

The Eyes Have It: Iris Biometrics Safely Identify UCSD Patients for Radiation Oncology Treatment

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A patient getting the wrong medication or the incorrect dosage of medication is a big deal. A radiation oncology patient getting the incorrect dosage or area treated with radiation? Huge. And luckily, uncommon. However, in either instance, patient safety can be preserved with a positive verification and confirmation of the patient's identification. Iris Biometrics, like the technology offered by M2SYS,

where the patient's identification is verified using an eye scan, is one of the safest, most reliable ways to assure the right patient receives the right treatment or medication as prescribed by his or her physician.

Todd Pawlicki, PhD, is Professor and Vice-Chair of Medical Physics in the Department of Radiation Medicine and Applied Sciences at University of California, San Diego. According to Dr. Pawlicki, a series of New York Times articles in 2010 highlighted the risks of radiation treatment and diagnostics, reenergizing the field to focus on quality and safety. "I've been working in quality and safety a long time. There wasn't a mistake-proof solution for knowing with 100% certainty that the right patient is getting the right treatment," he explains. Radiation oncologists prescribe a dose that may be delivered over forty days, depending on the type of cancer being treated. "It's a highly specific treatment - delivering the exact right dose to the tumor while minimizing dose to nearby normal tissues."

With up to fifty patients per day per radiation machine, the treatment procedure is set up to go quickly, moving patients in and out of the radiation treatment room every fifteen minutes or so. It's easier than one might think for an error to occur, for example, administering one patient's dose to another patient. M2SYS, makers of biometric technology, including the RightPatient™ Iris Biometric system that UCSD now uses, is bringing that risk "as close to zero percent chance as we can get it," says Pawlicki. "Although we've never had it happen here, you know it can happen. Now we have the technology to essentially assure that it never will happen."

UCSD's Moore Cancer Center has explored other methods for patient identification verification, such as fingerprinting and palm printing, but ultimately deem the iris scanning as the most secure. It also avoids having the patient physically touch something, which for infection prevention is another big plus. Anecdotally, Pawlicki

shares, “There’s also a bit of a negative connotation associated with fingerprinting.” An interesting fact, “Iris scans check more biometric points about the patient, and are what we call ‘longitudinally reproducible’ in that if we treat a pediatric patient, their iris biometric scan will be the same if they come back at 50,” he explains.

Pawlicki mentions that M2SYS has proven sensitive to the application’s benefit outweighing the hassle of implementation and use, acknowledging that although it’s the company’s first time working with radiation oncology, they have proven eager to mitigate any stressors to the clinical staff or the patients. The company is also open to feedback and to customizing the solution depending on the unique parameters of their deployment. John Trader of M2SYS provides an example, “UCSD is very focused on patient photos as part of their multi-factor identification

approach. They have asked us to make several modifications to the RightPatient identification solution that allows their administrative personnel to see the patient’s photo in a separate oncology treatment health record database.” He says the M2SYS team enjoys discovering additional methods that healthcare organizations like UCSD use Iris Biometrics for to reinforce the confidence that patients are getting the right care. “It’s proving useful on so many fronts in healthcare – error elimination, protection from healthcare fraud and identity theft – both the patients and the hospitals benefit.”

UCSD is looking at tying the radiation prescription and other patient-specific information to the biometric, using it as a communication vehicle as well. “The radiation therapist then gets information regarding the specific patient exactly when they need it – which means it can facilitate workflow as well,” Pawlicki

says, explaining how the Iris Biometric will add value even beyond patient safety. “We’re an academic institution, so we study how something works and then share what we learn, interviewing staff and patients. We’ll look at other potentially useful ways the system can help.”

Once the rollout is smoothly integrated in radiation oncology, the plan is to share it with others in the hospital. Pawlicki feels the application could have many benefits across multiple disciplines. And patients are receptive. “Input from the therapists is that the patients are quite interested in how it works. We encourage patients to ask questions. They love that it’s a safety mechanism that helps guarantee they’re getting the right treatment.”

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