## March 2025 through August 2025 Therapeutic and Diagnostic Machine Medical Reportable Events (MRE)

#### 2025 Fall Meeting

## Therapeutic

- 1. A patient was receiving palliative treatment to the pancreas and thoracic spine using an IMRT technique with daily CBCT imaging, receiving a total of 35Gy in 10 fractions to the pancreas and 30Gy in 10 fractions to the pancreas and spine. Daily CBCT imaging of the fourth scheduled fraction showed a portion of the field treated the wrong site. The alignment of the patient using CBCT was off by a vertebral body (3cm inferior) and the patient was treated in this alignment for the entire fraction. The field of view of the CBCT is limited and bony anatomy that would have allowed for proper alignment was outside the field of view. It was determined that no clinically significant changes occurred as a result of the event. The severity of the event is considered minor and no modifications to the remaining fractions were necessary. Corrections include:
  - For CBCT imaging, verification of all three planes must be reviewed. If bony anatomy is not present in the CBCT field of view, an AP or Lateral image that does contain the bony anatomy will be taken. 3/2025
- A patient was prescribed 15 daily radiation treatments to their pancreas starting on February 24, 2025. The onsite physician reviewed the daily CBCT alignment pre-treatment images for 10 fractions. On the 15th fraction, a CBCT was acquired and all expected shifts from the acquisition were within tolerances. During an offline review, it was determined the CBCT match was misaligned by 2.4cm longitudinally and 1 cm vertically. Approximately 95% of the target volumes received less than 50% of the prescribed dose for that fraction. Additional side effects outside the norm are unlikely. No additional fractions were added. Corrections include:

The network will discuss implementing daily pre-treatment imaging review by the on-site physician prior to each hypo-fractionated abdominal treatment. The current imaging protocol used for breath hold treatments is a spotlight technique. This technique involves a shorter arc acquisition which can be performed in one breath hold for efficiency. To aid in image quality, it has been proposed to implement a full arc CBCT to improve image quality for these cases. These action items will be further discussed amongst the network leaders and a written policy will be developed. 3/2025

- A patient was sent for treatment to the right posterior jawline and left posterior vertex. After treatment, the therapist questioned why it was called left posterior vertex as it was closer to the right side of the head. The original biopsy photo was compared to the set up and it was discovered the biopsy photo was inverted 180 degrees and anatomic landmarks were missing for confirmation. The therapist and provider concluded the wrong side was marked on simulation day. Corrections include:
  - 1. When taking photos of biopsy sites, include a zoomed-out photo so that landmarks can be seen.
  - 2. Ensure iPad is oriented so that the body is up/down and not tilted.
  - 3. The therapist and provider confirm lesion and lesion location before marking the patient.
  - 4.Double check the names of the treatment field match the direction and location of the lesion. 4/2025

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- 4. A patient was being treated for multiple areas, 2 non-melanoma and 1 melanoma site within the same vicinity on the body. During the radiation treatment course, the patient had surgery to remove the melanoma. The surgery adjusted and changed the location of the surrounding skin. The treating therapist was unable to find the original treatment area. The therapist consulted the provider on-site to draw the lesion for treatment. The lesion was agreed upon with the patient, provider, and treating therapist. Depth was measured on the lesion, which was confirmed to be similar to the depth of original lesion. Three fractions were delivered to the treatment spot. During the patient's treatment, it was noticed after healing of the surgery site, that the original location was not the same area as the area indicated in the provider's original drawing. The incorrect lesion received 297.44cGy for 3fractions. Corrections include: When there is an anticipated surgery during the RT course, documentation will change. The SRT lesions will be marked out prior to the surgery. Photographs will be taken of the site prior to and after the surgery. This will allow the team to see how the skin has changed. Doing this will allow the treating therapist to confirm the new location of the lesion. This will prevent questions of the lesions location. 6/2025
  - Planned electron beam treatment to the left temple consisted of two fractions of 200 cGy each for a total of 400 cGy. The first of two fractions of a treatment plan was delivered to the incorrect site. The incorrect area received between 200 to 240 cGy. Corrections include: All policies and procedures applicable to electron treatments were updated. Reeducation of personnel will be conducted. 7/2025