

THE SANTAYANA REPORT – Special Clinical Edition

George Santayana was a Spanish-American philosopher, essayist, poet, and novelist. In 1905, he penned the famous aphorism “those who cannot remember the past are condemned to repeat it.” More than a century later, the saying reverberates with professionals the world over. The following is a summary of a recent incident at Columbia University. The information presented is intended to provide awareness and help readers plan against the occurrence of a similar situation in their work area.

Double Badge Mix-Up – will the real dose record please show up

An individual must wear a radiation dosimeter when working with radiation – whether it is for research applications or clinical use. An intrinsic limitation of a radiation dosimeter is that it does not provide instantaneous feedback to the wearer, and it is therefore critical that dosimeters be returned for read-out as soon as possible after the assigned wear period. Radiation safety closely tracks the read-out results and meets with the individuals who have occupational radiation dose records that exceed the “early-warning” ALARA 2 levels.

Clinical fluoroscopic users are assigned two radiation dosimeters, one to be worn at the collar level external to the lead garments, and the other to be worn at the chest level underneath the lead garments. Radiation dose calculations are built on the assumption that the dosimeters are worn this way. If the dosimeters are worn incorrectly, the calculated radiation dose may be grossly overestimated.

There were two occurrences in 2015 wherein the combined dosimeter errors of being worn incorrectly and being returned late resulted in high apparent dose records. In one of these two cases, the individual needed to stop working with sources of radiation immediately.

Lessons Learned

The common main causes for these events are:

- 1. Dosimeters were not returned on time, and**
- 2. Dosimeters were not worn correctly**

Please ensure that your Radiation Dosimeters are worn correctly. Wearing the dosimeters in the proper location is very important, particularly for personnel who are assigned two or more dosimeters. In addition, please ensure that these Dosimeters are returned on time after the assigned wear period.

Wear your **COLLAR** badge on the **outside** of your lead apron on the collar.
Do NOT place your **CHEST** badge inside the pocket! It is not lead lined!



For further information, or to view previous Santayana Reports, please visit our lessons learned website. For any other safety related matter, please contact the EH&S office.