

## The Value of Experience: Lessons Learned and Pearls of Wisdom Gathered

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Life is full of experiences. Hopefully, most are good ones, but regardless of the type, all experiences can lead to lessons learned and pearls of wisdom gathered. An experienced educator is good at recognizing teachable moments (usually when something goes wrong) and turning them into an educational opportunity for students.

Over my many years of teaching, I have had a fair share of teachable moments. Perhaps the best was a particularly bad day in the radiopharmacy lab. A colleague of mine and I, along with our students, were practicing eluting a  $^{99}\text{Mo}/^{99\text{m}}\text{Tc}$  generator and had pulled from the generator the first elution, which was about 30 mCi of  $^{99\text{m}}\text{Tc}$ . Within a few minutes, we then hit the generator a second time for practice and to show how the level has to build back up, and we pulled 1 mCi of  $^{99\text{m}}\text{Tc}$ . Somehow, within the process of determining molybdenum breakthrough, the glass vial burst (we later suspected that it had a weak spot and broke when it touched the lead shield at the wrong angle). The breakage caused the  $^{99\text{m}}\text{Tc}$  to splatter onto the floor and some nearby students. Spills in the lab are infrequent and often confined to a tabletop, and we usually are able to contain them and work around the issue. However, this time the students panicked, and before we knew what had happened we had a contamination event involving the entire lab. It quickly became apparent that the spill was confined to the lab, so we began the process of clearing out each student one by one. We had them replace their shoes with booties or trash bags and sit on a wheeled chair. After checking them with a Geiger counter, we wheeled them to the door of the lab and allowed them to exit. We decontaminated any students who had been splashed with radioactive material, and some had to change their clothes. The contaminated clothing and all shoes were left in the lab for 3 days to decay to background levels.

There were many lessons learned from this experience. One lesson was the need to resist panicking and running away when an incident such as this occurs. That response only contaminates an even wider area. Another lesson was the need to keep plastic booties in one's lab coat in case they are suddenly needed. (I did have some in my lab coat, but not enough for the whole class.) And perhaps the best lesson was on the need for proper cleanup, the nature of removable

versus nonremovable contamination, and the speed at which a lab can become contaminated from a small amount of  $^{99\text{m}}\text{Tc}$ . The pearls of wisdom gathered from this experience were that we needed extra sets of scrub suits for students in case this happened again, and that using proper personal protective equipment really does contain a spill and keep 90% or more of the contamination on the outer garments, which can be removed,



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stored, and decayed to background levels. Another pearl I learned was that when one reports a radioactive contamination event to the university building managers, they may want to call in the hazardous material team of the city fire department. Luckily, I was able to talk them out of that idea.

In the book *Outliers: The Story of Success*, by Malcolm Gladwell, the author concludes that there actually is a threshold above which experience goes beyond the ordinary to the possibility of professional success through expertise. He gives as examples Bill Joy, Bill Gates, the Beatles, and others, illustrating that although a certain amount of luck is involved, so also is ten thousand hours of basic work and practice in the field or endeavor. A lot of this experience stems from the passion these people have over a prolonged time, working entire days and weeks to hone their skills. Many of the examples in the book are of individuals who were incredibly fortunate in having the time and resources needed to practice and reach a high level of expertise. I found this book fascinating in the examples and research it provides to prove the point. I also agree that experience is valuable and that the many lessons learned from past experiences can lead one to become an expert.

"Researchers have settled on what they believe is the magic number for true expertise: Ten Thousand Hours."

—From *Outliers*, by Malcolm Gladwell

In this edition of *JNMT*, we have one new continuing education article: a report on the quality survey from the

SNMMI-TS. In addition, the annual meeting abstracts are included in this edition, along with several imaging, radiation safety, radiopharmacy, and teaching case report articles. There is a broad range of topics on many different types of procedures, on management of radiation safety, and on changes in patterns of  $^{99m}\text{Tc}$ -macroaggregated albumin use, to mention just a few. The teaching case reports include one on a metastatic pineal gland cell tumor, one on a low-grade mucoepidermoid tumor, and one on an unusual ring artifact produced by a SPECT/CT hybrid system.

As my term as Editor of *JNMT* winds down, I would like to congratulate the incoming Editor, Kathy Thomas, whose term begins January. Her transition starts July 1, and any articles newly submitted from that point forward will be under her guidance through the process. I know the journal will be in good hands under her leadership.

For the online discussion this quarter on the SNMMI Facebook page ([www.snmmi.org/facebook](http://www.snmmi.org/facebook)), I simply ask the question, “Whom do you consider to be an expert, and why?”



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