Post-Lecture #8: Radiation Interactions with Matter

1. List each mode of charged particle interaction with matter. How do they differ?

2. List each mode of photon interaction with matter. How do they differ?

3. How does bremsstrahlung differ from beta decay?

4. What is the definition of a delta-ray? What type of particle is it?

5. What is the average energy of an MV bremsstrahlung spectrum?

6. How do collisional and radiation losses differ? How do they change with differing electron energy and target atomic number?

7. Order the following according to which would likely travel the furthest in tissue:

- Proton
- Alpha
- Beta-
- Beta+
- Photon
- Neutron

8. Explain what the Bragg Peak is, and explain why we don't see this with electrons or neutrons.

9. What are the three primary photon interactions? Why do we often ignore the other two?