

1. Simulation Check

- a. Patient evaluated or scheduled for evaluation with Electrophysiology to verify device dependency.
- b. Verify that a CIED alert has been added to the patient's record.
- c. Estimate the distance (cm) from the device to the approximate region of interest.
- d. Verify if patient is scheduled for a 4D simulation. If so, determine if the device will be irradiated with direct beam during the 4D simulation. If the CIED may be in direct beam and the patient is device dependent (or status unknown), contact Electrophysiology.
- e. Document the device make, model, and serial number.

2. Planning check

- a. Verify that only 6X photons were used and physical wedges were avoided.
- b. Estimate the distance (cm) from the device to the closest edge of the treatment field.
- c. Estimate the dose/fraction (cGy/fraction) and total dose (cGy) to the device.
- d. Verify the patient's device dependency.
- e. Is the edge of the treatment field > 10 cm from the CIED and/or the dose < 2 Gy (ICP) or < 1 Gy (ICD)? If yes, no further action required. Update patient's record to indicate *in vivo* dosimetry not required on Day One.
- f. Is the edge of the treatment field < 10 cm and/or estimated total dose ≥ 2 Gy (ICP) or ≥ 1 Gy (ICD)? If yes, update patient's record and add a patient alert to page physics to perform *in vivo* dosimetry on Day One.

3. First day of treatment (if patient alert added)

- a. Place *in vivo* dosimeter on CIED under bolus.
- b. Verify imaging fields do not irradiate CIED.
- c. Estimate dose/fraction (cGy/fraction) and total dose (cGy) to the device based on dosimeter readings.
- d. Summarize the *in vivo* results.
- e. If the estimated total dose to the CIED is greater than departmental tolerance (2 Gy for ICPs and 1 Gy ICDs) notify attending and Electrophysiology to determine cardiac monitoring strategy.