

ROTATION: PGY1_BRACHY_CYCLE1
YEAR: PGY1
TIMEFRAME 4 MONTHS (JANUARY through APRIL)
MENTORS: Jared Treas/Dr. Zhengdong Zhang

OVERVIEW:

During the Brachytherapy Cycle 1 rotation, the resident will become familiar with safe use of the HDR remote afterloader and its functions, participate in a variety of QA testing and demonstrate an understanding of radiation safety practices, learn and use of the Oncentra TPS for planning a variety of applicators as well as participate in all aspects of HDR treatments.

CLINICAL OBJECTIVES:

- Learn the basic features and understand how the HDR Remote Afterloader operates
- Know the basic radiation safety precautions and emergency response procedures when using the HDR Afterloader
- Perform HDR Daily QA checks independently and participate in a HDR Ir-192 Source Exchange
- Understand the positional relationship between the Source Position Simulator, Dummy Source, Actual source and how to accurately represent the position within the Oncentra TPS
- Learn and become familiar with the Oncentra TPS
- Create a total of 10 treatment plans using anonymized data sets comprising 2 - Cylinders, 2 - Tandem and Rings (plus 1 w/ HR_CTV), 2 Rotte-Y (plus 1 w/HR_CTV) and 2 interstitial SYED applications
- Understand and demonstrate the ability to generate a second dose check and complete all documentation needed to complete a plan.
- Participate in at least one cylinder and Tandem and Ring treatments to complete the rotation. However, the resident is expected to be involved directly and/or indirectly with the use of HDR Afterloader for QA during HDR treatments until the residency is completed.
- Understand EQD2 doses and how they apply to EBT and Brachytherapy

DIDACTIC READINGS:

- AAPM TG-59 High Dose-Rate Brachytherapy Treatment delivery
- AAPM TG-56 Code of Practice for Brachytherapy Physics
- ESTRO Booklet No 8 A Practical Guide to quality control of brachytherapy equipment

EMBRACE Protocol – A European study on MRI-guided brachytherapy in locally advanced cervical cancer

COMPETENCY:

At the conclusion of the rotation, the level of competency demonstrated by the resident will be evaluated by the mentors completing evaluation forms. If the scores on the evaluation forms are below the acceptable level, the mentor(s) will notify the residency program director for further guidance.