

***Radiation Oncology
Medical Student Guidelines***

**Medical Student Guidelines
2022-2023**

**Welcome to Department of Radiation Oncology
Thomas Jefferson University Hospital**



We are very excited for you to join us in the Department of Radiation Oncology. We want you to have an excellent educational experience and have outlined in this document some expectations during your time in the department.

During your time with us, you will be involved in patient care, including clinical visits (on treatment, follow-up, and new consultations), multi-disciplinary tumor board discussions, and treatment planning and delivery. We would also expect you to attend our educational conferences. There are many ongoing conferences that you may choose to attend. For example, when you are on the breast service you should try to attend the multidisciplinary breast conference. Just about every service line will have its associated multidisciplinary conference. Most of the conferences are held via zoom. You may also choose to attend some of the resident educational sessions held every Friday. This will give you a great idea about how the residents

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learn and what topics are covered. Ultimately, the goal is to provide you with a solid foundation in radiation oncology and skills and resources that will help guide you in your future career. Within this document, you will find the outlined expectations for your upcoming rotation with us.

Please do not hesitate to contact us with any questions or concerns. Our contact information is included at the end.

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Experience While on Service

The main objective of this rotation is for you to learn about the evaluation and management of radiation oncology patients. To accomplish this, we expect you to participate in aspects of patient care, which include preparation for clinical visits, history taking, the performance of relevant physical exams, and learning about treatment planning and delivery. You are here to learn and are a member of the team. Please feel free to lean on your resident and ask questions of your resident, attending, and therapists. We want this to be a successful rotation for you. There may be assigned readings to help you prepare and learn. We certainly do not expect you to have a significant knowledge base before starting and in fact, most students only have basic knowledge about the field of radiation oncology. We will take care of the rest.

Consults/Re-evaluations:

These are the most beneficial learning opportunities in your rotation. Physicians and residents spend a lot of time preparing and reviewing for these clinical visits, in which we evaluate what will be the role of radiotherapy in a patient's medical condition. You will learn a lot from consults. You will learn about staging, work-up, pathology, and imaging review. You will hone your presentation skills. The more you do the better you get! This is where the conversations start with the team as far as the most appropriate treatment for the patient.

- Look ahead on Epic for the scheduled consultations/re-evaluations for your assigned attending. (please ask our residents how to access the clinic schedule)
- Prepare the relevant history and review it with your assigned resident.
- Review any Oncologic Treatment History including prior chemotherapy, radiation, or surgery (if applicable)
- Imaging reports
- Pathology reports
- Other relevant information discovered through chart review (past history of HTN)
- Try to determine the stage of cancer, if indicated

Read about the disease site and discuss a tentative treatment plan with your resident. This will help to prepare a discussion with your attending about dosing and other treatment modalities. Compile the above (history, stage, treatment plan) before the consult, if feasible.

CT Simulation:

This is the first step after initial evaluation leading toward the treatment phase. At this time the patient will meet up with the radiation oncology team in CT simulator. Consent is obtained and a CT scan will be with performed with or without contrast. The patient will be in the position required for treatment. Your resident and radiation technologist will explain what they are doing and why. This first step is critical to excellent patient setup later.

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Follow-up and On-treatment visits (OTVs):

These visits are also educational but should be secondary to the consultations/re-evaluations. If you see a patient during one of these visits or are shadowing the attending-resident team, it is usually helpful to at least be aware of the diagnosis and radiation treatment details. It is not necessary to prepare documentation for these visits. During the OTV you will learn about the side effects of treatment and how to manage these effects. During Follow-up visits you may see how patients are managed after treatment is complete and work-up necessary to detect recurrence and long-term sequelae of radiation.

Introduce yourself to the patient as the medical student on the team. Wear a clean white coat each day. You may be asked by the resident to go in first to ask about their symptoms and other relevant questions. Eventually, you may be asked to perform these clinical encounters on your own, but in the beginning, it is certainly acceptable to shadow for a couple of visits to understand our process.

For patients that will be treated with RT and undergo CT simulation, it is highly encouraged to participate in contouring. Please see that section within this guideline for more details.

Tumor Boards:

Multi-disciplinary conferences are held for various disease sites throughout the week, typically on a weekly or bi-weekly basis (see schedules). These are often quite popular among students. Typically, it makes the most sense to pick the tumor board for the disease site of the attending you are paired with that day. However, feel free to attend any of the conferences if you are not busy.

Educational Conferences for Residents on Friday:

The residents have educational conferences on most Fridays which include radiation biology and Physics as well as clinical didactic lectures. You are expected to attend the clinical lectures but not necessarily physics or radiation biology. Lunch is usually provided, please give Phyllis your lunch order for Friday. You may discuss the lecture series with your resident and also request a copy of the lecture schedule for that day.

Contouring:

Contouring is an important part of treatment planning for patients receiving radiotherapy and a key responsibility of radiation oncologists. To design the best plan for a patient, we must incorporate our knowledge of anatomy, treatment guidelines, patterns of disease progression, radiobiology, and other relevant individual clinical features.

We typically contour both structures that will be targeted with radiotherapy and those that we want to maximally spare, also known as organs-at-risk (OARs). Participating in contouring will

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enhance your understanding of a patient’s radiotherapy plan, as well as your knowledge of anatomy and radiology.

When you arrive, we will teach you the basics of how to use our software. Before you begin contouring any case, review with your attending or residents what structures you should be contouring and how to do so. First, you should start with contouring OARs, but further along in the rotation, you may be able to progress to contouring gross tumor volumes (GTVs) and clinical target volumes (CTVs), with the guidance of your resident and attending.

In general, the best cases for you to contour will be the patients that you have seen in the clinic so that you are maximally involved in the various aspects of their care. Furthermore, you will likely have a better understanding of the situation for these patients because you had prepared for their visit and will have learned about their disease and how the attending arrived at that treatment decision.

Schedules of multidisciplinary conferences and Grand Rounds

Tumor Board	Day	Time	Location
Brain	Monday	7 am – 8 am	Simon Kramer Conference Room G-312
Uveal Melanoma	Monday	7:30am – 8:30am	Gibbon IR Conference Room 5360
Spine	Monday (2nd and 4th)	8 am – 9 am	Bodine Chairman’s Conference room G-301L
Colorectal	Monday	4pm – 5pm	Surgical Pathology Conference Room 285
Liver	Tuesday	7:30am – 8:30am	Gibbon IR Conference Room 5360
Melanoma	Tuesday	8:30am – 9:30am	Curtis Building Conference Room 1001
Lung	Tuesday	1pm – 2pm	Simon Kramer Conference Room G-312
Genitourinary	Wednesday	7:30am – 8:30am	Surgical Pathology Conference Room 285
Head and Neck	Wednesday	8:30am – 9:30am	Surgical Pathology Conference Room 285
Breast	Wednesday	4pm – 5pm	Adelson Conference Room 3rd Floor
Sarcoma	Thursday (1st, 3rd, and 5th)	1pm – 2pm	Simon Kramer Conference Room G-312
Gynecology	Friday	8 am – 9 am	Surgical Pathology Conference Room 285

(Most being are held via zoom)

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Other personnel

In the department, you will have the opportunity to meet non-physicians that are critically important to patient care. You will also realize how large our team is and how many people are involved in patient care. We work with schedulers, administration, nurses, medical assistants, and physician assistants, social workers but also with physicists, dosimetrists, and radiation therapists.

Non-Clinic Experience

You may encounter these members of the department during your rotation, but you will gain the most out of this experience if you use some of your unassigned time (non-clinical) to learn about their role and how they contribute to the management of a radiation oncology patient.

We have scheduled time for you to spend in CT-Sim to work with the technologists and you will see the importance of set-up, You will have time in dosimetry to work with the dosimetrist that plans radiation treatments, and you will have time at the machines so you can get a better appreciation for final patient set-up and understand the role our therapists play in patient care.

End of Rotation Presentation

You will have the opportunity to present a 20-30 minute PowerPoint presentation to the department on the topic of your choice. There will be 5-10 minutes allotted for questions at the end. This will be an opportunity for you to practice your oral presentation skills and to learn more about an interesting topic in radiation oncology or present some of your research.

It is a good idea to start thinking about your topic during the first week of your rotation and review that with your mentor. Before you present to the department you should review the slides a few days before with your mentor or senior resident. It is not a bad idea to practice your presentation in front of a few residents.

I hope you found this rotation educational and also enjoyable. If you have any questions please feel free to come to my office to discuss them either during or after the rotation. I usually like to meet up with the students the first week and as they complete the rotation for feedback. Phyllis can also be of great assistance. Feel free to swing by if she can help in any way.

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Contact Information

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Resources:

1. <https://roecsg.org/introduction-to-radiation-oncology/>
Covers the basics of what radiation oncology is as a specialty. A good resource to start with.
2. eContour.org
A resource used by residents that describes typical radiation treatment contours. Useful for understanding how we map out our treatment
3. <https://library.jefferson.edu/scott.cfm>
Search for the book – *Absolute Clinical Radiation Oncology Review*, Trifiletti 2019
Available for free to download.
More in-depth information about treatment planning for specific disease sites.
4. Log in to Canvas to review information needed for this rotation
5. AJCC, Staging; 8th edition