

RO•ILS[®]

RADIATION ONCOLOGY
INCIDENT LEARNING SYSTEM

Sponsored by ASTRO and AAPM

CLARITY

PSO

A Patient Safety Organization

RO-ILS Dosimetry Great Catch

System failures that circumvent multiple safeguards (checkpoints) are at risk of reaching the patient, potentially leading to a serious adverse event with significant negative impacts on their physical and psychological health. These safeguards or slices in the “Swiss cheese” model aid in identifying and preventing failures before an error occurs.¹ Each team member, including medical dosimetrists, plays an important role in the system and in contributing to high quality, safe treatments. Dosimetrists are critical members of the interdisciplinary radiation oncology clinical team and are important assets to patient safety efforts.

In this RO-ILS event, the dosimetrist was the first team member to identify previous radiation that ultimately averted a significant overdose risk.

- A patient was consulted and simulated for right lung and mediastinal treatment.
- Neither the prescription nor simulation documentation mentioned any previous radiation treatment.
- The radiation oncologist contoured the right lung and mediastinal targets.
- During the planning stage, the dosimetrist noticed a previous radiation course in the treatment planning system to the T3-T5 vertebral bodies.
- The dosimetrist developed a new plan with current targets and created a plan sum to show the radiation oncologist.
- The physician had not realized the patient had been previously treated. Based on the overlap of the two courses of treatment, the patient could not receive additional radiation therapy at this time. The patient was notified, and their course of treatment was adjusted.

GREAT CATCH DOSIMETRY!

This near miss event highlights some important takeaways:

1. The dosimetrist was thorough and did not assume that someone else had reviewed previous treatment courses.
2. The three Ps (prior radiation, pacemaker and pregnancy status) are critical medical information that should be explicitly documented early in the workflow, as required by APEX accreditation. In addition to collecting and confirming previous radiation status during consult, this information may be collected as part of a patient intake form, asked by administrative staff before a consult is scheduled and/or confirmed during simulation. Regardless of the process, it must be explicitly documented. Omission of information may indicate that it is irrelevant, or, as in this case, that it was not checked or considered. Therefore, it is helpful for documentation to require a clear “yes” or “no” to act as a reminder for staff and facilitate improved communication.
3. The safety culture at this facility enabled the dosimetrist to question the safety of the treatment without concern for negative consequences.

SAFETY CHECK

If you have a concern with a treatment plan, does your work environment empower you to bring it to a physician’s attention?

Medical dosimetrists are an integral part of the quality assurance team and serve a vital role in preventing, investigating and addressing errors. National Medical Dosimetrist Day is only one day in the year but contributions by the dosimetry team should be acknowledged and celebrated regularly. RO-ILS thanks all dosimetrists for their contributions to patient safety.

At the national level, the American Association of Medical Dosimetrists (AAMD) is a proud supporter of RO-ILS. 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.

References

¹Reason J. Human error: models and management. *BMJ*. 2000; 320:768–70.