

# Radiation Oncology PGY-2 Survival Guide

ACRO Education Committee

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- **DISCLAIMER:** This is a short collection of our biased opinions about how to survive radiation oncology residency. Take them with a grain of salt

# Outline

- Academics
  - Set up for success
  - Consultation
  - SIM
  - OTV
  - Follow-up
  - Self-studying
- Non-Academics
  - Resident well-being
  - Family life
- Resources

# Set up for Success

- Understand that each attending is different
  - Some function well without residents
  - Others expect more resident autonomy
- Approach each attending to have a conversation about expectations before each rotation
  - Dress code, notes, and literatures
  - Review ASTRO refresher course for general overview
  - Not all rotations have a syllabus, do not hesitate requesting guidance if you are struggling with self-directed learning

# New patient consult

- Develop a system for gathering information
  - Perform pre-charting prior to seeing the patient
- Have a mental note about one liner for each patient and ask yourself what you would like to do for the patient
  - Example One-Liner: Ms. X is 75y/o female with a PMHx of HTN, HLD, prediabetes, R breast IDC s/p lumpectomy (2007, pT1aN0, 4mm margin) followed by mammosite APBI (34Gy/10fx), L breast IDC s/p lumpectomy (2016, pT1aN0) followed by anastrozole (8 weeks), LUL adenocarcinoma s/p lobectomy (pT4N0, R1 resection, 9/5/2019) followed by adjuvant chemoRT (60Gy/30fx, carboplatin/paclitaxel 11/5/2019-12/19/2019), and a recently identified RUL mass. She presents to Radiation Oncology for evaluation for definitive radiotherapy.
- Familiarize yourself with general and site-specific side effects
  - 1. Know the patient history
  - 2. Know the options (e.g. standard treatment options, alternatives, available clinical trials, esp if they are available at our center)
  - 3. What's the evidence? Should be able to back up your argument for each option with literatures
- Best way to learn radiation and oncology literatures is through new patient encounters!

# Contour

- Remember this is your case. Try to do the best job, but do ask for help if you are stuck
- Where is the evidence? you should be able to defend why you did what you did
  - Should be able to explain your rationales (e.g. overcontouring apex of prostate because positive margin)
- Look at it from all three views
- Have e-contour open and contour guideline open simultaneously
  - Use econtour, contour guideline, and Nancy Lee guideline books while contouring
- Do not waste time on OAR detail far away from your PTV, as you gain knowledge you will learn what/where is important

# OTV

- Understand the workflow
  - Typically RN, then resident sees the patient to report to the attending
- What do you want to check
  - PE (e.g. skin exam for breast; mental status for CNS)
    - Streamline by asking site specific toxicity (e.g. nausea, diarrhea, dysuria, hematuria, urinary retention, etc. for prostate)
  - Labs (esp, concurrent chemo, leukopenia and thrombocytopenia)
  - Chemo compliance
    - Check med onc note if patient has been complaint with chemo/immunotherapy and also when is the last dose

# FU

- Check notes from other disciplines
- Typically imaging (CT/MRI) and lab check (e.g. PSA)
- Does the patient need radiation or any other interventions? Why or why not
- Use “wrap up” to schedule future follow ups
  - Use NCCN guidelines to determine when the next appointment is needed and what to order
- Order periodic imaging tests/labs

# Self-studying

- Bring a notebook/laptop to keep track of topics discussed during clinic
- Develop a system to gather study materials (e.g. resident lectures, ASTRO refresher courses, and random papers that attendings mention)
- Less emphasis on knowing papers/studies at this point, but attendings will expect more from you with time
- Try to understand a big-picture concepts rather than focusing on details

# Pace yourself and reward yourself

- Clinics can be busy and you are being pulled in many directions (e.g. adaptives, lectures, OTVs, administrative responsibilities)
- Have time away from clinic to spend time with family and friends to recharge
- Develop healthy habits to relax and stay engaged
- Celebrate your small successes everyday and they will give you fuel to keep on going

# Speak Out and Seek for Help

- Resident burnout is real, and do not wait if you have warning symptoms
- Do not wait to ask for guidance (e.g. my first time contouring the brachial plexus took 2hrs, should have asked a senior to show me)
- Speak to seniors that you trust. Many of them have experienced similar situations
- Difficult situations regarding ancillary staffs can also be discussed with senior residents. Chief residents will determine whether this needs to be escalated

# Resources

- Essentials Of Clinical Radiation Oncology (Second Edition)
- Handbook of Treatment Planning in radiation Oncology (Third Edition)
- Pocket Radiation Oncology (MDACC)
- Gunderson & Tepper's Clinical Radiation Oncology (5<sup>th</sup> edition)

- Essential if you haven't made these accounts already
  - [www.nccn.org](http://www.nccn.org)
    - Evidence-based guidelines for every disease site
    - Can click on disease-specific guideline, find the staging, and click through the algorithm to see NCCN recommendations
  - [www.econtour.org](http://www.econtour.org)
    - Has examples of cases contoured for each disease site with links to the appropriate guidelines
    - Not always perfect but a great starting point when learning to contour

- Books

- Essentials of Clinical Rad Onc ([Essentials of Clinical Radiation Oncology, Second Edition: 9780826169082: Medicine & Health Science Books @ Amazon.com](#))
  - Put together by residents of Cleveland Clinic - has good background info on each disease site + all the major data that justifies why we do what we do
  - A nice reference as a student, don't try to read it all now. I would buy this as it will help you a ton in residency.
- Pocket Rad Onc ([Pocket Radiation Oncology \(Pocket Notebook\): 9781496398574: Medicine & Health Science Books @ Amazon.com](#))
  - Like Pocket Medicine but for rad oncs. You can look up any disease site and see the workup, staging, how to sim, doses, constraints etc. This was made at MD Anderson so it's all the Anderson way.
  - Other institutions will do it differently but this is a good guidebook of one way to do things right. Has helped me answer lots of questions during didactics!
- Question based review ([Radiation Oncology: A Question-Based Review: 9781496360366: Medicine & Health Science Books @ Amazon.com](#))
  - Also useful, I think I used a similar thing for my surgery rotation in med school
  - It goes through each disease style in question format.
  - Again, good as a reference but once you get into the evidence-based parts it can be hard to understand as a student

- Online videos

- ROECSG (pronounced "rock-sig") Intro for Med Student videos ([Introduction to Radiation Oncology – ROECSG](#))
  - These lectures were given by Dr. Dan Golden who's at University of Chicago. They are an introductory curriculum for rad onc med students specifically. Goes through very fundamental things to help understand workflow, how radiation works, basic physics & rad bio concepts.
- ROECSG IROC curriculum for incoming residents ([IROC – ROECSG](#))
  - Came from the same group but they have more in-depth explanations on stuff you need to know.
  - Session 4 in particular on plan evaluation is super helpful. I never understood what was happening in chart rounds as a med student cause I had no idea how to evaluate a radiation plan.

- Other websites

- ARRO has a page dedicated to educational resources ([Educational Resources - American Society for Radiation Oncology \(ASTRO\) - American Society for Radiation Oncology \(ASTRO\)](#))
  - Specifically ARROCases are powerpoints that go through different disease sites and review workup, tx plan, and evidence
- ROVER ([Radiation Oncology Virtual Education Rotation \(ROVER\) \(radoncvirtual.com\)](#))
  - Rad Onc Virtual Education rotation - they have a list of resources and some nice videos reviewing various topics
  - You can find relevant videos that apply to the sites you're seeing
- ACRO & ACROdecks (<https://acro.org/page/Residents>)
  - Excellent overview of disease sites, workup/staging, and treatment paradigm

- Podcasts

- At the Beam (started by residents at Stanford & UCLA)
  - Oral board style reviews of different disease sites
- Two Onc Docs
  - Heme Onc fellow board review tool, but they nicely go through treatment paradigms in 15-20-minute segments
- The Fellow on Call
  - Heme onc podcast goes into great detail about disease sites (e.g., 5+ episodes just on breast cancer) but very good for a thorough understanding of the med onc perspective, and they interview other specialties including rad oncs.