the figure. Over the next 6 months, additional lymph nodes become enlarged, and CT scans show nodules in the lung, liver, and brain. Which of the following molecular abnormalities is most likely to be found in her carcinoma cells?

A. Amplification of the ERBB2 (HER2) gene

B. Deletion of one RB gene copy

C. Fusion of BCR and C-ABL genes

D. Inactivation of one BRCA1 gene copy

E. Mutation of one p53 gene copy

Answer : A

Q26 : 9-A 34-year-old sexually active woman undergoes a routine physical examination.
There are no abnormal findings. A Pap smear is obtained as part of the pelvic examination. Cytologically, the cells obtained on the smear from the cervix show severe epithelial dysplasia (high-grade squamous intraepithelial lesion). Which of the following therapeutic options is most appropriate for this woman? **

A. Antibiotic therapy

B. Excision

C. Ovarian removal

D. Screening of family members

E. Watchful waiting

Answer : A

Q27 :10-A 61-year-old woman has noted a feeling of pelvic heaviness for the past 6 months. On physical examination, there is a palpable nontender lower abdominal mass. An abdominal ultrasound scan shows a 12-cm solid mass in the uterine wall. A total abdominal hysterectomy is performed. The mass has the microscopic appearance of a well-differentiated leiomyosarcoma. One year later, a chest radiograph shows a 4-cm nodule in her right lower lung. Cytologic analysis of a fine-needle biopsy specimen of the nodule shows a poorly differentiated sarcoma. The patient's medical history indicates that she has smoked cigarettes most of her adult life. Which of the following mechanisms best explains these findings?

A. Continued cigarette smoking by the patient

B. Development of a second primary neoplasm

C. Inheritance of a defective RB gene

D. Immunodeficiency with HIV infection

E. Metastasis from an aggressive tumor subclone

Answer : E

Q28 : A 63-year-old man has a cough with hemoptysis for 10 days. He has a 65 pack-year history of smoking. A chest CT scan shows a 5-cm right hilar mass. Bronchoscopy is performed, and lung biopsy specimens show small cell anaplastic lung carcinoma. His family history shows three first-degree maternal relatives who developed leukemia, sarcoma, and carcinoma before age 40 years. Which of the following gene products is most likely to have been altered by mutation to produce these findings?**

A. APC (tumor suppressor)

B. BCL2 (anti-apoptosis)

C. K-RAS (GTP binding)

D. NF1 (GTPase activation)

E. p53 (DNA damage response)

Answer : E

Q29 :Which of the following is least likely to be mutated in a woman with sporadic breast cancer?

A. BRCA-1

B. RAS

C. RB

D. MYC

E. Cyclin A

Answer : A

Q30 : Which of the following is the carcinogenic toxin present in cigarettes ?

A. Polycyclic hydrocarbons
B. Benzo pyrene
C. Nitrites
D. Aflatoxin B
E. Naphthalamine

Answer : B

Q31 :A 65 year old woman has breast cancer that metastasized to the bone. She has no family history of breast cancer. The least likely mutated gene in her case is: (Important question, repeated multiple times)

A. RAS

B. TP53

C. BRCA 1

D. E cadherin

E. SLUG/SNAIL

Answer : C

For any feedback, scan the code or click on it.

Corrections from previous versions:

Versions	Question #	Before Correction	After Correction
V1 → V2			
V2 → V3			