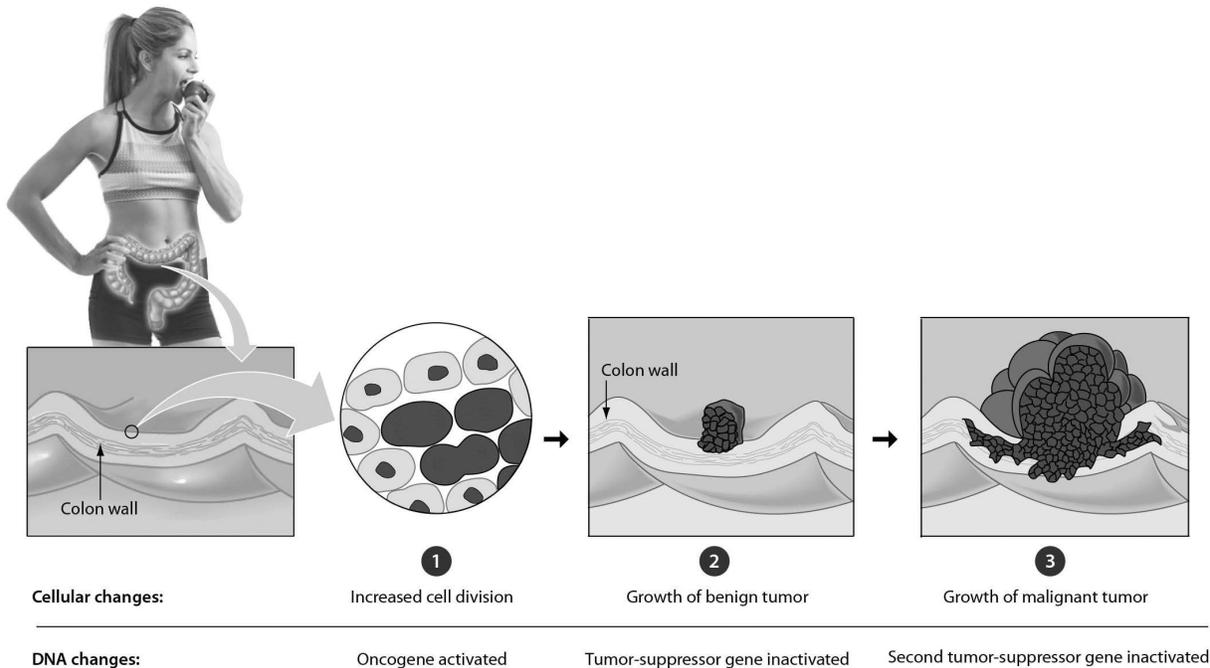


Name \_\_\_\_\_

HW9 covers the cancer section of Ch11 and the beginning of Ch12 on biotechnology. Due in class on Thursday, Nov 15th, or complete the online version of HW9 in the quiz tab on Canvas.

**MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.**

- 1) What name is given to a gene that causes cancer? 1) \_\_\_\_\_  
 A) promoter B) repressor  
 C) homeotic gene D) oncogene
  
- 2) Many proto-oncogenes regulate \_\_\_\_\_. 2) \_\_\_\_\_  
 A) cell repair B) cell growth C) cell division D) cell cloning
  
- 3) Inheritance of certain genes increases the risk of getting certain cancers; thus, it can be said that \_\_\_\_\_. 3) \_\_\_\_\_  
 \_\_\_\_\_  
 A) lifestyle will have little impact on cancer risk for these individuals  
 B) these cancers are inherited as a dominant trait  
 C) mutations that occur in somatic cells can be passed from parent to offspring  
 D) predisposition to these cancers is inherited
  
- 4) Data suggest that the normal version of *BRCA1* functions as a(n) \_\_\_\_\_. 4) \_\_\_\_\_  
 A) silencer B) oncogene  
 C) tumor-suppressor gene D) proto-oncogene
  
- 5) Examine the figure below. In a typical colon cancer, the first step is \_\_\_\_\_. 5) \_\_\_\_\_



- A) the mutation of a proto-oncogene, producing an oncogene
- B) the mutation of a tumor-suppressor gene, producing an oncogene
- C) the inactivation of a tumor-suppressor gene
- D) the conversion of an oncogene to a tumor-suppressor gene

- 6) If you were working for a pharmaceutical company trying to develop anticancer drugs, what biological process would be the best target to investigate? 6) \_\_\_\_\_  
A) mitosis B) glycolysis  
C) cellular respiration D) meiosis
- 7) Which risk factor is associated with cancer of the colon and rectum? 7) \_\_\_\_\_  
A) tobacco B) dietary fat C) UV radiation D) viruses
- 8) \_\_\_\_\_ is(are) responsible for more cancers than any other carcinogen. 8) \_\_\_\_\_  
A) Tobacco B) UV radiation C) Asbestos D) X-rays
- 9) Which of these lifestyle choices will increase cancer risk? 9) \_\_\_\_\_  
A) a diet low in plant fiber B) jogging  
C) spending less time in the sun D) quitting smoking
- 10) Which of the following is the best definition for recombinant DNA? 10) \_\_\_\_\_  
A) an alternate form of DNA that is the product of a mutation  
B) DNA that results from bacterial conjugation  
C) DNA that includes pieces from two different sources  
D) DNA that carries a translocation
- 11) Which of the following is a genetically modified organism? 11) \_\_\_\_\_  
A) an organism carrying a gene that was acquired by artificial means  
B) an organism that gestated in an artificial womb  
C) a cloned organism carrying two different alleles  
D) the first organism in which a particular mutation has appeared
- 12) Which of the following best defines the term "transgenic organism"? 12) \_\_\_\_\_  
A) an organism that is the first of its kind to bear a particular allele  
B) an organism containing a gene from another species  
C) an organism in which a genetic defect has been corrected using recombinant DNA therapy  
D) an organism containing genes from three or more species