

RADIOLAB Podcast “Patient Zero” Homework Assignment

Name: _____

Listen to the first two segments of the [“Patient Zero - Updated” Radiolab Podcast](http://www.radiolab.org/story/patient-zero-updated) (<http://www.radiolab.org/story/patient-zero-updated>). Then answer the following questions. Your grade will be based on how complete and correct your answers are.

TYPHOID MARY

1. Specifically how did Mary Mallon spread typhoid bacteria (*Salmonella typhi*) to the families she cooked for, as cooking food kills bacteria?
2. Mary Mallon was an “intermittent carrier” of typhoid. What does that mean?
3. Did Mallon believe she was sick and dangerous? Why or why not?
4. How did the health department officials initially deal with Mallon, once she was identified as a typhoid carrier? Do you think her treatment was fair? Explain why or why not.
5. A few years after being released from quarantine, Mary was re-quarantined on North Brother Island. Why? Do you think her treatment was fair? Explain why or why not.

THE BEGINNING OF THE AIDS PANDEMIC

6. Who was the first person with HIV (Patient 0), *as most people understand the story*? Who is *really* believed to be the first human to have contracted HIV? In what year did he/she live?
7. How did researchers determine who the real “Patient 0” was? Scientists revealed where human HIV originated by looking at genetic diversity between different HIV samples. Explain how this works.
8. Describe where geographically HIV originated and how researchers hypothesize the virus moved out into the world to become a pandemic.
9. What is “spillover”? When and how did HIV spillover, and from what type of animal? Describe the spillover incident. In what area of the world did this occur?
10. How did “Chimp 0” get the simian version of HIV (SIV)? How did scientists determine this?

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