



RO-ILS Radiation Therapist 2024 Great Catch

Challenges from equipment related issues and downstream ramifications on the treatment workflow are familiar to radiation oncology staff. Consequently, rushing often results from machine downtime and can increase the likelihood of an error. A recent [RO-ILS Themed Report](#) found that approximately half of the events in the RO-ILS aggregate database, approximately 17,500, had some component of rushing or a scheduling issue. Whether the events fell into the rushing or non-rushing cohort, radiation therapists are the leading discoverer of events and play an important role in patient safety.

In this RO-ILS event, an attentive radiation therapist identified a multi-leaf collimator (MLC) issue that could have resulted in incorrect treatment.

- Early in the day, one of the treatment machines went down and staff had to replan patients for treatment on other available machines.
- After rushed planning, the urgency of checking a particular patient's treatment plan wasn't communicated to the physics staff, which led to a request for an expedited plan check.
- The patient's appointment was scheduled for 2:30 pm; however, the physics plan check was not completed until around 3:30 pm.
- During imaging for patient setup, the radiation therapists noticed an issue with the MLCs. The AP field MLCs were correctly covering the humerus and elbow, but the PA field had MLCs blocking the middle of the field.
- The dosimetrist verified that this was an error, and the radiation oncologist was notified.
- The patient was replanned prior to receiving treatment.

GREAT CATCH THERAPISTS!

This near miss event highlights some important takeaways:

1. Given their critical role at the end of a long and complex process, radiation therapists must be able to take a holistic look at the treatments being delivered and voice any concerns if something does not look right. The radiation therapist in this case felt empowered to ask questions and make sure they were satisfied with the resolution prior to starting treatment. Practices need to promote psychological safety with all team members, especially therapists as they are the last line of defense against errors.
2. Machine downtime is inevitable and therefore it is crucial to have triage workflow procedures in place. Proactive management of patients in the event of machine downtime can help manage stressors on the facility workflow and throughput. For example, one practice includes a designation of category A or B in the prescription to indicate the urgency of patient treatment, i.e., same day if machine is down OR next day. This process is built into the workflow, allowing for quick and easy triaging and prioritization of patients in unplanned downtimes.
3. While it seems inconceivable to eliminate time pressures, all practices need to develop mechanisms to minimize the potential safety consequences of compressed timelines. Identifying rushing as a contributing factor and analyzing local trends at the facility level are helpful first steps in identifying vulnerable workflow steps. For staff to perform their job duties optimally, as the radiation therapist in this case did, they need to have sufficient time to address and resolve any questions as they complete their work.

SAFETY CHECK

What policies and processes does your facility have in place for when a machine is down?

In honor of National Radiologic Technology Week, RO-ILS applauds the significant contributions and leadership of radiation therapists and the American Society of Radiologic Technologists (ASRT). The 2024 week's theme of "Always on the Front Line of Health Care" is fitting given therapists' critical role in patient safety. Therapists are foundational to safety event submission and tracking, a critical first step for successful incident learning. Therapists also bring an important perspective in offering mitigation strategies and perform critical last safety checks before treatment.

ASRT is a proud supporter of the RO-ILS program. Together, the sponsors and supporters enable U.S.-based practices to participate in the RO-ILS program for free, allowing shared learning and quality improvement. RO-ILS thanks ASRT for their generous contribution to RO-ILS and the field. Radiation therapists are critical members of radiation oncology teams at the practice and national level, and together, via partnership and collaboration, patient safety and quality can continue to improve.