**Cancer Questions For Class Discussion: Nov. 18, 2016 *https://en.wikipedia.org/wiki/CimaVax-EGF***

a) Do cancer cells have any molecules that equivalent non-cancerous cells don't have? What's an example?

b) Why would cancer cells have molecules than normal cells don't? Is it what made them cancerous?

c) The various monoclonal antibodies used to treat cancer bind specifically to what molecules?

d) Is it better for a treatment to convert cancer cells back into normal cells, or better to kill cancer cells?

e) If an over-active enzyme causes cells to grow without control, then will cancer be cured by a drug that inhibits this enzyme? Would such a cure be temporary? or permanent? Sometimes permanent & sometimes temporary.

f) Or would it be better to kill all cells in which this enzyme is over-active? Permanent? Or temporary?

g) What about a non-poisonous enzyme that gets converted into a poison when it contacts molecules of the over active enzyme (i.e. the one that causes cancer?

h) If a cell grows and divides faster than normal, why would you expect that cell to be killed by chemicals that inhibit DNA synthesis or formation of the mitotic spindle?

i) Suppose a growth-inhibiting drug really did selectively kill cancer cells and faster growing normal cells, then suggest hypothetical explanations why this drug might kill, instead of just slowing cell growth and division?

j) Suppose that a drug inhibited the normal cell cycle checkpoint controls, could it be an effective treatment for cancer?

k) Suppose that cancer cells have defective cell cycle control mechanisms (reducing their ability to slow or delay division), how could that be used as part of a method for selectively killing cancer cells?

l) Do you believe that one of the functions of the immune system is to attack cancer cells?

m) In order for cells to be selectively targeted by the immune system, do those cells have to possess some kind of molecule not found in normal cells?

n) Suppose that a certain kind of cancer was caused by inability to undergo apoptosis, would you treat that cancer with drugs that inhibit DNA synthesis? or that inhibit mitosis? Or both?

o) Would you expect faster-growing kinds of cancer to be more curable by chemotherapy than other cancers? What is your reasoning for expecting this?

p) Usually, this is true: many faster-growing cancers are more curable: what do you conclude from this?