

# Help Us Swim

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Radiation oncology has often endearingly been called “the best-kept secret in medicine,” but this common statement may actually be a disservice to our field. While medical students complete rotations focused on inpatient medicine or surgical specialties, their exposure to radiation oncology is often nonexistent or minimal unless they are interested in the field. However, even colleagues who believe they grasp the main aspects of a radiation oncologist’s job often lack insight into key components required to treat a patient with radiation.

During medical school, we were all warned about the “fire hose” that was about to be turned on with an abundance of new medical knowledge taught during our didactic years. By separating the didactic education from clinical rotations, most trainees master the content and feel confident with inpatient care by the end of their intern year. While medical school often focuses on one topic or organ system at a time, our radiation oncology residency training requires us to learn a significant amount of anatomy, medical and surgical oncology, pathology, toxicity management, and so on for the clinical service that we are rotating on while simultaneously learning the didactic curriculum, radiation biology, and radiation physics. Additionally, new technologies have further increased the number of tasks required of a resident, such as contours needed for intensity-modulated radiation treatment compared with the 2D/3D treatment era and the even more extreme example of treatment plan daily adaptations.

Most residency specialties have clear proficiency goals for residents during each year of training. Given the apprenticeship model used in radiation oncology, an attending’s service is covered by one resident, whose goal

is to complete all service tasks and “run the service” by the end of their PGY5 year. As a PGY2 tries to learn and manage all the tasks, this can feel like being thrown into a deep ocean without a flotation device in a manner that is more overwhelming than the firehose of medical school. Additionally, in discussing daily tasks with residents across various institutions, there seems to be significant variation in how residents spend their time on attending CT simulation scans or weekly see visits, contouring, reviewing plans, adapting daily treatments, studying, etc.

Physician training followed an apprenticeship model through the 19th century, and this “worked” before medical knowledge and treatment methods expanded, resulting in formalized medical school training. Similarly, the rapid explosion of technology, clinical trials, systemic therapies, and new radiation treatment indications (oligometastases, osteoarthritis, etc.) further necessitates the need to standardize education beyond case numbers through competency-based training with entrustable professional activity (EPA) assessments. The Radiation Oncology Education Collaborative Group is actively working on creating EPAs to direct resident task prioritization.<sup>1</sup> Creating guidelines that emphasize which tasks should be mastered in each residency year will hopefully transform the PGY2 transition into a sensation of being thrown into a shallow pool instead of a deep ocean, as well as normalize resident training to increase proficiency in all aspects of future radiation oncologists’ careers.

## Reference

- 1) Jeans EB, Brower JV, Burmeister JW, et al. Development of a United States radiation oncology curricular framework: a stakeholder delphi consensus. *Int J Radiat Oncol Biol Phys*. 2023;115(5):1030-1040. doi:10.1016/j.ijrobp.2022.12.009

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