

DEFINING NEOPLASIAS

1. Cancer has become epidemic in our society. T or F
2. Benign growths are clinically insignificant. T or F
3. Most benign growths become malignant. T or F
4. What is a neoplasia?
5. What is a neoplasm?
6. What is a tumor?
7. What is oncology?
8. What is differentiation?
9. A well differentiated neoplasm looks like _____.
10. Benign is to well-differentiated, as malignant is to _____.
11. What occurs to the nuclei in anaplasia?
12. What occurs to the cells in general during anaplasia?
13. What are the two components of all neoplasms?
14. Minimal stroma results in a ___ & ___ neoplasm.
15. A hard neoplasm due to abundant _____ is called a _____.
16. _____ origin is the most common source of neoplasm; _____% to be exact.
17. If glandular, add the suffix _____.
18. What is the prefix of a benign epithelial neoplasm?
19. What is in epithelioma? Papilloma?
20. What is a benign the neoplasm of the gut?
21. What is used when classifying an malignant epithelial neoplasm?
22. A malignant neoplasm of mesenchymal origin has what suffix?
23. Name a benign neoplasm of smooth muscle. Vascular tissue? Striated muscle.
24. Learn the names of the various neoplasms.
25. Benign neoplasms do not _____ and are _____ in the nine movable mass.
26. Why are malignant neoplasms difficult to surgically excise?
27. Provide five malignant neoplasms that do not fit standard nomenclature.
28. Few exceptions aside, all malignant neoplasms have the _____ to metastasize.
29. Approximately ___% of newly diagnosed patients with _____ clinically present with metastasis.
30. What is metastatic spread strongly reduce?
31. What are the three pathways of metastatic spread?
32. Benign neoplasms are non-_____, have few _____, and _____ growth.
33. What tissue changes share features with neoplastic disease?
34. Provide the potential sequence of events in the evolution of a neoplasia.
35. What are the local effects of benign and malignant neoplasias?



36. What is intussusceptions?
37. What is cachexia initiated by?
38. What is cachexia?
39. Benign neoplasms may result in _____ secretion of hormones. What does this mean?
40. Malignant tumors may secrete _____ or _____ hormones. What is the latter?
41. Hypercalcemia may be due to a _____, _____, or _____.
42. What is a syndrome in which symptoms mask the underlying neoplasm?
43. What are the three groups of paraneoplastic syndromes?
44. Name two endocrinopathies and their usual causes.
45. Describe the neuromyopathic/myasthenic syndrome.
46. What is the vascular disorder associated with neoplasms?
47. What is thrombosis also known as?

GRADING AND STAGING

48. What is grading based upon?
49. What is the scale of grading?
50. What is staging a based upon?
51. Describe the values of the 'N' in the TNM system.
52. T₀N₀M₀ is what?
53. What are the histological/cytological methods of cancer diagnosis?
54. What are the other four laboratory techniques to diagnose cancer?
55. What makes tumor markers significant?
56. What tumor marker is seen in breast carcinoma?
57. What tumor marker is in liver carcinoma and testicular carcinoma?
58. What tumor marker is seen in colon, pancreas, and breast carcinoma?
59. What tumor marker is seen in prostate carcinoma?
60. What tumor marker is seen in O'Berry and carcinoma?
61. What are the current treatment modalities for cancer?
62. How is prostate cancer graded?
63. The Gleason score is based upon what?

MOLECULAR BASIS OF CANCER

64. What is PSR?
65. What for groups in order have the highest risk for leukemia?
66. Why would someone down syndrome have increased risk for leukemia?
67. T or F: Not all mutations cause cancer. Explain.

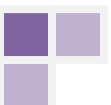


68. When do mutations lead to a neoplasm?
69. What is a mutation?
70. Name three examples of DNA mutations?
71. What is gene amplification?
72. What is a DNA point mutation?
73. What is a chromosomal translocation?
74. What may cause a genetic mutation?
75. Due to genetic instability, what may go wrong with in DNA in general terms?
76. What are the three fundamental characteristics although malignant neoplasm?
77. The nonlethal genetic damage may be _____ or _____.
78. _____ are the normal growth promoting genes, which when mutated, are known as _____.
79. What are anti-oncogenes also known as?
80. Proto and anti-oncogenes aside, what genes may also be damaged?
81. What is the product of an oncogene called and what makes it significant?
82. What do oncogenes promote?
83. –Sis is a protoncogene, what is c-sis and v-sis?
84. How do oncogenic proteins render their effects?
85. In reference to cell receptors. What does a 'Ret' mutation stand for? Erb? What does both lead too?
86. With normal receptor binding, what is transiently activated?
87. What is a MAB?
88. Name a MAB that blocks the growth factor receptor in breast cancer.
89. What is the most well studied signal transducing protein of the G-protein family?
90. What does a RAS mutation result in?
91. What are proteins that live in the nucleus and bind to DNA, activating transcription of proto-oncogenes?
92. To inactivate an anti-oncogene leading to neoplasm, what must occur?
93. Describe the Cancer suppressor gene, RB.
94. Describe the Cancer suppressor gene, p53.
95. Describe the Cancer suppressor gene, BRCA.
96. Describe the Cancer suppressor gene, APC.
97. What is so significant about APC?
98. P53 can be seen as the cellular detective of the nucleus, explain its significance?
99. If p53 undergoes homozygous damage, DNA damage goes _____ and _____ in dividing cells.
100. What genes regulate apoptosis?
101. What gene of apoptosis is over expressed in a malignant lymphoma?
102. What enzyme prevents chromosomal shortening by adding nucleotides after cell division?
103. Since somatic cells lack telomerase, what occurs?



TUMOR GROWTH

104. Kinetics of tumor growth is dependent on _____.
105. For a tumor to become malignant or greater than 1mm^3 , what process must occur?
106. What is tumor progression?
107. What type of cancer does not follow the tumor progression rule?
108. What yields an increased rate of random mutations during clonal expansion?
109. Growing tumors are selected for its potential to _____, _____, _____, and _____.
110. What molecule must be lost for tumor cells to detach from each other?
111. What do tumor cells use to attach themselves to the basement membrane?
112. What do tumor cells secrete to degrade the extracellular matrix?
113. What do tumor cells use to move through the basement membrane and vessels?
114. What are the four most common sites for metastatic dissemination?
115. What is organ tropism?
116. Prostate carcinoma preferentially spreads to _____.
117. Lung carcinoma spreads to the _____ & _____.
118. What are two possible causes of organ tropism?
119. Most tumors elicited a _____ response.
120. Inflammation may be correlated with _____ in _____ cancers.
121. _____ Is the recognition and destruction of tumor cells by the immune system.
122. What is the difference between a tumor specific antigen and tumor associated antigen?
123. _____ cells recognize TSAs, while _____ cells lyse tumors without the need for TSA.
124. How may immuno surveillance breakdown?
125. What is epidemiology?
126. Carcinomas are the most frequent in _____.
127. What are the top three forms of cancer in males? Give their respective %'s.
128. What are the top three forms of cancer in females? Give their respective percentages.
129. Death is most common in which three forms of cancer in males?
130. Death is most common in which three forms of cancer in females?
131. Stomach cancer has been decreasing over the last 50 years. Why is this?
132. What is a well-defined malignancy with a single inherited mutant gene?
133. Rb is mutated in what inherited cancer syndrome?
134. How do familial cancers differ from inherited cancer syndromes?
135. What does the high risk strain human papilloma virus do?
136. What do low risk strain human papilloma viruses cause?
137. What virus infects epithelial cells and b- lymphocytes?
138. With an Epstein-Barr virus infection, what occurs in a healthy individual?



139. With an Epstein-Barr virus infection, what occurs in a immunocompromised individual?
140. Epstein-Barr virus is associated with what two lymphomas?
141. What is the mechanism and association of the hepatitis B virus?
142. Helicobacter pylori is associated with what disorders/diseases?
143. What factors increase the risk for breast/cervical/uterine cancers?
144. What protects against osteoporosis, yet may increase the risk for breast carcinoma?
145. At a serum PSA level of ____, a _____ or _____ may be present.
146. Why is "watchful waiting" often associated with prostate carcinoma?
147. What are possible adjunct therapies for prostate carcinoma?
148. What are six non-neoplastic disorders, which are highly associated with malignancies?
149. Chemical carcinogens may _____ or _____ a neoplasm.

DISEASES OF WBC

150. WBC's are produced where before birth? Afterbirth?
151. Hematopoietic stem cells give rise to _____ & _____.
152. Where do lymphocytes and monocytes accumulate?
153. What is found in the periphery of a lymph node?
154. What is found para-follicular in lymph nodes?
155. What is found at the center of a lymph node?
156. What is leukopenia?
157. What is leukocytosis?
158. How does leukemia and lymphoma differ?
159. What is leukopenia associated with?
160. What are the symptoms of leucopenia?
161. What is leukocytosis often confused with?
162. What is lymphadenitis?
163. What is lymphadenopathy?
164. How does lymphadenopathy and lymphadenitis relate with each other?
165. How are leukemias classified?
166. Lymphocyte leukemia is derived from _____. Most importantly effecting _____ cells.
167. Myelogenous leukemia is derived from _____. Effecting _____, _____, and _____ cells.
168. Acute leukemias are histologically _____ due to _____.
169. What are the clinical features of an acute leukemia?
170. Chronic leukemias are histologically _____ with a predominance of _____.
171. Often chronic leukemias will have a _____ symptomology including _____.
172. What is a blast crisis?



173. 90% of all childhood leukemias are _____. (Much better care today)
174. 90% of adult acute leukemias are _____.
175. What are two indicators of acute myeloid leukemia?
176. What vitamin receptor is blocked due to gene fusion in acute myeloid leukemia?
177. What is the prognosis of acute myeloid leukemia?
178. Chronic lymphocytic leukemia is the counterpart of _____, and often effects who?
179. What cell tends to be involved in chronic lymphocytic leukemia?
180. Why is chronic myeloid leukemia so dangerous?
181. What is unique about chronic myeloid leukemia?
182. What may interfere with the Philadelphia chromosome?

