REX 3 - YEAR 2023

Near-incident description

Two patients are to be treated on the same day with HDR intra-uterine brachytherapy.

The standard patient identification procedure implemented in the radiation therapy department describes how radiation oncologists and RTTs verify the identity of the patient based on name and date of birth before proceeding with the treatment. The RTTs ask who the next patient is, verify name and date of birth when calling the patient from the waiting room, and again verify name and date of birth when positioning the patient in the bunker. It is also the RTTs who select and open that patient's treatment plan at the console.

In HDR brachytherapy, patient verification is done by the RTTs and also by the attending radiation oncologist. Here, however, the treatment plan is selected and opened by the medical physicist who co-supports the HDR treatment.

On the day of the near incident, the RTTs discuss as usual who they will call from the waiting room. The patient's identity is verified several times on the way to the bunker. Once inside, the radiation oncologist also asks the patient's name and date of birth. The medical physicist, along with the physician, connects the catheters to the applicator and remote afterloader and walks back to the console room to open the brachytherapy treatment plan. Since there were 2 patients scheduled that day, the physicist had to choose which plan to open. He opened the second patient's plan and was under the impression that this was the correct patient since he thought he heard that name in the bunker. The physicist listened passively during patient verification, but did not actively participate. Nor does the patient identification procedure require this.

The procedure continues as prescribed, but when trying to start the treatment, the software gave an error message as the number of catheters connected to the afterloader did not match the number of catheters in the treatment plan. Upon investigating this error message, it was discovered that an incorrect treatment plan had been opened. If both patients would have had the same number of catheters planned, the event would not have been noticed and the second patient's treatment plan would have been administered to the first patient.

Root cause analysis

The following root causes have been identified:

Organisational factor: Procedures

The patient identification procedure implemented in the department is designed for external therapy only, where RTTs select and open the treatment plans at the console. It does not take into account brachytherapy where a medical physicist opens the HDR treatment plan.

Human factor: Intervention

- The radiation oncologist and RTTs in the bunker do not pass the patient verification on to the medical physicist.
- The medical physicist listened only passively during patient verification and did not actively participate.

Human factor: Verification

The patient's identity is not verified when opening the treatment plan at the console.

Corrective actions:

Revision of the patient identification procedure. The updated procedure requires the medical physicist opening the HDR treatment plan to actively participate in the patient verification process.