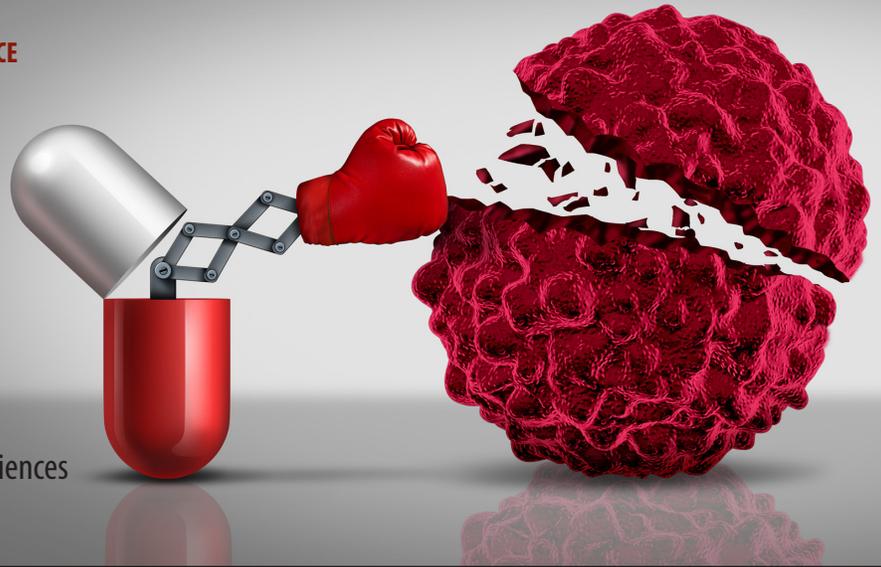


A Cure for Cancer?

by

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Part I – Bad News

Watch the video “A Cure for Cancer?” here: <https://youtu.be/yQbUIwUKv50>. After viewing the video answer the questions below. (If you are unable to watch the video or want to refer back to the story, use the transcript on the next page.)

Questions

1. Try to put yourself into Miranda’s situation. What does she need to know to “wrap her head around this”? What questions would she need to ask?

2. What resources could she consult to help her address these questions?

Devin sits down at the study table to join his friend Miranda.

Devin: Hey. How's the studying going?

Miranda: Not so good. I just keep on staring at my notes and not remembering anything.

Devin: What's wrong?

Miranda: I went home this weekend and I found out my mom has breast cancer.

Devin: That's terrible news! Is she going to be okay?

Miranda: I dunno, the doctors don't know if they caught it in time.

Devin: Caught it in time? What does that mean?

Miranda: They found a lump on her mammogram, but they'll have to do more tests.

Devin: So, what do they have to do then? Does she have to get chemo? Or...

Miranda: I don't know for sure. It depends on what the tests say and if the cancer has spread to other parts of her body.

Devin: Wow, I'm really sorry. You know my aunt actually had breast cancer and they had to remove part of her breast.

Miranda: I just don't understand why this happened. My mom doesn't smoke, she doesn't drink, she's a vegetarian and she runs marathons!

Devin: Well, you live in Clyde right?

Miranda: Yeah.

Devin: Well, I saw on the news the other day that there's actually an unusually high rate of cancer over in Clyde. So, do you think that has anything to do with it?

Miranda: Who knows? I wonder what that means for me too. I've lived in Clyde my whole life. And because my mom had it, does that mean I'm going to get it too?

Just then their friend Roxanna comes over to the table to join them.

Roxanna: Alright, so what chapters is this test over?

Devin: You know the test is tomorrow. Have you even started studying? Whatever, that's not important right now. Miranda just found out her mom has cancer.

Roxanna: Whoa, sorry Miranda! How are you holding up?

Miranda: I'm just really worried about her.

Roxanna: This is crazy. People are getting cancer and dying everyday. This shouldn't be happening when there's already a cure for cancer.

Devin: Wait, wait; what are you talking about? There's a cure for cancer?

Roxanna: Yeah, they cured cancer years ago, but the drug companies won't let anyone have it. They make too much money on their so-called "treatments," which are really just poisons.

Miranda: Is this true? Where did you find out about this?

Roxanna: Open your eyes, Miranda; it's all over the Internet. The government even knows this is going on and they won't do anything about it, because they want to control population size.

Miranda: Now I don't know what to think. I have to go wrap my head around this.

Try to put yourself into Miranda's situation. What does she need to know to "wrap her head around this"?

Part II – What Is Cancer Anyway?

There are a number of credible sources of information that someone could use to learn more about the science of a topic like cancer. The Internet is often a good place to start, but you have to be careful about whether a source of information is reliable. The C.R.A.P. Test (<<http://library.hccs.edu/c.php?g=228355&p=1513568>>) is a useful tool to check the Currency, Reliability, Authority, and Purpose of Internet sources. Here are a few sites you can begin with, but there are certainly many others. Use the websites and videos to learn more about cancer and find information that will help you answer the questions below.

Websites

- American Cancer Society: <<http://www.cancer.org/>>
- Cancer Quest: <<http://www.cancerquest.org/>>
- Centers for Disease Control and Prevention: <<http://www.cdc.gov/cancer/>>
- Medline Plus: <<http://www.nlm.nih.gov/medlineplus/cancer.html>>
- National Cancer Institute: <<http://www.cancer.gov/>>
- Susan G. Komen Foundation: <<http://www5.komen.org/>>

Videos

- Amoeba Sisters. “The Cell Cycle and Cancer” (7:41)
<<https://youtu.be/lpAa4TWjHQ4>>
- Cancer Treatment Centers of America. “What is Cancer?” (6:35)
<https://youtu.be/_N1Sk3aiSCE>
- CancerQuest. “Animated Introduction to Cancer Biology (Full Documentary)” (12:07)
<<https://youtu.be/46Xh7OFkkCE>>
- Healthchanneltv. “Breast Cancer—Symptoms and Treatments” (2:34)
<<https://youtu.be/VsviAPGfPUo>>

Questions

1. What is cancer and how does it relate to the cell cycle?
2. What are proto-oncogenes and tumor suppressor genes, and how do they contribute to cancer?
3. What are some things that might make a person have a higher risk of developing cancer?
4. What are some of the major steps that occur in the progression from a single cancer cell to a tumor and then to many tumors spreading throughout the body?
5. As tumors grow and spread, the cells undergo a number of changes. How might the cells in a late stage tumor be different from the original cell that became cancerous?
6. Why are different types of cancers named based on where in the body they originate (breast cancer, skin cancer, bone cancer, etc.)? Why does it matter from which organ or tissue type the cancer developed?

Part III – How Is Cancer Treated?

After diagnosis, the major methods for the treatment of cancer are surgery, radiation therapy, and chemotherapy. Use the websites from Part II to find the following information for each treatment method: (1) How does it work to treat cancer? (2) What are the potential advantages of this treatment over other treatment options? (3) What are the limitations of this method? and (4) What are the potential side effects? Complete the table below with this information.

<i>Method</i>	<i>1. How does it work?</i>	<i>2. Advantages</i>	<i>3. Limitations</i>	<i>4. Side effects</i>
Surgery				
Radiation Therapy				
Chemo-therapy				

While each of the major treatment methods—surgery, radiation therapy, and chemotherapy—have been used to successfully cure many patients with cancer, they each have limitations and are not a “cure for cancer.”

Questions

1. What would a true “cure for cancer” have to be able to do?
2. Why have many researchers, doctors, and cancer advocacy groups shifted their goal of finding a “cure for cancer” to finding “cures for cancer”?

Part IV – A Cure for Cancer?

In the case study, Roxanna suggested that there is already a cure for cancer that is being suppressed. As she indicated, with even just a quick Internet search you can find numerous examples of this claim about a secret cure for cancer, but is there any basis? Use the following resources to learn more about the conspiracy theory, and apply what you have learned about cancer to evaluate the claim.

1. DNews – “Conspiracy theories: Why we believe” (3:06)
<<https://youtu.be/dXYWLWx0-S0>>
2. SciShow – “Why haven’t we cured cancer?” (8:38)
<<https://youtu.be/7tzaWOdvGMw>>
3. Alltime Conspiracies – “Has the cure for cancer been suppressed?” (5:05)
<<https://www.youtu.be/zeVHyNj4694>>
4. An example of a website that proposes the cancer cure conspiracy theory and offers “alternative” treatment methods.
<<https://www.cancertutor.com/cancer-myths/>>
5. Website offering counterpoints to the most common claims of the cancer cure conspiracy.
<<http://www.crediblehulk.org/index.php/2015/07/02/10-reasons-why-hidden-cancer-cure-conspiracy-theories-fail/>>



Assignment

Now that you have a better understanding of cancer and the hidden cure conspiracy theory, if you were in Miranda’s place, how would you respond to Roxanna’s claim? You must demonstrate your new knowledge and understanding of cancer and the cancer cure conspiracy in one of two ways: Construct an email from Miranda to Roxanna or write a dialogue between Miranda and Roxanna discussing the nature of cancer and the likelihood that a cure exists and is being suppressed. Include details about the nature of cancer and specific claims of the cure conspiracy.

