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INCIDENT LEARNING SYSTEM
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CLARITY PSO
A Patient Safety Organization

RO-ILS CASE STUDY 18

PICTURES WORTH A THOUSAND WORDS

Introduction

Reproducible patient setup is critical to minimizing setup deviations during radiation treatment delivery. This begins with a well thought out plan for patient positioning and immobilization at the time of simulation. This preparation allows the treatment team to achieve precision and reproducibility during a patient's treatment. Staff involved in a patient's simulation are often not the same individuals as those delivering daily treatment, and because of this, effective communication between teams is critical to ensure consistency in patient setup. This includes accurate and thorough documentation during simulation, which may include photographs, detailed notes, patient alerts if necessary, and measurements. Photographs play a vital role in enhancing the clarity and accuracy of information related to patient setups in radiation therapy. They serve as a visual aid that contributes to the overall quality and reproducibility of the treatment.

Event Overview

- Patient was scheduled for treatment to the mediastinum.
- Patient was simulated with an abdominal compression belt to help minimize respiratory motion.
- The patient's original paper chart was lost and had to be recreated.
    - Digital files were recovered, but none of these showed the belt.
    - Simulation devices were documented on a simulation setup sheet that was not digitally saved.
- After fraction 12, the patient had a re-simulation scan while on-treatment and the physician inquired whether compression had been used because of the poor quality of the scan.
- The treating therapists overheard this discussion and spoke up that compression had not been used during treatment.
- A dosimetric calculation was performed to assess the impact of the error.
- The patient was then treated with abdominal compression for the remaining 10 fractions, as intended.

Contributing Factors

- The digital setup photographs taken during simulation did not include the belt.
- The use of abdominal compression was documented in a paper chart, which was subsequently lost and could not be recreated.

- At this practice, abdominal compression was not documented in the prescription.
- There was an assumption by reviewing physicians that the device was in place during treatment because the on-treatment imaging did not scan low enough on the patient to where the device would be visible.

Lessons Learned/Mitigation Strategies

1. It is critical to capture multiple photographs of a patient's setup, including all devices, during simulation. In addition to the written documentation, photos help the treating therapists (and planners) understand how the patient was set up.
2. Paper charts are prone to being lost and do not have the ability to be recovered when this happens. Implementation of checklists in an electronic format may also reduce risk of handwritten documentation. Moving toward a paperless environment provides a source of backup and easy access to information by various staff members.
3. In addition to the simulation documentation, documentation of abdominal compression in the prescription can provide redundancy. There must be consistency in how and where information is documented. Standardizing documentation establishes clear expectations and well-defined communication channels.
4. In the event simulation documentation is not recoverable, the radiation therapist involved in the simulation should be consulted to provide information regarding the setup.

Conclusion

Incomplete or missing simulation documentation has the potential to lead to safety events downstream during treatment planning and/or delivery. There are many handoffs throughout the radiation therapy treatment workflow, and effective communication and documentation is critical. The event discussed above highlights the risks associated with incomplete or missing documentation. Proper documentation is core to safety, as highlighted in Safety is No Accident.[1] On the topic of patient setup, it specifies that "radiographic and photographic images of the patient in the preferred treatment position are typically necessary." A key mantra of ASTRO's Accreditation Program for Excellence (APEx) program is, "if it's not documented, then it's not done." APEx standards specify the importance of documentation that enables the reproducibility of patient positioning and setup during treatment.[2] Comprehensive documentation is crucial for assisting with patient safety, minimizing errors and supporting the consistency and accuracy of treatment planning and delivery in radiation therapy.

SAFETY CHECK

Does your facility capture several photographs of patient positioning and devices during simulation? Should abdominal compression be "prescribed?" If you work in an environment that uses paper charting, how do you ensure there is a backup for documentation, should a chart be lost?

References

1. ASTRO Safety is No Accident. American Society for Radiation Oncology. Accessed January 30, 2024. https://www.astro.org/Patient-Care-and-Research/Patient-Safety/Safety-is-no-Accident.
2. ASTRO APEx Accreditation 2020 Program Standards. Accessed January 30, 2024. https://www.astro.org/ASTRO/media/ASTRO/Daily%20Practice/PDFs/APExStandards.pdf.

