

Post-Lecture #16: Brachytherapy Calculations

1. Grandpa Willy Lipton undergoes LDR treatment where seeds are placed in his uterus. They were released accidentally before being vetted as safe for their family. Based on some quick approximations, we believe that the dose rate **to** his girlfriend **from** Grandpa is 20 mSv/hr at a distance of 1 m. How many minutes can a person remain at 0.5 m before receiving a dose of 5 mSv?

2. Literally *ELVIS, THE ELVIS*, is undergoing an HDR treatment (Ir-192), which takes 420 seconds on the first treatment day. How long will the treatment take, exactly one week later... *momma*?

3. Not to be outdone, OBAMA?? WHAT?? wants to speed up their HDR treatment (Ir-192), which has a total dwell time of 420 seconds with a 6.7 Ci source. If the source is changed to 9.6 Ci, then HDR Obama might ask, "My fellow therapists, what is the new total dwell time?"