University of Minnesota Therapeutic Radiology Residency
UMMC, FV—Dr. Cho’s Rotations

Goals and Objectives

Introduction: Residents spend a majority of their time during our residency program working with faculty at UMMC. The rotations are structured so that each three month block at UMMC is spent working directly with a faculty member (primarily Dr. Dusenbery, Dr. Reynolds, Dr. Yuan and Dr. Cho). This apprenticeship-like structure allows for continuity of experience with the faculty member and his/her patients and opportunities to focus on different clinical aspects of radiation oncology in which each faculty members specializes.

Each faculty member has developed his/her own learning objectives and expectations for their rotation blocks. While there is overlap among the attending physicians, each has defined additional areas of learning and performance expected of residents rotating on his/her service.

The special areas of emphasis when working with Dr. Cho include: treatment of lung malignancies and sarcomas. Dr. Cho places a strong emphasis on the mastery of the principles of evidence-based medicine.

Most Important Goal when working with Dr. Cho:

Learn to practice evidence-based medicine

What is recommended in consultation and planning must be based on scientific evidence. Therefore, constant critical reading of the literature and referencing the literature is a must. Quotations of pertinent references in the consult notes are encouraged.

Other areas of focus:

1. Development of good bedside manners.
2. Be prompt and reliable.
3. Develop inquisitive mind.

Specific learning objectives are provided for each rotation with Dr. Cho (first rotation and second rotation). The learning objectives are referenced to the appropriate ACGME core competencies: Patient Care=PC, Medical Knowledge=MK, Professionalism=Prof, Communication Skills=CS, Practice Based learning and Improvement=PBLI, and Systems-based practice=SBP.

First Rotation (PGY2-PGY3) Objectives: Upon completion of this rotation residents are expected to:

- Learn the natural history, workup, and evaluation of lesions arising from connective tissue, including bone, cartilage, muscle, fat, and blood vessels (MK, PC, PBLI).
- Become proficient in history taking and physical examination techniques that apply to tumors arising from connective tissue, including bone, cartilage, muscle, fat, and blood vessels (PC, MK, CS).
- Understand the anatomy involved in treating these tumors of connective tissue, including bone, cartilage, muscle, fat, and blood vessels (MK, PC).
• Understand the surgical and chemotherapeutic options involved in treating tumors of connective tissue, including bone, cartilage, muscle, fat, and blood vessels (PC, MK).
• Understand the epidemiology and etiology of lung cancer (PC, MK, PBLI).
• Recognize the clinical manifestations of lung cancer (PC, MK).
• Stage lung cancers using the International Staging System using TNM categories for non-small-cell lung cancer (PC, MK, PBLI).
• Develop treatment recommendations for non-small-cell lung cancers and small cell lung cancers (PC, MK).
• Understand the indications for the various treatment modalities for lung cancer including: Surgery, Chemotherapy, Radiotherapy and Sequential vs. Concurrent modalities (PC, MK, PBLI).
• Assess the results of treatments including: Local control, Absolute survival, Cause-specific survival and acute and long-term morbidity of treatments (PC, MK, PBLI).
• Simulate malignancies of all histological types and selected benign diseases including the design of both basic and complex treatment fields (PC, MK, PBLI).
• Evaluate and design isodoses for malignancies and select benign diseases (PC, MK, PBLI).

Second Rotation (PGY3-PGY4) Objectives: Upon completion of this rotation residents are expected to:

• Become proficient in the radiotherapeutic techniques necessary to treat connective tumors, particularly for soft tissue sarcomas where complicated, extended SSD techniques are required (PC, MK, PBLI).
• Understand the late consequences of surgical and radiotherapeutic treatment to connective tissues (MK, PC).
• Understand the specifics of radiation treatment for lung cancers (MK, PC, PBLI)
• Under staff supervision, perform evaluation and treatment planning for lung cancers
• Understand the Dosimetry issues in treatment of lung cancer (PC, MK, PBLI)
• Thoroughly target volumes, margins, and limits (tumor and normal tissues) including: (PC, MK, PBLI)
  Beam arrangements, energies, weighting, compensators, and shielding
  Irradiation dose to tumor and regional lymphatics
  Tolerance limits of critical normal tissues (spinal cord, lung, heart)

Learner Performance Assessment: Resident performance on this rotation is assessed through:

• Attending evaluation of resident performance using global form.
• Direct observation of procedures
• Regular feedback from attending.
• Performance on mock oral exams

Note: Residents will be given Mock Orals near the end of each academic year and must receive a passing grade. If the mock oral demonstrates that the resident does not have an appropriate understanding of the topic for their level of training, then the resident will be asked to give a short talk to the group on a topic assigned by the supervising staff.
Text Books:
Devita Hellman, Rosenbunk: Cancer, Principle and Practice of Oncology
Leibel and Philips: Textbook of Radiation
Gunderson & Tepper: Clinical Radiation Oncology

For this rotation, I have reviewed the Brachytherapy procedures: Curator and Checker Source Preparation, Loading, and Logging. Low Dose Rate Implant Emergency Procedures.