University of Minnesota

Graduate Medical Education

2015-2016

Program Policy & Procedure Manual

Department of Radiation Oncology Residency Program
Program Policy Manual, 2015-2016

DEPARTMENT OF RADIATION ONCOLOGY

POLICIES AND PROCEDURES:
A GUIDE FOR RESIDENTS

Contents
I. Introduction and Explanation of Manual page 5
II. Department and Program Mission Statement page 5

Section 1. Student Services
A. University Pager page 6
B. E-Mail and Internet Access page 6
C. Campus and US Mail page 6
D. HIPPA Training page 6
E. Tuition and Fees page 7
F. Identification page 7

Section 2. Benefits
Stipends page 7
Paychecks page 7
Vacations page 8
Sick Leave page 8
Military Leave page 9
Professional Academic Leave (includes conferences and CME) page 9
Bereavement Leave page 9
Holidays page 9
Personal Leave of Absence page 9
Family Medical Leave/Parental Leave page 9
Parental Leave for Childbirth page 10
Parental/domestic Partnership Leave – Adoption page 10
Jury Duty page 10
Professional expenses page 10
Educational expenses allowance page 11
Policy on Effect of Leave for Satisfying Completion of Program page 11
Health and Dental Insurance Coverage page 11
Long/Short Term Disability Insurance page 11
Professional Liability Insurance page 11
Life Insurance page 11
Voluntary Life Insurance page 12
Insurance Coverage Changes page 12
Workers Compensation page 12
Meal Tickets/Food Services page 12
Laundry Service page 12
Parking page 12
Section 3. Institution Responsibilities

Section 4. Disciplinary and Grievance Procedures

Section 5. General Policies and Procedures

Residency Program Curriculum

ACGME Competencies

Overall Educational Goals for the Program

Performance Expectations by Rotation and Training Year
  First Year Expectations
  Second Year Expectations
  Third Year Expectations
  Fourth Year Expectations

Chief Resident Duties

Rotation Learning Objectives
  University of Minnesota Medical Center, Rotations
    Dr. Reynolds’s Rotation
    Dr. Dusenbery’s Rotation
    Dr. Cho Rotation
    Dr. Yuan Rotation
  VA Medical Center Rotations
  Fairview Lakes Rotations
  Medical Oncology Rotation
  Physics/Dosimetry Rotation

General Clinical and Attendance Expectations

Clinical Responsibilities/Expectations

Consultation

Consents

Treatment Planning

Weekly Examination of Patient Under Treatment

Chart Completion

Follow-up Clinic

Other Medical Records

Logs

Conferences, Journal Club, Didactics, and Seminars

Required meetings

Teaching Responsibilities

Evaluation of Staff and the Program

Radiation Physics and Radiobiology Courses

Seminars

Requirements for Graduation

RMS and Other Evaluation Methods

Formal Evaluations and Tests

Research Requirement

Distinguishing the Difference Between First, Second, Third and Fourth Year Residents and Chief Resident

First Year

Second Year
Third and Fourth Years

Chief Resident Duties

Training/Graduation Requirements

Rotations

History and Physical Examination

Consents

Treatment Planning

Radiation Physics and Radiobiology Courses

Examinations

Duty Hours

On-Call Hours/Schedules

On-Call Rooms

Support Services

Laboratory/Pathology/Radiology Services

Medical Records

Security /Safety

Moonlighting

Supervision

Fatigue

Graded Responsibility

Monitoring of Resident Well-Being

Grievance Procedure and Due Process

Path of Resolution/Conflict

ACLS/BLS/PALS certification

Visa policy

USMLE Step 3 policy

Section 6. Administration

Department Faculty

Department Contact List

**Introduction/Explanation of Manual** Welcome to the Residency Program in the Department of Radiation Oncology at the University of Minnesota! The faculty and staff in this department hope that the time you spend with us will be both educational and enjoyable. The Program Manual is specific to the Department of Radiation Oncology.

All materials are intended to be written in accordance with the Accreditation Council for Graduate Medical Education and the Guidelines constituted by the American Board of Radiology.

Please note information in Institution Policy Manual will not be replicated in Program Policy Manual. Also, all information outlined in this manual is subject to periodic review and change. Revisions may occur at the program, medical school, or University of Minnesota level.

Residents are responsible for familiarizing themselves and adhering to the policies and guidelines contained in this manual.

**Department and Program Mission Statement** The Mission of the Department of Radiation Oncology is to conduct high quality education, cutting-edge basic and clinical research and provide excellent patient care. The department is committed to and serves the broader mission established by the University of Minnesota Academic Health Center to be a leader in the ethical, innovative and efficient discovery and dissemination of knowledge and to enhance the health and well-being of people in Minnesota, the nation and the world.
SECTION 1 - SERVICES

UNIVERSITY PAGER
The Department provides residents, also referred to as Medical Residents, with an individual digital pager that is to be utilized for both standard and on-call duties. The trainee will obtain the pager from the Residency Coordinator and will utilize the same pager over the course of his/her training. During duty hours you must have your pager with you. If you forget your pager a loaner pager is available at the UMMC information desk at no charge.

E-MAIL AND INTERNET ACCESS
As students at the University, Medical Residents are provided with an e-mail/internet access account. Email and Internet access can be obtained through Computer Support Services on the first day of orientation. With this account trainees can access the Internet and e-mail from any of their assigned training sites. They should use this privilege responsibly. Information will periodically be sent to you by email. It is your responsibility, to check your email often. (At least once/week)

Website addresses:
Radiation Oncology- http://www.med.umn.edu/trad
GME- http://www.med.umn.edu/gme
Medical School- http://www.ahc.umn.edu
HIPPA training: https://myu.umn.edu

CAMPUS AND US MAIL
Residents are given a Department mailbox and may utilize the campus mail system at no charge. The campus mail drop box and resident mailboxes are located in the Masonic Building, M10 copy room. Medical Residents may receive professionally related campus or U.S. Mail as well. Trainees should not receive or send personal mail through the campus mail system.

Departmental Address: Radiation Oncology
Mayo Mail Code 494
420 Delaware St., S.E.
Minneapolis, MN 55455

HIPAA TRAINING
HIPAA training is mandatory for all University of Minnesota medical students, faculty members, researchers and staff. Residents are expected to preserve patient confidentiality as per University policy at all times. Failure to due so may result in disciplinary action or dismissal.
TUITION AND FEES
Tuition and Fees are being waived at this time. Trainees enrolled in Graduate School do pay tuition fees.

IDENTIFICATION
A nametag with the resident’s name and job title must be worn when in patient care areas.

Whenever seeing a patient in the clinic or on the ward, introduce yourself. Tell the patient your role in their care (“I am a radiation oncology resident working with Dr. ___________, your doctor; Dr. Peterson (for example) has asked us to see you for a consultation”). ALWAYS give them a business card with your name on it and your staff members name on it.

SECTION 2 - BENEFITS

STIPENDS
Medical Residents, who meet Department and University requirements, are appointed to one-year training positions from July 1 to June 30 of the following year (unless otherwise agreed to in writing).
Please see http://www.med.umn.edu/gme/directors/finance.html for base stipend rates for Medical Residents.

Medical Residents are subjected to withholding of federal and state income taxes (FICA).

PAYCHECKS
All trainees receive stipend/pay checks every two weeks. Residents are encouraged to sign-up for direct deposit. Residents participating in direct deposit may view their pay stubs on line at https://www.myu.umn.edu Paper checks are no longer available.

Questions pertaining to payroll, taxes, deductions, W2s, etc., are to be directed to the ALRT Center Payroll Office:
Moyya Randall: 612-626-6353
**VACATIONS**
On an annual basis each resident receives 15 vacation days (15 working days). **NO** vacation days can be carried over to the next year. The minimum length of a vacation is one day. The PGY1 resident may not take vacation during the first month of residency. The PGY5 resident may not take vacation or meeting days during the last 5 weekdays (Monday through Friday) of their residency. During the first 5 weekdays (Monday through Friday) of each July, a senior resident, PGY4 or PGY5, must be available at the University Hospital to assist with orientation of the PGY2 resident(s).

Since the Mock Orals are mandatory for PGY3, PGY4, and PGY5 residents, no vacation may be taken on the Saturday of the Mock Oral exams, unless approved in advance by the Residency Program Director and the Resident’s Staff Physician. Mock Orals are given on a Saturday in April. They are optional for PGY2 Residents.

Except for emergencies, all vacation day requests must be approved at least two weeks in advance.

In order to request vacation time, a resident first asks his or her staff doctor if those days are acceptable. If the staff doctor is planning on being gone those days as well, the resident must ask the staff person who will be on-call that week. If the staff doctor and/or the on-call doctor approve the request, the resident fills out a Leave Request Form located in the Copying Room (M-10 Masonic) and on WordPress. The Leave Request Form must be approved by the Residency Program Director and the Head of the Department.

Vacation is approved on a “first come first served basis”.

Neither vacation nor meeting requests will be approved for the last day of the Resident’s program. The University of Minnesota Regents Policy states “Vacation may not be used to extend the period of appointment beyond the last day of work.” Consequently, it is University practice that the Resident must be physically present in the Department on the last day of their appointment.

**SICK LEAVE**
Residents must call in sick as soon as they know they are unable to show up for work because of acute illness of himself or herself or child/children. They must inform the Program Coordinator 612-626-2631, and the physician staff of their current rotation. They should speak in person with either the residency coordinator, or someone in their rotation and fill out a request form when they return.

Days of absence due to illness are considered paid leave up to 10 days per year. Absence due to illness exceeding 10 working days in an academic year will be charged as vacation. There is no carryover from preceding years. In the event that a resident has exhausted all of his/her vacation leave, this time will be charged as unpaid leave. While on unpaid leave, the resident is responsible for payment of any insurance (residents on unpaid leave will be billed monthly).
MILITARY LEAVE
Military leave is granted in full accordance with State and Federal regulations. The Program Director must be promptly notified in writing when a Medical Resident requires military leave.

MEETING DAYS/PROFESSIONAL DAYS
A total of 15 days are allowed for attendance at national meetings during the four years of Radiation Oncology residency.

For presentation at a meeting, each trip is limited to 3 consecutive days. Any additional weekdays must be considered vacation or unpaid time.

For attendance at ASTRO without a presentation, the number of meeting days allowed is the number of weekdays during which ASTRO is held plus one day for travel. Any additional weekdays must be considered vacation or unpaid time.

Residents do not accrue professional days.

BEREAVEMENT LEAVE
Please refer to Institution Policy Manual for policy.

HOLIDAYS
Holiday schedules vary, depending on the institution. When rotating to a particular site, the holiday schedule for that institution must be followed.

PERSONAL LEAVE OF ABSENCE
If Vacation time is used up for the year, and upon the approval of the Program Director, a Resident may arrange for an unpaid leave of absence away from the training program. While on unpaid leave, the resident is responsible for payment of any insurance (residents on unpaid leave will be billed monthly).

FAMILY MEDICAL LEAVE / PARENTAL LEAVE
An unpaid leave of absence for serious illness of the resident; serious health condition of a spouse, parent or child/children; shall be granted through formal request. The chief resident and the Program Coordinator should be concurrently notified of the leave request by e-mail as soon as possible. The length of leave will be determined by the Program Director based upon an individual’s particular circumstances and the needs of the department, not to exceed twelve (12) weeks in any 12-month period. Residents taking family medical leave must submit the following documents to the Program Coordinator:

- FMLA: Certification of Health Care Provider
- FMLA: Leave Response/Notification

The above forms can be accessed online in the Forms Library under “Human Resources” at http://www.fpd.finop.umn.edu/groups/ppd/documents/main/formhome.cfm. While on unpaid leave, the resident is responsible for payment of any insurance (residents on unpaid leave will be billed monthly).
PARENTAL LEAVE FOR CHILDBIRTH
A female resident may, upon written request of the Residency Program director copied to a Chief Resident and Program Coordinator, take up to six weeks paid maternity leave related to the birth of her child.

The paid leave must fall within the term of appointment and must be taken consecutively and without interruption. After using two weeks paid time off Short Term Disability begins (14 day wait period). Please see your coordinator for application forms. While on leave, the resident is responsible for payment of any insurance (residents on unpaid leave will be billed monthly).

A male resident or a partner in a registered domestic partnership may upon formal request, take up to two weeks paid paternity/partnership leave related to the birth of a child. The chief resident and the Program Coordinator should be concurrently notified of leave requests by e-mail as soon as possible. All leave time must fall within the term of appointment and must be taken consecutively and without interruption. While on unpaid leave, the resident is responsible for payment of any insurance (residents on unpaid leave will be billed monthly).

Disabilities associated with childbirth and pregnancy will be treated like any other disability.

PARENTAL/DOMESTIC PARTNERSHIP LEAVE – ADOPTION
A female resident may, upon request, may take up to two weeks paid leave and up to two weeks leave without pay related to the adoption/birth of a child. All leave time must fall within the term of appointment. All leave must be taken consecutively and without interruption. After using all unused vacation, any additional leave will be without pay. While on unpaid leave, the resident is responsible for payment of any insurance (residents on unpaid leave will be billed monthly).

A male resident or partner in a registered domestic partnership may, upon request, take up to two weeks paid leave related to the adoption of a child. All leave time must fall within the term of appointment. All leave must be taken consecutively and without interruption. After using all unused vacation, any additional leave will be without pay. While on unpaid leave, the resident is responsible for payment of any insurance (residents on unpaid leave will be billed monthly).

JURY DUTY
Jury duty and court leave will be authorized consistent State and Federal Court requirements. The Program Director must be promptly notified when a Medical Resident requires jury duty or court leave in writing.

PROFESSIONAL EXPENSES
The department will reimburse the resident for the cost of ABR annual fees for initial certification as outlined at theabr.org. (Reimbursement will not include Late Registration fees, Late Payment fees, Cancellation fees, Exam No-show fees or Re-exam fees).

Only oral presentations at national meetings – ASTRO, ASCO or RSNA - will be considered for reimbursement. Residents must submit their travel plans for approval in advance. All travel requests must be made in writing and include a projected budget (including registration, airfare and hotel costs). Residents will be reimbursed for the meeting registration fees, transportation and food/lodging for two nights up to $1,500.00 per meeting. The same presentation can be
made only once. Only one resident can utilize meeting days per project per trip. Once a paper is presented, a manuscript must be completed and submitted for publication before another trip is approved.

Travel funding for subsequent meetings may be refused if the resident has failed to complete and submit a manuscript of research presented at a prior meeting.

The department may support residents at any meeting from which they receive a travel award. Residents will submit the estimated travel expenses, less the travel award amount, along with a copy of the abstract and/or manuscript that won the award to the Program Director and Department Chairman for approval.

Residents may attend one ASTRO meeting during the fourth or fifth year of training at their own expense. Requests for attending ASTRO should be submitted in writing to the Program Director and Department Chairman and will be considered on a first-come, first-served basis, with priority given to residents presenting papers.

EDUCATIONAL EXPENSE ALLOWANCE
The department will reimburse the resident for professional expenses incurred up to $3,000 during the course of their residency which includes ABR dues.

POLICY ON EFFECT OF LEAVE FOR SATISFYING COMPLETION OF PROGRAM
The American Board of Radiology stipulates that leaves of absence and vacation may be granted at the discretion of the program director and/or department chair. Within the required period of graduate medical education, the total such leave and vacation time may not exceed the following: 12 calendar weeks (60 working days) in any two years, 18 calendar weeks (90 working days) in any three years, or 24 calendar weeks (120 working days) in four years. If a longer level of absence is granted for any cause, the required period of graduate medical education must be extended accordingly.

For additional information on leave policies, please see the GME Website at http://www.med.umn.edu/gme/

HEALTH AND DENTAL INSURANCE COVERAGE
For clarification and/or further information, refer to the Office of Student Health Benefits at: http://www.shb.umn.edu/twincities/residents-fellows-interns/m-residents-fellows-health-plan.htm

LONG/SHORT TERM DISABILITY INSURANCE
For clarification and/or further information, refer to the Office of Student Health Benefits.

PROFESSIONAL LIABILITY INSURANCE
For clarification and/or further information, contact Karina Lawrence, Program Coordinator or see the Institution Policy Manual.

LIFE INSURANCE
For clarification and/or further information, refer to the Office of Student Health Benefits.
**VOLUNTARY LIFE INSURANCE**
For clarification and/or further information, Office of Student Health Benefits.

**INSURANCE COVERAGE CHANGES**
For clarification and/or further information, contact Karina Lawrence, Program Coordinator or see the Institution Policy Manual.

**WORKER’S COMPENSATION**
For clarification and/or further information, contact Karina Lawrence, Program Coordinator or see the Institution Policy Manual.

**DESIGNATED BELOW.**
For clarification and/or further information, contact Karina Lawrence, Program Coordinator at 612-626-2631 or the ALRT GME Manager at 612-625-3518.
Questions regarding liability insurance should be directed to:

Pamela A. Ubel, Office of Risk Management and Insurance  
1300 South 2nd Street, Suite #208 WBOB  
Minneapolis, MN 55454  
Phone: 612-624-5884  Fax: 612-625-7384  Email: novic002@umn.edu

**MEAL TICKETS/FOOD SERVICES**
The department does not provide meals for Residents.

**LAUNDRY SERVICE**
The department provides Medical Residents with standard laboratory coats at the start of their residency. Laundry service is provided by the department and is located in M10 office where soiled laboratory coats can be dropped off.

**PARKING**
The department has a limited number of contract parking cards. These cards are temporarily made available at no cost to the residents for their rotations at the University of Minnesota Medical Center Fairview (UMMC). These cards are rotated between all of the residents. Residents not currently rotating at UMMC must return the parking card to the Program Coordinator, who will then temporarily reassign that card to a resident currently rotating at UMMC. Parking is free at the VA Medical Center and a permit can be obtained by the resident from the VAMC department receptionist. Parking is free at University of Minnesota Physicians Radiation Therapy Center.

**SECTION 3 - INSTITUTION RESPONSIBILITIES**
SECTION 4 - DISCIPLINARY AND GRIEVANCE PROCEDURES

SECTION 5 - GENERAL POLICIES AND PROCEDURES

PROGRAM CURRICULUM

It is our objective to train well-rounded Radiation Oncologists who will know indications and contraindications for radiation therapy, be familiar with and able to utilize all modalities of radiation commonly used, and understand the possible adverse side effects and ways to minimize them. Additionally, the resident needs to be familiar with indications and contraindications for the use of chemotherapeutic agents, understand the principles of surgical treatments and be informed in basic radiation biology and tumor pathology. Through completion of the training program residents are enabled to qualify for and be certified as a Radiation Oncologist by the American Board of Radiology.

We also stress that in achieving these levels of competence that residents develop and show the skills necessary to communicate with referring doctors, associates, departments, hospital staff and most importantly the patients and their family. The concept of treating the patient and their needs as well as the disease is stressed.

To accomplish this, residents rotate on a three month basis with different attending staff who specialize in and treat various different diseases. The residents work with staff in different settings ranging from a University based teaching hospital (UMMC), to a community setting (Fairview Lakes) and a VA Medical Center. Rotating with the different faculty physicians allows for exposure to different treatments, interaction styles and environments as well as offering a wide variety of patients and disease types.

Clinical training is augmented by various multi-modality specialty conferences as well as morning conferences designed to discuss the patients as a group and optimize treatment strategies. There are also didactic lectures dealing with various topics in Oncology ranging from disease specific talks to those on pain management and end of life issues. There are also journal clubs that discuss recent literature and a mortality and morbidity conference that addresses radiation complications, how to avoid them, their cause and their treatment. The residents are also required to develop, work and present a research project, which must be prepared into a finished manuscript for submission for publication by the completion of the residency.

All residents are required to take and pass three semesters in radiation physics and one semester of radiation biology. These courses are provided and time is allocated for the resident to attend the lectures. These courses provide the basic information to understand and prescribe treatments and meet the standards set by the American Board of Radiology.
ACGME COMPETENCIES: Residents must demonstrate the following ACGME Competencies:

- **Patient Care** that is compassionate, appropriate, and effective for the treatment of health problems and the of health.
- **Medical knowledge** about established and evolving biomedical, clinical, and cognate (e.g., epidemiological and social-behavioral) sciences and the application of this knowledge to patient care.
- **Practice-based learning and improvement** that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, and improvements in patient care.
- **Interpersonal and communication skills** that result in effective information exchange and collaboration with patients, their families, and other health professionals.
- **Professionalism**, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.
- **Systems-based practice**, as manifested by actions that demonstrate an awareness of and responsiveness to the larger context and system for health care and the ability to effectively call on system resources to provide care that is of optimal value.

**Overall Educational Goals for the Program**

The educational goal for the program and its rotations are referenced to relevant ACGME Core competencies of patient care (PC), medical knowledge (MK), professionalism (Prof), interpersonal and communication skills (CS), practice based learning and improvement (PBLI), and systems-based practice (SBP).

Upon completion of the training program residents are expected to:

- Understand the epidemiology, etiology, and natural history of all major types of malignancies in children and adults (PC, MK, PBLI).
- Perform accurate staging of major malignancies in children and adults (PC, MK, PBLI).
- Perform simulation of 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 (MK, PC).
- Perform brachytherapy (PC, MK)
- Effectively communicate with patients and families to explain diagnosis, plan treatment, and discuss outcomes (CS, PC, Prof)
- Understand and perform the various radiation therapy techniques and dosages used to treat malignancies (PC, MK, SBP).
- Understand the expected outcomes when these radiation therapy techniques are used and the effects of radiation on the normal structure(s) (MK, PBLI).
- Possess a detailed knowledge of radiation physics and tumor biology (MK, PBLI, PC).
- Understand the acute and late effects that a patient may experience during and after radiation therapy (MK, PC, PBLI).
• Understand the major types of alternative therapies and the relative risk and benefits of those therapies (MK, PC, PBLI, SBP).
• Provide follow-up of patients previously treated with radiation therapy including the judicious use of diagnostic x-rays and lab tests (PC, MK, SBP).
• Work effectively with members of the treatment team including technicians, physicists and nursing staff to coordinate and deliver treatment (PC, SBP, Prof).
• Critically read, interpret and apply appropriate scientific evidence to patient care (PC, PBLI).
• Consider cost and benefit when discussing and planning treatment options with patients and families (PC, SBP, MK).
• Skillfully and honestly discuss end of life and palliative measures with patients and families (PC, CS, MK).
• Recognize areas for error and recommend changes to improve safety (PC, SBP).

Performance Expectations by Training Year:

First Year Expectations PGY2: Being interested and enthusiastic are the best ways to excel in the first year. The expectations for first year residents are generally to learn the following:

• Learn vocabulary unique to Radiation Oncology (CA, compensators, collimation, gantry angle, wedges, monitor unit, etc).
• Prescribe doses, develop general ideas of what doses are given for the routine situations encountered.
• Write a prescription in Mosaiq or Aria. Write a written directive for brachytherapy.
• Be knowledgeable and competent at handing, transporting and recording the use of radioactive isotopes.
• Take a through and appropriate history and physical
• Clearly tell the staff physician what the assessment (and AJCC stage) the patient has.
• Have a general idea of how to work up patients for their particular cancer (which tests are used to stage that particular cancer). If you know which treatments are used for which stage you are doing really well at this point.
• Know the spread pattern of the common cancers.
• Learn how to check port films and IGRTs.
• Know how to access pathology reports, review films with the diagnostic radiologist.
• Understand the basics of the surgical and chemotherapeutic approaches to the common cancers (i.e. what is a radical hysterectomy? What is adjuvant chemotherapy versus neoadjuvant chemotherapy?)
• Follow your patients closely; being certain you understand how their treatments are being delivered.
• Begin a patient case log. Enter your cases into the ACGME web site after each rotation. ACGME web site: http://www.acgme.org/, see Resident case log.
• Understand what you are treating and why.
• History Taking Ability - demonstrates completeness/accuracy of dictated history from consult/follow-up
• Physical Examination Ability - has examination thoroughness/accuracy from dictated consult/follow-up
• Timeliness - completes interview/exam in timely manner; timely in pages/etc.
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- Treatment Managements - manages complex problems of patients on treatment (grade 3-4 complications)
- Simulation Set up - appropriately documents simulation; assists at simulation
- Simulation Contouring – basic – able to do simple organ contouring and GTV, CTV and PTV
- Simulation of Metastatic disease - knows appropriate field definition, fraction/dose information
- Documentation - competes notes in a timely manner, reasonable length
- Investigatory thinking - Evidence of reading of texts/literature
- Physics questions – Takes Physics course and must pass all quizzes with a B average
- Empathy - demonstrates compassion in patient interactions
- Attitude - creates a constructive environment for patient/family
- Communication with Patients/Families - Open to discussions/requests of patient/family
- Communicates information to patient/family - Open to discussions/requests of patient/family
- Respectful behavior - Demonstrates mutual respect in patient/family interactions
- Attitude - Creates a constructive environment for pt/family
- Timeliness - Timely in patient response, pages
- Department Citizenship - Demonstrates an ability to work with others in cooperative/respectful manner
- The Director meets with each trainee individually to review their annual progress in June and discuss eligibility for promotion to the next level of training.

Second Year Expectations PGY3: By the second year, the resident is expected to begin understanding the indications and contraindications for the use of radiation therapy. The tasks, which took great lengths of time as a first year resident, should be much easier and done faster now. The second year resident needs to know the staging work-up for most of the cancers in detail and, after evaluating the patient, should be able to discuss the pros and cons of using radiation for that particular patient. Patient directed reading is probably the most important thing you can do in the second year. Read the textbook chapter section pertaining to the patient you saw that day. Ask the staff lots of questions.

Second year resident are expected to:

- Being able to discuss the appropriate staging work-up in detail.
- Know the organ tolerances in detail.
- Discuss the acute and long-term side effects of using radiation.
- Prescribe total dose and fraction size for the common tumors treated.
- Determine the target volume for different situations (i.e., what to include if the patient has a Stage I seminoma, or a T1 larynx cancer).
- Understand the University of Minnesota technique for the various tumors in detail. If no technique exists, know the most common technique in the textbooks.
- Start to know the important articles in the literature in detail. It’s a good idea to keep a file of the “important” papers, which usually are the randomized trials, or key reports pertinent to our specialty. Your staff person will help you with this.
- Teach and to set a good example for first year residents.
- Continue to keep Patient case logs up to date on the ACGME website.
• ACGME web site: http://www.acgme.org/, see Resident case log.
• Start working on a research project. Try to do this as early in the year as possible.
• Simulation Contouring-complex - contours complex/multiple organs accurately without supervision
• Multitasking -Managing multiple difficult patients without assistance
• Intellectual curiosity - Takes time to look up/ask probing questions to clinical dilemmas
• Radiation Biology questions- Takes Radiation Biology course and must pass all quizzes with a B average
• Dosimetry knowledge - Has in-depth understanding of the abilities and limitations of dosimetry.
• Interactions with Desk/Secretary/RTT – Responds appropriately to pages/requests
• Communication/presentation of data - Able to transmit information to therapists-written and verbal
• Patient-centered Care - Puts patient at the center of discussion/care
• Ethics - Demonstrates ethical behavior in mgt in all clinical arenas
• Patient Centered Care - “Needs of the patient comes first”/advocate for patient
• Uses scientific evidence - Appropriate application in patient cases
• Assessment of research - Able to evaluate and integrate current literature
• Quality Improvement - Project: description of a QI project
• Interpretation of information - Able to discern and optimize treatment plans
• Demonstrates ability to coordinate care for patient – social services/PMR/DDS, etc.
• The Director meets with each trainee individually to review their annual progress in June and discuss eligibility for promotion to the next level of training.
• Participate in Mock Orals

**Third Year Expectations PGY4:** By the third year, things are starting to “come together.” By this time the resident should be able to work relatively independently, using the staff person as a resource. You learn the most by trying to make decisions on your own, and then telling your staff person what you think (since they have to check everything you do anyway). Committing yourself in this way will make it a lot easier when you are on your own. In particular you are expected to:

• Procedural abilities - Competency in brachytherapy without direction
• Brachytherapy and brachytherapy dosimetry - Able to apply brachytherapy in an appropriate setting; understands and applies brachytherapy dosimetry
• Brachytherapy technical skills – has technical skills that allow independent use of brachytherapy
• Teaching - Demonstrates the ability to convey information
• Documentation – Documents a complex patient care situation
• Know the staging systems for the usual (and unusual) cancers.
• After seeing a patient, not only give a good history and physical, but also an assessment and plan.
• Be able to discuss whether RT is indicated and why, what other treatments might be available and why they are or are not indicated.
• Know the technique by which you plan to give the radiation, the dose you would give and the expected side effects.
• Be able to direct a simulation from start to finish.
• Be able to draw the target, give directions to the physicist, and evaluate the computer plans generated.
• Know when to use the different devices (IJ, wedge, compensators)
• Be familiar with, and know the indications for techniques such as:
  o - HDR Brachytherapy
  o - Stereotactic Radiation
  o - Intraoperative Irradiation
  o - Prostate Brachytherapy
  o - 3D Conformal Radiation Intensity Modulated Radiation Therapy (IMRT)
• By now the resident should be familiar with the RT literature and be working at knowing it in great detail.
• Residents are expected to teach and to set good example for first and second year residents.
• Participate in Mock Orals (Given in April)
• Continue to keep Patient case logs up to date on the ACGME website.
• ACGME web site: http://www.acgme.org/, see Resident case log.
• Application of research - Research project demonstration indicating application
  Interaction with professionals - Coordinates local care of patient during RT.
• Fund of Knowledge - Able to demonstrate a well rounded fund of knowledge
• Clinical Knowledge - Passes >50% of questions on in-service examination
• Radiobiology Exam - Passes >50% of questions on in-service examination
• Radiation Physics Exam - Passes >50% of questions on in-service examination
• Residents will be given Mock Orals at the End of each rotation and must receive a passing grade. *If the mock oral exam demonstrates that the resident does not have an appropriate understanding of the topic for their level of training.*
• The Director meets with each trainee individually to review their progress in June and discuss with eligibility for promotion to the next level of training.
• Participate in Mock Orals

**Fourth Year Expectations PGY5:**
• Independent function - Begins to function with minimal correction on supervision
• Difficult scenario - Presents/manages a difficult pt care situation-social/emotional
• Analytical thinking – Able to evaluate and manage complex patient situations; able to integrate complex issues
• Residents will be given Mock Orals at the End of each rotation and must receive a passing grade.
• Complete your research project. Prepare your project for presentation at a Tuesday Night Conference in May or June of their senior year. Residents must submit the final project during May or June of their senior year to the Director.
• Complete a QA project
• Submit patient logs for final review.
• Cost conscious care - Considers cost in recommending treatment/technology
• Facilitates learning of others - Able to share knowledge with others
• Coordinates care - Advocate for patient care outside radiation oncology and treatment center
• The Director meets with each trainee individually to review their annual progress in June and discuss eligibility for completion of residency
- Participate in Mock Orals

**CHIEF RESIDENT DUTIES:** During your final year you may be asked to serve as the chief resident. This will include the following duties:

- Help orient the new residents.
- Teach the first year residents how to do Med-line searches.
- Explain the process of Complications Conference to first year residents and coordinate the conferences.
- Help create the Wednesday night lecture series.
- Oversee resident participation in conferences.
- Make sure evaluations get filled out at the end of each conference.
- Serve on the Education Committee as liaison for the other residents.
- Create the resident night and weekend call schedule.
- Help set up the resident call schedule and making it equitable.
- Be in charge of holding regular meetings of the residents.
- Arrange monthly Journal Club meetings.
- Assist with arrangements and selection of visiting professors.

**Rotation Learning Objectives:**
Each clinical rotation lasts from one to three months. During that rotation the resident is assigned to a staff physician. By virtue of that staff physician’s interests and expertise, the resident may see more patients with a certain tumor type during that rotation.

On each of these services the resident performs the initial history and physical examination. The pertinent diagnostic x-rays and laboratory evaluations will then be reviewed. The patient is then presented to the staff physician who also examines the patient and formulates, with the resident, a treatment plan. If the patient is to be treated, the resident performs the simulation, treatment planning, dose calculations and programming with appropriate staff supervision. The resident cares for the patient throughout treatment, and may see the patient in long-term follow-up. The resident’s responsibilities are gradually increased during the period of training according to the judgment of the staff physician.

a) **University of Minnesota Medical Center (UMMC):** This is the main teaching site and center of the residency. It is a University based tertiary care hospital. At this hospital residents rotate with individual attendings following and taking part in patient care for 3 month periods before rotating to another attending. Residents rotate with Drs. Reynolds, Yuan, Dusenbery and Cho during UMMC rotations.

b) **Radiation Therapy Center (Fairview Lakes-Wyoming):** A comprehensive Medical Center which is staffed by University of Minnesota Physicians. This experience allows residents to have exposure a variety of cancer patients in an outpatient setting with an emphasis on prostate and breast cancer treatments.

c) **Veteran Affairs Medical Center:** A comprehensive Veterans Affairs Medical Center is University, staffed. This will allow the residents to have exposure a variety of cancer patients, especially prostate, lung, and head and neck cancers. Residents rotate with Drs. Siva and Ester.
d) **Medicine:** All residents will rotate for 2 months with in Medical Oncology and Pediatric Oncology Divisions of Internal Medicine and Pediatrics at UMMC-F. This rotation is geared to teach residents a better understanding of the perspective of the medical and pediatric oncology in patient care.

e) **Physics Rotation:** Residents are required to rotate 1 month on the physics service. This is to promote a better understanding of the role of physics in treatment planning and the applied use of physics in patient care.

f) **Research:** Residents are expected to work on and complete at least one research project in their 4 years of training. Up to 6 months of time will be allotted to work on this project. During your research rotation residents must be physically present at the University of Minnesota Medical Center (UMMC) Radiation Oncology Clinic. Should your presence be required away from the clinic during your research elective, residents are required to call or send an email to Dr. Margaret Reynolds and Ms. Karina Lawrence. A manuscript of the completes research must be submitted prior to graduation for successful completion of residency.

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.

**University of Minnesota Medical Center, Rotations:** 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. Cho and Dr. Yuan). 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 four attendings, each has defined additional areas of learning and performance expected of residents rotating on his/her service.

**UMMC-Reynolds Rotations:** The special areas of emphasis when working with Dr. Reynolds include: head and neck, gynecologic, gastroenterology and CNS. You will also focus on the use of HDR brachytherapy for treating gynecologic cancers.

Specific learning objectives are provided for each rotation with Dr. Reynolds (Year 1, Year 2, Year 3 and Year 4). 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.

Areas of Focus Include: Treatment of head and neck, gynecologic, GI and CNS malignancies. You will also focus on the use of HDR and LDR brachytherapy for treating gynecologic cancers.

**Learning Goals:** Through progressive participation in Dr. Reynolds’s service over the four years of your training, residents are expected to:
1. Understand the staging, anatomy, natural history and treatment of Head and Neck, Gynecologic, GI and CNS tumors.
2. Effectively perform HDR and LDR brachytherapy for treating gynecologic cancers.
3. Plan the treatment of patients including: type of radiation, possible concurrent agents, contouring, dose and dose limitations.

First-Year Rotation Objectives: The most important priorities for your participation in this rotation are:

1. Learning the language of Radiation Oncology (terminology, diagnoses, treatments so you can work effectively as a member of the treatment team. (PC, MK, CS)
2. Developing a solid understanding of and familiarity with the “process” of Radiation treatment (PC, MK, SBP).

Upon completion of this rotation residents are expected to demonstrate:

- History Taking Ability - demonstrates completeness/accuracy of dictated history from consult/follow-up (PC, MK, CS)
- Physical Examination Ability – demonstrates examination thoroughness and accuracy from dictated consult/follow-up (PC, MK, CS)
- Timeliness - completes interview and exam in timely manner (PC, CS, Prof)
- Provides timely responses to pages, calls, requests (PC, CS, Prof)
- Treatment Managements - Manages complex problems of patients on treatment (grade 3-4 complications) (PC, MK)
- Simulation Set up - appropriately completes simulation sheet (PC, MK, CS)
- Provides assistance at simulation (PC, MK)
- Simulation Contouring –Demonstrates the ability to do simple organ contouring (PC, MK)
- Knows appropriate field definitions in the simulation of metastatic disease (MK, PC)
- Knows fraction/dose information in the simulation of metastatic disease (MK, PC, PBLI)
- Documentation - competes notes in a timely manner, reasonable length
- Investigatory thinking-Demonstrates evidence of reading of texts/literature (MK, PBLI)
- Empathy- demonstrates compassion in patient interactions (PC, CS, Prof)
- Attitude - creates a constructive environment for patient/family (PC, Prof)
- Communication with Patients/Families - Open to discussions/requests of patient/family (PC, CS)
- Respectful behavior - Demonstrates mutual respect in patient/family interactions (PC, Prof, CS)
- Attitude - Creates a constructive environment for pt/family (PC, CS, Prof)
- Department Citizenship - Demonstrates an ability to work with others in cooperative/respectful manner (PC, Prof)
- Uses med line searches - Uses technology to find answers to clinical questions (PC, PBLI)
- Understands the participation of other physicians and patient care staff and their respective roles in the Health care system (PC, SBP)
- Attendance at departmental and multidisciplinary conferences.
Second Year Rotation Objectives: Upon completion of this rotation residents are expected to demonstrate:

- Simulation Contouring: Accurately contours complex tumors/multiple organs without supervision (PC, MK)
- Multitasking: Manages multiple difficult patients without assistance (PC, MK, SBP)
- Communication with Patients/Families: Answers patient/family questions and responds to requests (PC, CS, Prof).
- Communication/presentation of data: Effectively transmits written and verbal information to therapists (PC, SBP, CS)
- Patient-centered Care: Puts patient and his/her preferences at the center of discussions and care planning (PC, CS, Prof).
- Intellectual curiosity: Looks up/ask probing questions to clinical dilemmas (MK, PBLI)
- Assessment of research: Evaluates and integrates findings from current literature (PC, PBLI, MK).
- Dosimetry knowledge: Demonstrates understanding of the abilities and limitations of dosimetry (MK, PC)
- Ethics: Demonstrates ethical behavior in mgt in all clinical arenas (Prof, PC)
- Quality Assurance/Improvement: Understands the required safety and quality assurance steps required in brachytherapy (PC, SBP).
- Interpretation of information: Able to critically review, discern and optimize treatment plans (MK, PC, PBLI)
- Access of local medical system: Demonstrates ability to coordinate care for patient – social services/PMR/DDS, etc. (PC, SBP)
- Attendance at departmental and multidisciplinary conferences.

Year 3 Objectives: Upon completion of this rotation residents are expected to:

- Procedural abilities: Demonstrates competency in provision of brachytherapy without direction (PC, MK)
- Brachytherapy and brachytherapy dosimetry: Able to apply brachytherapy in an appropriate setting (PC, MK, SBP)
- Understands and applies brachytherapy dosimetry (MK, PC)
- Brachytherapy technical skills: Demonstrates technical skills that allow independent use of brachytherapy (PC, MK)
- Teaching: Demonstrates the ability to convey information (MK, PBLI, CS)
- Fund of Knowledge: Able to demonstrate a well rounded fund of knowledge (MK, PC, PBLI)
- Interaction with professionals: Coordinates local care of patient during RT (PC, MK, SBP)
- Attendance at departmental and multidisciplinary conferences.
**Year 4 Objectives:**  Upon completion of this rotation residents are expected to:

- Accurately evaluate complex patient situations (PC, MK, PBLI)
- Appropriately manage complex patient cases (PC, MK, PBLI)
- Integrates complex issues in diagnosis and treatment planning (PC, MK, PBLI)
- Demonstrates cost consciousness when recommending treatments and in use of technology (PC, MK, SBP)
- Facilitates learning of others – Effectively shares knowledge with others (MK, PBLI, CS)
- Accurately document complex patient care situations for clinical as well as billing and medico-legal purposes (PC, CS).
- Coordinates patient care outside of radiation oncology service and treatment center by serving as a patient advocate (PC, SBP)
- Independent function-Works as SRA with minimal correction on supervision (PC, MK, SBP)
- Difficult scenario-Effectively manages social and emotional aspects of difficult patient care situations (PC, Prof, CS)
- Attendance at departmental and multidisciplinary conferences.

**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.

**Text Books:**
Devita Hellman, Rosenbunk: Cancer, Principle and Practice of Oncology
Leibel and Philips: Textbook of Radiation
Gunderson & Tepper: Clinical Radiation Oncology

**Journals:**
- Journal of Clinical Oncology
- International Journal of Radiation Oncology Biology and Physics
- Seminars in Radiation Oncology
For this rotation, I have reviewed the following brachytherapy procedures:

Curator and Checker Source Preparation,
Loading and Logging,
Low Dose Rate Implant Emergency Procedures.
**Dr. Dusenbery Rotations**: The special areas of emphasis when working with Dr. Dusenbery include: gynecologic and pediatric malignancies and sarcomas.

Dr. Dusenbery expects residents to:

- Follow your patients closely.
- Read about each of their diseases (a minimum of a book chapter possibly 1 article that pertains to them).

If something doesn’t make sense or you disagree, ask or challenge me. Take initiative and search for data that agrees with or challenges what you are being taught, and, feel free to share it with me. Residents are expected to actively participate in all aspects of patient evaluation, treatment and care.

Remember although one of my primary reasons for being here is to support, teach and guide your education, it is ultimately up to you to assure that you are learning and processing the information you require to go on to your next step of education and practice. You must have a responsibility to yourself and this will require self-motivation and work. If at any time you do not feel I am keeping up my end of the bargain or you are having trouble with anything, please call it to my attention.

Specific learning objectives are provided for each rotation with Dr. Dusenbery. 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 Block (Year 1 or 2)**: Upon completion of this rotation residents are expected to:

- Understand the natural history and anatomy of gynecologic tumors, sarcoma and common pediatric cancers (PC, MK, PBLI).
- Perform staging of gynecologic tumors, sarcoma and common pediatric cancers (PC, MK, PBLI).
- Learn the fundamentals of gynecologic brachytherapy (LDR & HDR).
- Know the details of your patient’s history and staging (PC, MK).
- Follow up on all ordered lab and imaging tests (PC, MK, SBP)
- Present a cogent history and brief pertinent physical assignment and treatment planning conferences (PC, MK, CS).
- Develop an initial treatment recommendation and plan (PC, MK, PBLI)
- Ask for and seek recommended reading and literature (MK, PBLI).
- Communication with Patients/Families - Open to discussions/requests of patient/family (PC, CS
- Respectful behavior - Demonstrates mutual respect in patient/family interactions (PC, Prof, CS)
- Learn how to contour the target and OAR volumes for common gyn tumors and pediatric tumors.
Second Block (Year 2 or 3): Upon completion of this rotation residents are expected to:

- Understand the major methods of treatment of gynecologic tumors, sarcoma and common pediatric cancers (PC, MK, PBLI).
- Perform accurate implant calculations (PC, MK, SBP, PBLI)
- Actively preplan and participate in all simulations and implants (PC, MK, SBP)
- Follow up on all ordered lab and imaging tests (PC, MK)
- Present a cogent history and brief pertinent physical plus assessment at treatment planning conferences (PC, CS, MK).
- Discuss treatment recommendation and plan (PC, MK).
- Evaluate isodose plans, DVHs for complex treatments

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
- Presentations at treatment planning

Note: Residents will be given Mock Orals near the end of each academic year and must receive a passing grade.
**Dr. Cho Rotations:** 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).
- 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) 1) Beam arrangements, energies, weighting, compensators, and shielding; 2) Irradiation dose to tumor and regional lymphatics and 3) 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
**UMMC-Yuan Rotations:** The special areas of emphasis when working with Dr. Yuan include: gynecologic and pediatric malignancies and sarcomas.

Dr. Yuan expects residents to:

- Follow your patients closely.
- Read about each of their diseases (a minimum of a book chapter possibly 1 article that pertains to them).

If something doesn’t make sense or you disagree, ask or challenge me. Take initiative and search for data that agrees with or challenges what you are being taught, and, feel free to share it with me. Residents are expected to actively participate in all aspects of patient evaluation, treatment and care.

Remember although one of my primary reasons for being here is to support, teach and guide your education, it is ultimately up to you to assure that you are learning and processing the information you require to go on to your next step of education and practice. You must have a responsibility to yourself and this will require self-motivation and work. If at any time you do not feel I am keeping up my end of the bargain or you are having trouble with anything, please call it to my attention.

Specific learning objectives are provided for each rotation with Dr. Yuan. 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 Block (Year 1 or 2):** Upon completion of this rotation residents are expected to:

- Understand the natural history and anatomy of gynecologic tumors and breast cancer (PC, MK, PBLI).
- Perform staging of gynecologic tumors and breast cancer (PC, MK, PBLI).
- Learn the fundamentals of gynecologic brachytherapy (LDR & HDR).
- Know the details of your patient’s history and staging (PC, MK).
- Follow up on all ordered lab and imaging tests (PC, MK, SBP)
- Present a cogent history and brief pertinent physical assignment and treatment planning conferences (PC, MK, CS).
- Develop an initial treatment recommendation and plan (PC, MK, PBLI)
- Ask for and seek recommended reading and literature (MK, PBLI).
- Communication with Patients/Families - Open to discussions/requests of patient/family (PC, CS
- Respectful behavior - Demonstrates mutual respect in patient/family interactions (PC, Prof, CS)

**Second Block (Year 2 or 3):** Upon completion of this rotation residents are expected to:

- Understand the major methods of treatment of gynecologic tumors and breast cancers (PC, MK, PBLI).
• Perform accurate implant calculations (PC, MK, SBP, PBLI)
• Actively preplan and participate in all simulations and implants (PC, MK, SBP)
• Follow up on all ordered lab and imaging tests (PC, MK)
• Present a cogent history and brief pertinent physical plus assessment at treatment planning conferences (PC, CS, MK).
• Discuss treatment recommendation and plan (PC, MK).
• Able to find the pertinent literature to support treatment recommendation (MK, PBLI)

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.
**Minneapolis Veterans Affairs Health Care System (MVAHCS) Rotations:** Therapeutic radiology residents spend three, three month blocks working with faculty at the Minneapolis VA Health Care System. The major sites seen at the VA are Prostate, Head and Neck and Lung. The resident will also encounter malignancies including GI, CNS, lymphoma, breast, and skin. To get the most out of this rotation, it is encouraged that the resident focus their learning (and night-time reading!) on several of the major sites seen at the VA. Flexibility in focusing on other sites can be addressed on an individual basis. The resident’s responsibilities are gradually increased during the period of training according to the judgment of the staff physician.

**Responsibilities:**

1. Except for teaching sessions at the University, residents are expected to be present in the department from 8AM until the last patient has completed their treatment.
2. The resident will be assigned to work with Dr. Xin Wang in the OR on one or two Thursdays a month while at the VA. On these days only, the resident will be excused from all clinical responsibilities pertaining to external beam radiotherapy patients at the VA.
3. Residents are expected to attend all tumor boards with their supervising physician.
4. It will be expected that the resident be able to follow the planning of cases seen for consultation and simulation. However, there may be times when increased departmental workload or offsite learning commitments at the University may adversely affect the ability to follow the development of a patient’s treatment plan in real time. Residents are encouraged to review such cases with the responsible attending at the later date.
5. Contouring – Residents will be requested to complete contouring of radiotherapy volumes and normal tissues by end of the next business day following CT simulation.
6. Medical Documentation- Residents are strongly encouraged to dictate all consultation notes (i.e. H and P’s.). Simulation notes, treatment summary notes, OTV notes, and follow-up notes may be entered manually into CPRS. It is expected that the treatment summary note be completed within 1 week of the end of treatment. Templates are available for simulation and treatment summary notes.
7. Evaluation- this will consist of observations of resident performance during the rotation and an end-of rotation oral exam based on specific learning objectives specified by the resident at the start of the rotation.

**First Block (Year 1 or 2):**

Upon completion of this rotation residents are expected to:

- Understand head and neck anatomy (MK)
- Understand the natural history, prognostic factors, and staging of head and neck malignancies (PC, MK, PBLI).
- Perform the initial assessment of patients with head and neck malignancies (PC, MK, CS)
- Patient assessment- obtain H and P’s tailored to the patient’s diagnosis and stage.
- Appropriate utilization of imaging and laboratory investigations for the staging and work-up of patients.
Understand the effects of radiotherapy on normal tissues and organs of the head and neck (MK, PC)
Understand the role of radiotherapy in palliative cases (bone metastases, brain metastases, spinal cord compression, SVCO, mediastinal RT for lung cancer) (PC, MK, PBLI).
Understand and appreciate the role of other treatment modalities e.g. Surgery, chemotherapy, hormonal therapy (PC, MK).
Understand the general approach to assessment and management of Localized-disease, Locally-advanced disease and Metastatic disease (PC, MK, SBLI).
Understand the use of palliative radiotherapy in treatment of: Bone metastases, Brain metastases, Spinal cord compression, SVCO and mediastinal RT for lung cancer (PC, MK, PBLI).
Understand the natural history, prognostic factors, and staging of head and neck cancer (PC, MK)
Perform assessment of patients with head and neck malignancies (PC, MK)
Understand the effects of radiotherapy on normal tissues and organs of the head and neck (PC, MK, PBLI).
Understand the General approach to assessment and management of the following types of prostate cancer: Localized-disease, Locally-advanced disease, Metastatic disease
Understand the prognostic factors and staging of prostate cancer.
Understanding and appreciation of the role for surgery, hormonal therapy and/or observation
Effects of radiotherapy on normal tissues and organs of the pelvis
Understand the pathologic classification of lung cancer
Understand the Staging of lung cancer
Understand the role of surgical management and chemotherapy in the treatment of lung cancer.
Understand the prognostic factors in lung cancer
Understand the effect of radiotherapy on normal tissues and organs of the medistinum
Understand the WHO classification of Hodgkin’s lymphoma and non-Hodgkin’s lymphoma (PC, MK, SBP)
Pathologic assessment including role of immunohistochemistry (PC, MK, PBLI)
Staging of Hodgkin’s lymphoma and non-Hodgkin’s lymphoma (PC, MK, PBLI)
Understand the prognostic factors of Hodgkin’s and non-Hodgkin’s Lymphoma (PC, MK, PBLI)
Understand the role of chemotherapy in management of Hodgkin’s lymphoma
Understand Role of CHOP chemotherapy in management of Diffuse large cell lymphoma
Understand the assessment of Response to treatment
Understand the long-term effects of treatment in Hodgkin’s lymphoma patients (PC, MK, PBLI)
Second Block (Year 2 or 3):

- Develop an overall plan for management in collaboration with other members of the multidisciplinary team (i.e. surgical oncologists, medical oncologists) (PC, MK, SBP).
- Communicating with patients and their families – discussing diagnosis and prognosis, discussing results of tests, discussing results of tests, discussing management options and obtaining informed consent (PC, MK, CS).
- Understands the roles that are taken by surgeons, medical oncologists, diagnostic radiologist and radiation oncologists in the multi modality approach to prostate cancer (PC, MK, SBP)
- Perform Simulation and Treatment Planning
  - 4-Field Box
  - 3D conformal planning
  - IMRT
  - Locally-advanced disease
  - Post-op Prostate
- Perform indirect laryngoscopy and fiberoptic laryngoscopy (PC, MK)
- Understand Techniques:
  - POP larynx-T1/T2 vs. T3/T4 N0,
  - 3-Field Head and Neck
  - Off-cord techniques and matching electrons and photons
  - Ipsilateral-treatment techniques
  - Post-op head and neck fields

Third Block (Year 3 or 4): Upon completion of this rotation the resident expected to:

- Understand more advanced techniques including (PC, MK, PBLI):
- Planning and Evaluation of IMRT treatment plans (PC, MK, PBLI)
- RT for Paranasal sinuses
- RT for Hypopharyngeal CA (Posterior pharyngeal wall lesions and Disease extending to the root of the neck)
- Perform the following Clinical and Technical Skills: 4D CT simulation, Treatment Planning including (PC, MK, PBLI): 1) AP-PA parallel pair, 2) Off-cord techniques; 3) 3D conformal planning for lung; 4) ITV-based treatment planning
- Perform Treatment Techniques including: Mantle field, STLI and matching fields, Inverted Y, Involved-field RT and RT for Waldeyer’s ring (PC, MK, PBLI)
**Fairview Lakes Rotations**: The Radiation Therapy Center at Fairview Lakes is a regional, ambulatory center designed so patients can receive treatments closer to their homes. Residents typically spend 3, 3 months blocks (one in first year, one in the third year and one in the fourth year) working with department faculty member Dr. Wang and part time Drs. Dusenbery, Yuan and Cho. This experience provides an excellent complement to the University site and the VAMC in that it is an ambulatory, community based treatment site exposure to a wide range of disease entities and patient types. The major sites seen at the Lakes are Prostate, Breast, Lung, GI, CNS, Head and Neck.

This is a very busy service and the resident is not expected to see and/or follow all patients. They are expected to see and follow a number of patients commensurate with their level of training. The resident is expected to be involved in all aspects of care for the patients they are actively following. The resident is also expected to see some of the patients returning for follow-up visits.

During this rotation you will evaluate and manage a variety of patients in a private practice-type setting. The majority of patients have either breast, prostate, lung, gastrointestinal, head and neck or brain tumors. Prostate cancer patients are managed with external beam irradiation, permanent interstitial brachytherapy or a combination of both.

**Responsibilities:**

1. Residents are expected to be present in the department from 8:00 am until the last patient has completed their treatment. Resident’s are expected to attend the monthly tumor conference (3rd Thursday of the month, 12:00 to 1:00 pm).
2. Residents are expected to follow through entire process of consultation, simulation, planning, treatment, port films check, weekly visit and follow up of the patients.
3. Medical Documentation - Residents are strongly encouraged to dictate all consultation notes (i.e. H and P’s.). Simulation notes, treatment summary notes, OTV notes, and follow-up notes. It is expected that the treatment summary note be completed within 1 week of the end of treatment.
4. Evaluation - this will consist of observations of resident performance during the rotation and an end-of rotation oral exam based on specific learning objectives specified by the resident at the start of the rotation.

**First Block Objectives** (First or Second year):

Upon completion of this rotation the resident is expected to:

- Perform initial work up of patients referred for breast cancer treatment (PC, MK, PBLI).
- Perform initial work up of patient referred for prostate cancer treatment (PC, MK, PBLI)
- Understands the basic epidemiology and biology of breast cancer.
- Know the spread pattern of common cancers (prostate, breast, GI, lung) (MK, PBLI, PC)
- Understand the basics of the surgical and chemotherapeutic approaches to breast cancer (PC, MK, PBLI).
- Understand the basics of the surgical and chemotherapeutic approaches to prostate cancer (PC, MK, PBLI).
• Understands the roles that are taken by surgeons, medical oncologists, diagnostic radiologist and radiation oncologists in the multi modality approach to breast cancer (PC, MK, SBP)
• Programs and diagrams a chart so it is ready for patient treatment (PC, MK, CS).
• Understand the various roles of members of the treatment team (PC, Prof, SBP)
• Interacts appropriately and effectively with physicist, technician, and other team members (PC, Prof, SBP, CS)
• Prescribe doses, develop general ideas of what doses are given for the routine situations encountered and how to do calculations (PC, MK, PBLI).
• Determine the assessment (and AJCC stage) of the patient (PC, MK, PBLI).
• Manages complex problems of patients on treatment (grade 3-4 complications) (PC, MK, PBLI).
• After evaluating the patient, discusses the pros and cons of using radiation for that particular patient (PC, MK, PBLI).

Second Block Objectives (third or fourth year): At this stage of training, residents are expected to function independently under staff supervision. By the end of this rotation residents are expected to:

• Understands whether RT is indicated and why, what other treatments might be available and why they are or are not indicated (PC, MK, PBLI).
• Knows the techniques by which to give the radiation, the dose to give and the expected side effects (PC, MK, PBLI).
• Directs a simulation from start to finish (PC, MK, CS).
• Draws the target, give directions to the physicist, and evaluate the computer plans generated (MK, PC, CS, PBLI, SBP).
• Know when to use the different devices (IJ, wedge, compensators) (PC, MK, PBLI)
• Demonstrates competency in interstitial brachytherapy for prostate cancer without direction (PC, MK, SBP).
• Effectively works with team members and patients to coordinate care throughout treatment and between visits (initial and treatment, treatment and follow up) (PC, MK, SBP).
• Answer patient and family questions accurately and honestly (PC, CS, MK).
• Appropriately document treatments, visits and phone calls in a timely and accurate manner (PC, CS).
• Accurately document services to ensure appropriate billing (PC, Prof, SBP).
• Understands the major differences between a private-practice type patient setting such as Lakes and an academic practice such as UMMC (PC, SBP)
**Medical Oncology Rotation**: Radiation Oncology residents are required to complete a one month rotation in medical oncology with Dr. Bruce Peterson. Residents serve as members of the clinic team and conduct patient evaluations and follow-up in the Oncology Clinic and participate in oncology conferences. Emphasis is on the clinical evaluation and management of cancer patients and residents are expected to actively participate in all aspects of patient evaluation, treatment and care.

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.

Upon completion of this rotation residents are expected to:

- Perform history and physical examinations appropriate to patients with various forms of cancer, with particular attention to examination of the primary site and common sites of spread of the particular type of malignancy (PC, MK, CS).
- Learn staging, treatment, natural history and anatomy of cancers (MK, PC, PBLI)
- Stage newly diagnosed cancer (MK, PC, PBLI)
- Interpret radiographic studies and recognize pertinent pathologic findings (MK, PC).
- Understand the various types of treatment for the specific age ranges and malignancies (MK, PC, PBLI).
- Manage medical problems of cancer patients (PC, MK, PBLI)
- Identify potential toxicities of and monitor response to chemotherapy programs for patients with malignancy (MC, PC, PBLI)
- Explore the psychosocial aspects of cancer (MK, PC, PBLI).
- Honestly and effectively communicate with patients and families regarding prognosis and treatment (PC, MK, CS).
- Expect and ask for recommended reading literature (PC, PBLI)
**Physics/Dosimetry Rotation:** Radiation Oncology residents are required to take a two month physics rotation in which the resident works with the medical physicists. The intent of this rotation will be for the resident to become intimately familiar with standard planning techniques. The resident will be introduced to dosimetry and will be required to participate in the planning of a variety of “standard” cases. Additionally the resident will also participate in the QA of radiation therapy equipment as it applies to clinical practice.

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.

Upon completion of this rotation residents are expected to:

- Perform computer treatment planning including External beam radiation: photons, electrons (MK, PC, PBLI)
- Perform brachytherapy and the use of HDR for Eye Plaques (MK, PC, PBLI)
- Obtain/process patient data for computer input (contours, CT scans, MRI scans, simulator films, field outlines or targets, etc.)
- Operate computer program (MK, PC, PBLI)
- Generate treatment plans (MK, PC, PBLI)
- Understand the role of physicists and dosimetrists in treatment (PC, SBP, CS)
- Work effectively as a member of the treatment team (PC, Cs, SBP, Prof)
- Understand the necessary ongoing QA processes (PC, SBP)

A variety of plans will be worked on as examples, e.g., multiple fields, wedges, irregular fields, rotation, etc.

**Treatment Planning; Pinnacle and Eclipse**

- Plan Evaluation
- Plan parameters
- Dose specification
- Inhomogeneity corrections
- Plan normalization
- Dose-volume histograms (DVH)
- Using plan to calculate monitor units
- Stereotactic planning and set-up. (Gamma Knife)
- TBI: planning and calculations
- Compensator design
- IMRT planning and physics quality assurance
- HDR brachytherapy planning/checks
- Tomotherapy planning and DQA
- Quality Assurance, linac QA, Portal Imaging, kVCT
- Daily checks: accelerator and simulator
- Monthly checks: accelerator and simulator
- Quality Management Program (QMP) for brachytherapy
- Physics chart checks
1. Take a complete history and do an appropriate physical exam. It is important to review

2. The pertinent medical records as early as possible after the day before.

3. Residents' plans about the Review

4. Each resident is responsible for the patient. Each resident is also responsible for the patient's disease and for the patient's care. This includes: initial consultation, examination, and planning and to take an active role with their attending in planning and follow-up conferences.

5. Residents are expected to be present at attendings' rounds and conference.

6. Residents are also expected to dress appropriately, maintain proper hygiene and behavior.

7. Residents are required to attend all departmental conferences.

8. Residents are required to maintain their attendance on time, participate and be ready to present your patients or other pertinent information.

9. Residents are also required to dress appropriately, maintain proper hygiene and behavior.

10. Residents are also responsible for the patient's disease and their care. This includes: initial consultation, examination, and planning and to take an active role with their attending in planning and follow-up conferences.

11. Residents are expected to be present at attendings' rounds and conference.

12. Residents are also expected to dress appropriately, maintain proper hygiene and behavior.

13. Residents are also required to maintain their attendance on time, participate and be ready to present your patients or other pertinent information.

14. Residents are expected to maintain their attendance on time, participate and be ready to present your patients or other pertinent information.

15. Residents are also expected to dress appropriately, maintain proper hygiene and behavior.

16. Residents are also responsible for the patient's disease and their care. This includes: initial consultation, examination, and planning and to take an active role with their attending in planning and follow-up conferences.

17. Residents are expected to be present at attendings' rounds and conference.

18. Residents are also expected to dress appropriately, maintain proper hygiene and behavior.

19. Residents are also required to maintain their attendance on time, participate and be ready to present your patients or other pertinent information.

20. Residents are expected to maintain their attendance on time, participate and be ready to present your patients or other pertinent information.

21. Residents are also expected to dress appropriately, maintain proper hygiene and behavior.

22. Residents are also responsible for the patient's disease and their care. This includes: initial consultation, examination, and planning and to take an active role with their attending in planning and follow-up conferences.

23. Residents are expected to be present at attendings' rounds and conference.

24. Residents are also expected to dress appropriately, maintain proper hygiene and behavior.

25. Residents are also required to maintain their attendance on time, participate and be ready to present your patients or other pertinent information.

26. Residents are expected to maintain their attendance on time, participate and be ready to present your patients or other pertinent information.

27. Residents are also expected to dress appropriately, maintain proper hygiene and behavior.

28. Residents are also responsible for the patient's disease and their care. This includes: initial consultation, examination, and planning and to take an active role with their attending in planning and follow-up conferences.

29. Residents are expected to be present at attendings' rounds and conference.

30. Residents are also expected to dress appropriately, maintain proper hygiene and behavior.

31. Residents are also required to maintain their attendance on time, participate and be ready to present your patients or other pertinent information.

32. Residents are expected to maintain their attendance on time, participate and be ready to present your patients or other pertinent information.

33. Residents are also expected to dress appropriately, maintain proper hygiene and behavior.

34. Residents are also responsible for the patient's disease and their care. This includes: initial consultation, examination, and planning and to take an active role with their attending in planning and follow-up conferences.

35. Residents are expected to be present at attendings' rounds and conference.

36. Residents are also expected to dress appropriately, maintain proper hygiene and behavior.

37. Residents are also required to maintain their attendance on time, participate and be ready to present your patients or other pertinent information.

38. Residents are expected to maintain their attendance on time, participate and be ready to present your patients or other pertinent information.

39. Residents are also expected to dress appropriately, maintain proper hygiene and behavior.

40. Residents are also responsible for the patient's disease and their care. This includes: initial consultation, examination, and planning and to take an active role with their attending in planning and follow-up conferences.

41. Residents are expected to be present at attendings' rounds and conference.

42. Residents are also expected to dress appropriately, maintain proper hygiene and behavior.

43. Residents are also required to maintain their attendance on time, participate and be ready to present your patients or other pertinent information.

44. Residents are expected to maintain their attendance on time, participate and be ready to present your patients or other pertinent information.

45. Residents are also expected to dress appropriately, maintain proper hygiene and behavior.

46. Residents are also responsible for the patient's disease and their care. This includes: initial consultation, examination, and planning and to take an active role with their attending in planning and follow-up conferences.

47. Residents are expected to be present at attendings' rounds and conference.

48. Residents are also expected to dress appropriately, maintain proper hygiene and behavior.

49. Residents are also required to maintain their attendance on time, participate and be ready to present your patients or other pertinent information.

50. Residents are expected to maintain their attendance on time, participate and be ready to present your patients or other pertinent information.
3. Integrate this information and be able to relate it in a cogent manner to the staff MD.
4. Request any needed records, films, etc. be obtained and copied. On all non-emergent consults, all records and films should be reviewed prior to the patient arriving to the clinic. Prior to seeing the patient, be prepared to summarize pertinent history and reason for consultation. Review literature and available protocols prior to seeing the patient.
5. If dictating a note, provide a clear, cogent consult note. Include all the pertinent information including all the referring physicians, pathology numbers and reports if available, result of labs and diagnostic x-rays. The first sentence of the consult should be: Mr./Mrs./Ms. (patient’s name) was seen in Radiation Oncology consultation on (date) at the request of (referring physician) for an opinion regarding (chief complaint or diagnosis). Make sure to cc all referring M.D.’s copies of this note.
6. Participate in simulations. Think about what area your will be treating and which technique(s) your will be using. Plan the field borders, immobilization devices, patient positioning before the actual simulation time. Relate that information to the simulation tech.
7. Together with staff write a full, clear treatment prescription. Have it checked by staff.
8. Prepare the chart for treatment, which includes: diagrams, programming of intended doses, program changes, important data (bolus, plan for compensator, IJ diagram etc) special instructions and calculations. If a computer plan is used, understand the computer plan. When your staff is looking at the computer plans, be involved in the decision making process of intended doses.
9. Be able to discuss the potential acute and late side effects of radiation with the patient.
10. Evaluate follow up patients for important aspects of their follow up care. Dictate a note to the referring physician detailing their follow up visit. Include labs and x-ray results if done at the University and that referring physician is outside the University. Fill out the follow-up form (if applicable).
11. Look at the charts daily of your patients under treatment. Look to make sure the treatments are going correctly. Be aware of any missed treatments and the reason why. Check for thickness changes. Plan boosts well in advance, and schedule necessary simulations.
12. Check port films every day before you go home. Check again first thing in the morning. Leave them where the staff can check them too. If there is something significantly wrong with a port film (block backwards, wrong area of the body) make sure you tell the staff and treating tech IMMEDIATELY.
13. See your patients each week with your staff doctor for On-Treatment visits with your staff doctor. Document their visit with a progress note.
14. Follow-up on all radiology and laboratory studies ordered on patients either as part of pre-treatment evaluation, or during the course of treatment.
CONSULTATION

1. Consults: In-patient
   Once the resident is notified of the consultation he/she is responsible for obtaining the appropriate clinical information, imaging and pathologic studies. The initial part of the consult consists of obtaining a history and performing a physical examination. This is then presented to the appropriate faculty physician who will see the patient, together with the resident, within 24 hours of departmental notification. A decision regarding patient management is made and a short progress note is left in the patient’s hospital chart followed by a dictated formal consultation. Once the patient has been seen, complete history and physical note must be dictated within 24 hours. Check off the consult as done in the appropriate spot in EPIC.

2. Consults: Out-patient
   Patients are scheduled to be seen in the outpatient clinic area at designated times. A daily schedule for patient consultations, simulations, setup of new patients and patients under treatment is provided for each staff physician and resident. The outpatient consultation is seen first by the resident and then jointly with the faculty member. A complete consultation note with history and physical is dictated at that time. Outside pathology slides for each patient accepted for treatment in the Department of Radiation Oncology must be reviewed at UMMC-F. Release forms for pathology slides, reports, medical records, x-rays, scans, etc., should be obtained when appropriate.

CONSENTS

Consent for treatment is required for all patients prior to simulation. No patient will be treated without a consent form having been completed and signed. The consent form may be obtained by the resident and attending faculty either at the time of consultation or simulation. Consent forms are located in the nursing stations. The signed consent should be scanned into the EMR by administrative staff. A new consent is required if a new treatment is planned.

TREATMENT PLANNING

Scheduling of new patients:
Appointments for simulations and CT/MRI scans for planning purposes must be scheduled through the secretary in the reception area. Appointments for new patients beginning treatment are scheduled through the chief therapist or the therapist on the machine. In order to schedule a patient, a sim order should be completed, the resident must have the patient’s name, the faculty member responsible for the patient, the area to be irradiated, whether simulation or machine time is required, whether the patient has received prior radiotherapy, and the location of the patient (if an in-patient). The resident should also indicate any special circumstances such as contrast medium for the bladder, rectum, esophagus, stomach, or small bowel, or a gap calculation because of prior treatment.

Simulation appointments are usually given at one-hour intervals. Appointments for CT/MRI for treatment planning are scheduled through receptionist.

Initiation of treatment:

- Simulation is the process by which the treatment field outlines and orientations are determined. Usually a CT simulation is done. Simulation of a new patient is performed by the resident, simulator therapist, and faculty physician. If a treatment plan is to be
developed by dosimetrist or physicist, the resident must delineate the target volume on the planning CT. The target volume should include the primary/regional disease, as well as appropriate margins. The target volume, as well as critical structures where a specified dose can be tolerated should be indicated on the computer system. These structures include the lens of the eye, the spinal cord, lung, kidney, etc. Faculty approval of the target volume must be obtained prior to proceeding with a computer planning. If blocks are to be employed in the treatment, the resident will draw the appropriate blocks on the DRRs. The dosimetrist/physicist will then develop a treatment plan. This will deliver the most homogeneous dose possible to the target volume while minimizing doses to critical structures and other normal tissues. The dosimetrist/physicist will present this plan to the resident and staff for approval. The resident is responsible for the review of the plan with the faculty physician.

- At the time of the initial radiation treatment to check the set up parameters, both the resident and faculty physician will be present.

WEEKLY EXAMINATION OF PATIENT UNDER TREATMENT
All patients undergoing treatment are seen and examined on a weekly basis in the clinic area, both by the resident and faculty physician. Patients who are having problems during treatment are examined as often as necessary.

Each attending physician has a specific day to see patients under treatment. On this day the technologist will bring the patient back in the examining area right after daily treatment, obtain his/her weight and place the patient in an examining room. The nurse will then check the laboratory reports or recent test results. The resident will then be notified that the patient is ready. At the time of the examination, the physical findings, side effects, or problems should be addressed to the staff physician. The progress note should be dictated or typed on the day of examination. If a change in the treatment plan (i.e. cone-down, electron beam appointment, change in blocks, re-simulation, or target plan) is indicated, this should be scheduled as soon as possible. Advance planning is required in order to keep the patient on schedule.

When a patient is suspended from treatment, the nurse and appropriate therapist should be notified and the date at which treatment is to resume should be indicated on the daily dose record. At the completion of treatment, the patient is seen, and a follow-up appointment is scheduled through the nurse for a time determined by the physician.

CHART COMPLETION
At the completion of treatment, the resident writes a treatment summary, with details concerning both external beam and intracavitary or interstitial therapy. This will include the region treated, the dates of treatment, the daily dose, the total dose and number of fractions for each treatment region or course, any problems encountered during treatment, and arrangements for follow-up care. A copy of this summary will be sent to the referring and primary MD. The staff physician will approve the treatment summary and a final check up for completeness of the chart will be done by a dosimetrist/physicist. Treatment summary notes are then to be typed by the secretary and to be signed by the resident and the staff physician. Copies of this should be cc’d to all referring physicians.
FOLLOW-UP CLINIC
At the completion of treatment, patients are given follow-up appointments. Patients are
examined by the attending physician and the resident. Follow-up notes are dictated at the time
the patient is seen. In general, outpatients undergoing x-rays or other imaging studies on the
day of follow-up will be reviewed both by the resident and attending physician.

This information should be given to the appropriate attending physician on the first day
following weekend or holiday who will ultimately be managing the patient. Residents can take
call from home nightly. A long-range beeper is provided and residents must be in range of
beeper contact while on call.

The on-call schedule is given to each resident and staff physician for each quarter, as well as
every month. Changes in the on call schedule should be given to the secretary as soon as
possible. Changes made within a week of the upcoming on call should be relayed directly to the
hospital page operator, departmental receptionist and on call attending. When on-call you must
be available by phone and beeper for any patient calls, consults or emergencies. Let the
operator know how to get in touch with you at all times. Arrange with treating tech the time to
come in on weekends.

3. In general, the on call period is one week at a time.

PROTOCOL: PATIENT HAN DOFF FOR END OF CLINICAL ROTATION AND PATIENTS SEEN ON-
CALL
During the last week of each clinical rotation, the departing resident contacts the incoming
resident for patient handoff and communication to ensure continuity of patient care. Patient
handoff occurs prior to the first day of the incoming resident’s clinical rotation. Communication
between residents is in person, by phone and/or written summary.
Topics for discussion include:
• On treatment patients
• Patients seen in consultation who will need simulation
• Any outstanding laboratory tests or radiologic imaging that requires follow-up

OTHER MEDICAL RECORDS
Residents are responsible for dictating procedure notes including simulation note, operative
reports for intracavitary and interstitial procedures. Patients who are receiving radiation while in
the hospital should have weekly notes placed on their in-patient chart. This is generally done on
the on-therapy examination day. The note should summarize the patient's progress as well as
any complications of therapy and recommendations for alleviation. The current radiation dose
as well as ultimate therapeutic plans should also be summarized.
LOGS
Residents are required to maintain patients’ logs and enter them into the ACGME website at the end of each rotation to be reviewed four times a year by the program director. At the end of the fiscal year, the program coordinator will print copies of the Resident case logs to keep in the resident file.
- ACGME website: http://www.acgme.org/, see Resident case logs.

TREATMENT PLANNING CONFERENCE
For all patients who are undergoing radiotherapy treatments are being presented at Treatment Planning Conference:

1. Be able to discuss the indications for treatment, rationale and anticipated side effects. Understand the computer plan (why wedges, compensator etc).
2. Review cases to be presented the day before conference, to be sure all-necessary data and films are available.
3. Review computer plans, and be prepared to discuss the proposed treatment plan.
4. Review any questions with the staff physicians prior to conference.
5. Review all pertinent diagnostic films, and current simulation and port films.
6. Be ready to present a concise but complete H&P (which will include all aspects of previous chemo and radiation therapy).
7. Present your assessment. This will include stage of disease, rationale for RT, alternatives that were considered, and justification for your decision.
8. Be able to describe the radiation technique being used.
9. Know the dose you plan to give and critical organs that will be affected.

CONFERENCES, JOURNAL CLUB, DIDACTICS, AND SEMINARS
All residents are expected to attend and contribute to the intradepartmental and interdepartmental conferences. Attendance at conference should take precedence over clinical responsibilities unless the attending physician requests the resident’s assistance for a special circumstance during conference time. Joint conferences are held separately with Head and Neck Oncology, Breast Oncology, Neuro Oncology, Musculoskeletal Oncology, Gynecology Oncology, Hematologic Oncology, and Thoracic Oncology. Announcements for journal club, and journal club articles, should be distributed to the resident and attending staff at least three weeks before the scheduled conference.

When you are assigned journal club, distribute articles at least 1 week before conference.

When you are assigned complications conference, review hospital and treatment chart, get outside records if necessary, give physics the chart at least 1 week in advance, have pertinent port films and diagnostic films available. Review process and direct questions to the Chief Resident concerning complications conference.

REQUIRED MEETINGS
(It is Mandatory to be present at the start time for all conferences)

Treatment Planning Conference: Wed @ 7:30 AM, Discussion of all newly seen, patients and all newly started patients with discussion of the indication for treatment, review of their treatment plans, computer plans, simulation films and port films.
Wednesday Night Educational Conference: 4:30 – 6:00 PM. This conference alternates between Educational Didactic Lectures, Journal Club, and Mortality morbidity conference.

Quality Assurance Conference: All charts of patients on treatment are reviewed and discussed Thursday 12:00-1:00 PM.

Resident Mini-Presentation: Wed. AM, BeforeTreatment planning Conference. Residents at UMMC alternate giving short presentations related to patients they are treating.

Complication Conferences: Wednesday 4:30-5:30 PM.

All Multidisciplinary Conferences.

**TEACHING RESPONSIBILITIES**
The residents are required to participate in the teaching program for medical students during the third- and fourth- year medical student electives at UMMC-F or at United Hospital. The teaching experience includes case presentations and discussions in the clinic.

**EVALUATION OF STAFF AND THE PROGRAM**
The residents must also complete confidential evaluations for the staff and the program after each rotation. Our department has integrated the RMS Residency Management System created by New Innovations as the new web-based method of evaluation. This system is available to the residents 24 hours per day from any computer with Internet access. Residents are initially given their password, which can be changed frequently and obtained easily and confidentially through their e-mail if they forget it. This program has decreased the turnaround period for evaluations and provides complete assurance that the resident’s evaluations are confidential.

**RADIATION PHYSICS AND RADIOBIOLOGY COURSES**
All residents must take two semesters of medical physics and one semester of radiation biology. All residents must pass these courses in order to graduate. These courses are provided by the department and time is allotted as to not interfere with clinical duties. The department’s medical physicists teach Radiation Physics, which is a two semester course comprehensive course offered during the first year. This course meets twice weekly from September through May. Attendance is mandatory for first year residents.
The Radiation Biology course is taught by our radiation biology faculty and covers the basic principles of radiobiology. This course meets twice weekly from September through December. Attendance is mandatory for residents during their second year of training, and must take and pass the written exams.

Both courses require the passing of written exams. This is a prerequisite for graduation.

**SEMINARS**
Residents and Staff give three to five, one-hour presentations each year on radiation oncology topics. Faculty members are available to advise and provide guidance to residents. The presentations are held at the Tuesday Night Conference.
REQUIREMENTS FOR GRADUATION
Service: 48 months of service rotations at the UMMC, VAMC or other Affiliated Hospitals, including a research rotation, with satisfactory evaluations after each service. At the end of every three-month rotation the staff completes an electronic evaluation of a resident’s performance. This evaluation will be discussed with the resident. The RMS is used. A copy of this evaluation is given to the resident and placed in the resident’s file. RMS is available to the residents 24 hours a day. If an unsatisfactory rotation occurs, a meeting with the program director will occur and the resident will be placed on probation the following 3 months. If the performance remains unsatisfactory, the resident may be dismissed.

Satisfactory performance in the required course work in Radiation physics (2 terms) and Radiobiology (1 term), as well as Medical and Pediatric Oncology (1-month rotation) and Medical Dosimetry (2-month rotation).

Conferences: Attendance at Tuesday night conferences during the academic year is mandatory and residents must actively participate.

Research project: By January of the resident’s 4th year, he/she must present a research project to the department, as well as prepare it into manuscript form ready for submission to a referred journal. (Note: this is also an ACGME requirement.)

Call schedule: All residents are required to do a set amount of call to be determined at 6 month blocks by the Chief resident. All changes must be verified first with the Chief resident, who will then notify the resident coordinator via email.

For additional Radiation Oncology requirements please refer to the ACGME website, http://www.acgme.org/.

RMS AND OTHER EVALUATION METHODS
The residents must also complete confidential evaluations for the staff and the program after each rotation. Our department has integrated the RMS- Residency Management System electronic evaluation system created by New Innovations, Inc. as the new web-based method of evaluation. This system is available to the residents 24 hours per day from any computer with Internet access. Residents are initially given their password, which can be changed frequently and obtained easily and confidentially through their e-mail if they forget it. This program has decreased the turnaround period for evaluations and provides complete assurance that the resident’s evaluations are confidential.

The web address for the RMS system is: http://www.new-innov.com

FORMAL EVALUATIONS AND TESTS
At the end of every three-month rotation the staff fills out an electronic evaluation of a resident’s performance RMS. This evaluation is available to the resident immediately on-line and a copy is printed and placed in the resident’s file. These evaluations are available to the resident to review at any time.
• The Residency Program Director meets with each resident twice each year to review patients’ logs and service evaluations. The Program Director also obtains feedback from the residents regarding their overall residency experience.

• Mock oral board results are not to be used for promotion, but if it is the determination of staff that the resident did not meet the expectations, the Residency Program Director will discuss the results with the resident, and develop a plan for improvement.

• The In-Service written examination of the American Board of Radiology is required to be taken each year by the residents. Residents will receive results of the examination, as well as a ranking, which compares their result with residents nationwide at the same level of training. The Residency Program Director will review these results with the resident.

• We have a small number of residents and staff. It is usually obvious if someone is having trouble. If it becomes apparent that a resident is having trouble with a rotation he/she should make an appointment to discuss the problem with his/her staff and the Residency Program Director.

• Each year all residents are required to take the ACR Resident Evaluation test (In-Service Exam). In addition, 2nd, 3rd, and 4th year residents are required to take the Mock Oral Examination, which is given each year by the Radiation Oncology staff at the University of Minnesota. First year residents have an option to take the Mock Oral Examination if they so desire. (Mock Oral Exams are given in April)

• Examinations

• All residents take the annual In-Training Examination in Radiation Oncology, given by the American College of Radiology in March of each year. The exam has separate sections on radiation biology, radiation physics, and clinical radiation oncology. The purpose is to provide insight into individual residents’ strengths and areas for further development. It also aids the resident in taking the written board exam given by the American Board of Radiology.

• Annually, the clinical staff administers a mock oral-board exam to the residents. It simulates the oral exam given by the American Board of Radiology. The exam covers eight areas: lung cancer and sarcoma; breast cancer; gastrointestinal cancer; cancers of the reticulo-endothelial system; head, neck, and skin cancers; pediatric and CNS cancers; genitourinary cancers; and gynecologic cancers. This is usually held in April.

**RESEARCH REQUIREMENT**

Residents are required to complete a Research project under faculty supervision. This may take the form of biological laboratory research, clinical research, medical physics research, or the retrospective analysis of data from treated patients. The results of such projects shall be a quality that is suitable for publication in peer-reviewed scholarly journals or presentation at scientific meeting. ([The Resident must produce a Manuscript due 6 months before completion of Residency program](#)) Also residents will assist with data submission for the Multi institution protocol groups such as the Radiation Therapy and Oncology Group (RTOG), the Cancer and Leukemia Group B (CALGB) and the East Central Oncology Group (ECOG).

(During your research rotation residents must be physically present at the University of Minnesota Medical Center (UMMC) Radiation Oncology Clinic. Should your presence be
required away from the clinic during your research elective, residents are required to call or send an email to Dr. Margaret Reynolds and Ms. Karina Lawrence.

***Residents must take 1 week vacation during their research block****

DISTINGUISHING THE DIFFERENCE BETWEEN FIRST, SECOND, THIRD AND FOURTH YEAR RESIDENTS AND CHIEF RESIDENT

FIRST YEAR
The expectations for first year residents are generally to learn the following:

- Learn vocabulary unique to Radiation Oncology (CA, compensators, collimation, gantry angle, wedges, monitor unit, etc).
- How to prescribe dose, have a general idea of what doses are given for the routine situations encountered and how to do calculations. Usually by the end of the first rotation, you should pass the Calculation Test and be a certified calculation “DO-er”.
- Learn how to program and diagram a chart and get it ready so that a patient can be treated.
- Be knowledgeable and competent at handing, transporting and recording the use of radioactive isotopes.
- Be able to do a good history and physical and tell the staff physician what the assessment (and AJCC stage) the patient has.
- Have a general idea of how to work up patients for their particular cancer (which tests are used to stage that particular cancer). If you know which treatments are used for which stage you are doing really well at this point.
- Know the spread pattern of the common cancers.
- Learn how to check port films. (Do this each night before going home.)
- Know how to get pathology reports, review films with the diagnostic radiologist.
- Understand the basics of the surgical and chemotherapeutic approaches to the common cancers (i.e. what is a radical hysterectomy? What is adjuvant chemotherapy versus neoadjuvant chemotherapy?)
- Follow your patients closely; being certain you understand how their treatments are being delivered.
- Begin a patient case log. Enter your cases into the ACGME web site after each rotation. ACGME web site: http://www.acgme.org/, see Resident case log.
- Understand what you are treating and why.
- Being interested and enthusiastic are the best ways to excel in the first year.

SECOND YEAR

By the second year, the resident needs to start understanding the indications and contraindication for the use of radiation therapy. The tasks, which took great lengths of time as a first year resident, should be much easier and done faster now. The second year resident needs to know the staging work-up for most of the cancers in detail and, after evaluating the patient, should be able to discuss the pros and cons of using radiation for that particular patient. In particular the second year resident should focus on:

- Being able to discuss the appropriate staging work-up in detail.
- Know the organ tolerances in detail.
• Be able to discuss the acute and long-term side effects of using radiation.

• Be able to prescribe total dose and fraction size for the common tumors treated.

• Be able to determine the target volume for different situation (i.e., what to include if the patient has a Stage I seminoma, or a T1 larynx cancer).

• Understand the University of Minnesota technique for the various tumors in detail. If no technique exists, know the most common technique in the textbooks.

• Start to know the important articles in the literature in detail. It’s a good idea to keep a file of the “important” papers, which usually are the randomized trials, or key reports pertinent to our specialty. Your staff person will help you with this.

• Residents are expected to teach and to set a good example for first year residents.

• Participate in Mock Orals. (Given in April)

• Continue to keep Patient case logs up to date on the ACGME website.
   ACGME web site: http://www.acgme.org/, see Resident case log.

• Start working on a research project. Try to do this as early in the year as possible.

Patient directed reading is probably the most important thing you can do in the second year. Read the textbook chapter section pertaining to the patient you saw that day. Ask the staff lots of questions.
THIRD and FOURTH YEARS
This is when it all needs to come together. By this time the resident should be able to work relatively independently, using the staff person as a resource. You learn the most by trying to make decisions on your own, and then telling your staff person what you think (since they have to check everything you do anyway). Committing yourself in this way will make it a lot easier when you are on your own. In particular the third and fourth year resident is expected to:

- Know the staging systems for the usual (and unusual) cancers.
- After seeing a patient, not only give a good history and physical, but also an assessment and plan.
- Be able to discuss whether RT is indicated and why, what other treatments might be available and why they are or are not indicated.
- Know the technique by which you plan to give the radiation, the dose you would give and the expected side effects.
- Be able to direct a simulation from start to finish.
- Be able to draw the target, give directions to the physicist, and evaluate the computer plans generated.
- Know when to use the different devices (IJ, wedge, compensators)
- Be familiar with, and know the indications for newer techniques such as:
  ~ HDR Brachytherapy
  ~ Stereotactic Radiation
  ~ Intraoperative Irradiation
  ~ Prostate Brachytherapy
  ~ 3D Conformal Radiation
- By now the resident should be familiar with the RT literature and be working at knowing it in great detail.
- Residents are expected to teach and to set good example for first and second year residents.
- Participate in Mock Orals (Given in April)
- Continue to keep Patient case logs up to date on the ACGME website. ACGME web site: http://www.acgme.org/, see Resident case log.
- Complete your research project. Prepare your project for presentation at a Tuesday Night Conference in May or June of their senior year. Residents must submit the final project during May or June of their senior year to the Director.
- Submit patient logs for review.
**CHIEF RESIDENT DUTIES**
During your final year you may be asked to serve as the chief resident. This will include the following duties:

- Help orient the new residents.
- Teach the first year residents how to do Med-line searches.
- Explain the process of Complications Conference to first year residents and coordinate the conferences.
- Help create the Tuesday night lecture series.
- Oversee resident participation in conferences.
- Make sure evaluations get filled out at the end of each conference.
- Serve on the Education Committee as liaison for the other residents.
- Create the resident night and weekend call schedule.
- Help set up the resident call schedule and making it equitable.
- Be in charge of holding regular meetings of the residents.
- Arrange monthly Journal Club meetings.
- Assist with arrangements and selection of visiting professors.

**TRAINING/GRADUATION REQUIREMENTS**
Resident Responsibilities IN CLINICAL SERVICES:

- Residents are expected to be in the department at 7:30 AM and stay until 5:00 PM or all work is done or his/her attending allows him/her to go.
- Residents are expected to attend all departmental and service related conferences. They are expected to fill out attendance sheets and critiques of all lectures and conferences.
- Residents are expected to be present at all patient consults, follow ups, simulations, and planning and to take an active role with their attending in evaluating, examining, and planning the patients care. This includes: initial consults, simulation, treatment planning, treatment set up checks, weekly on treatment visits and follow-ups.
- Residents are expected to inform and get the consent of their attending for any scheduled or unscheduled leave time as well as going through the normal departmental mechanism for arranging this.
- Residents are required to dress appropriately, maintain proper hygiene and behave professionally while in the department during clinic hours.
- Residents should evaluate all port films prior to final evaluation by their attending.

**ROTATIONS**
Rotations are 3 months:

- University of Minnesota Medical Center Fairview (UMMC-F): This is the main teaching site and center of the residency. It is a University based tertiary care hospital. At this hospital residents rotate with individual attendings following and taking part in patient care for 3 month periods before rotating to another attending.
- University of Minnesota Physicians Therapy Center (Lakes-Wyoming): A comprehensive Medical Center which is University, staffed. This will allow the residents to have exposure a variety of cancer patients, especially prostate, and breast patients.
- Veteran Affairs Medical Center: A comprehensive Veterans Affairs Medical Center is University, staffed. This will allow the residents to have exposure a variety of cancer patients, especially prostate, lung, and head and neck cancers.
- Medicine: All residents will rotate for 1 month with in Medical Oncology and Pediatric Oncology Divisions of Internal Medicine and Pediatrics at UMMC-F. This rotation is geared to teach residents a better understanding of the perspective of the medical and pediatric oncology in patient care.
- Physics: Residents are required to rotate 2 months on the physics service. This is to promote a better understanding of the role of physics in treatment planning and the applied use of physics in patient care.
- Research: Residents are expected to work on a research project in their 4 years of training. 6 months of time will be allotted to work on this project.

HISTORY AND PHYSICAL EXAMINATION
Patients are to be seen and examined by both resident and staff physician. The residents should obtain a complete history and perform a physical examination before the faculty physician sees the patient. All signs and symptoms pertinent to the patient's problem must be noted. Dimensions of palpable nodes or masses must be recorded accurately. Pertinent negative findings should be recorded. At the completion of the history and physical examination, the patient should be staged by the appropriate staging classification for the primary disease site for ALL patients. Diagrams should be completed indicating the nature and extent of the primary and regional disease where appropriate. At the completion of the history and physical, a summary of the salient points of the patient's history and disease status, as well as recommendations and plans for treatment should be described. Completed dictations will be returned to the resident for signature and corrections. Each dictation completed by the resident must also be countersigned by the responsible staff physician.

CONSENTS
Consent for treatment is required for all patients prior to simulation or immediately after simulation. No patient will be treated without a consent form having been completed and signed. The consent form may be obtained by the resident and attending faculty either at the time of consultation or simulation. Consent forms are located in the nursing stations. The signed consent should be kept in the pending chart. A new consent is required if a new treatment is planned.

TREATMENT PLANNING
Scheduling of new patients:
Appointments for simulations and CT/MRI scans for planning purposes must be scheduled through the secretary in the reception area. Appointments for new patients beginning treatment are scheduled through the chief therapist or the therapist on the machine. In order to schedule a patient, the resident must have the patient’s name, the faculty member responsible for the patient, the area to be irradiated, whether simulation or machine time is required, whether the patient has received prior radiotherapy, and the location of the patient (if an in-patient). The resident should also indicate any special circumstances such as contrast medium for the bladder, rectum, esophagus, stomach, or small bowel, or a gap calculation because of prior treatment. The resident should check to make sure that the time scheduled does not conflict with the attending faculty’s schedule.
Simulation appointments are usually given at one-hour intervals. Appointments for CT/MRI for treatment planning are scheduled through receptionist. New patient’s treatment beginning times are assigned either between 9:00 and 10:00 a.m. or between 2:00 and 3:00 p.m.

Initiation of treatment:

- Simulation is the process by which the treatment field outlines and orientations are determined. A modified diagnostic x-ray unit with fluoroscopy is employed. The simulator imitates the treatment field but is not capable of delivering a treatment. Simulation of a new patient is performed by the resident, simulator therapist, and faculty physician. Completed simulation films must be checked and initialed both by the faculty physician and the resident prior to scheduling the patient for treatment on the treatment machine. If a treatment plan is to be developed by dosimetrist or physicist, the resident must delineate the target volume using the patient contour and simulator films. When 3D-CRT or stereotactic computer system is to be used, the resident must delineate the target on the computer monitor. The target volume should include the primary/regional disease, as well as appropriate margins. The target volume, as well as critical structures where a specified dose can be tolerated should be indicated on simulation films or computer system. These structures include the lens of the eye, the spinal cord, lung, kidney, etc. Faculty approval of the target volume must be obtained by the resident prior to proceeding with a computer planning. If blocks are to be employed in the treatment, the resident will draw the appropriate blocks on the simulator films. This must be approved by the faculty physician before blocks are cut. These films are then given to the simulator therapist for preparation. The dosimetrist/physicist will then choose the field size and field combinations to provide an optimum treatment plan. This will deliver the most homogeneous dose possible to the target volume while minimizing doses to critical structures and other normal tissues. The dosimetrist/physicist will present this plan to the resident and staff for approval. The resident is responsible for the review of the plan with the faculty physician. At this time, both physicians should initial the plan and complete the dose prescription (if not already done). The dose to the critical structures (e.g. spinal cord, supraclavicular region, lens, optic pathway, etc.) to be recorded in the treatment chart should also be indicated.

- At the time of the initial radiation treatment to check the set up parameters, both the resident and faculty physician will be present. Port films will be obtained and will be reviewed and signed by both physicians.
RADIATION PHYSICS AND RADIOBIOLOGY COURSES
The department’s medical physicists teach Radiation Physics, which is a two semester course comprehensive course offered during the first year. This course meets twice weekly from September through May. Attendance is mandatory for first year residents.

The Radiation Biology course is taught by our radiation biology faculty and covers the basic principles of radiobiology. This course meets twice weekly from September through December. Attendance is mandatory for residents during their second year of training, and must take and pass the written exams.

Both courses require the passing of written exams. This is a prerequisite for graduation.

EXAMINATIONS
All residents take the annual In-Training Examination in Radiation Oncology, given by the American College of Radiology in March of each year. The exam has separate sections on radiation biology, radiation physics, and clinical radiation oncology. The purpose is to provide insight into individual residents’ strengths and areas for further development. It also aids the resident in taking the written board exam given by the American Board of Radiology.

Annually, the clinical staff administers a mock oral-board exam to the residents. It simulates the oral exam given by the American Board of Radiology. The exam covers eight areas: lung cancer and sarcoma; breast cancer; gastrointestinal cancer; cancers of the reticulo-endothelial system; head, neck, and skin cancers; pediatric and CNS cancers; genitourinary cancers; and gynecologic cancers. This is usually held in April.

DUTY HOURS: (For additional requirements, please refer to Institution Policy Manual at http://www.med.umn.edu/gme/InstitutionPolicyManual2013/index.htm

- Residents duty hours are from 7:30 AM until 5:00 PM or until work is done (whichever is later) Monday-Friday. Resident hours at VA and Lakes are 7:30 AM until 5:00 PM or until the work is done (whichever is later) Monday-Friday.
- Duty Hours are defined as all clinical and academic activities related to the training program, i.e., patient care (both impatient and outpatient), administrative duties related to patient care, the provision for transfer of patient care, time spent in-house during call activities, and scheduled academic activities such as conferences. Duty Hours DO NOT include reading and preparation time spent away from the duty site.
- Duty Hours are limited to 80 hours per week, averaged over a four-week period, inclusive of all in-house call activities.
- Residents are provided with 1 day in 7 free from all educational and clinical responsibilities, averaged over a 4-week period, inclusive of call.
• Call is taken for 1-week blocks usually every 6 weeks, starting 1-month after starting the program. Call starts on Monday at 7:30 AM and continues to 7:30 AM the following Monday. Call is taken from home. The on-call resident must be available by pager and able to get to the hospital in a timely manner when on-call. Senior residents will back up the new resident. A staff person is always on-call and available for any questions or problems. On average, residents are called in to the hospital only once or twice per week of call. Over the course of a typical month residents are usually off at least 6 days. Therefore, residents will be allowed to spend, on average, at least one full day out of seven away from the hospital.

• Residents are required to record their duty hours in RMS on a bi-monthly basis for each year of their training.

• Duty Hours are monitored according to the institutional polices, with frequency sufficient to ensure ACGME compliance. If needed, resident schedules will be adjusted to mitigate excessive service demands and/or fatigue. If an ACGME duty hour violation occurs, the RMS (Residency Management Suite) sends a report to Program Director, cc’s the Program coordinator who then reviews with the resident the violation for accuracy to ensure it does not occur on a regular basics.

ON-CALL HOURS/SCHEDULES

1. The resident on call schedule is prepared by the chief resident(s) subject to review and approval by the program director. All residents are included in the call schedule. Emergency consults, such as spinal cord compression, superior vena caval syndrome, or brain metastases, must be evaluated by the on call resident immediately following the request for consultation. The on call attending staff will also evaluate the patient. The on call resident is responsible for helping with the TBI set-ups, treating emergency patients as well as others who have already been started on emergency treatment and require continuing treatment through the weekends or holidays. A consult note must be completed on all emergency in-patient consults and placed on the patient hospital chart and the department pending chart. The resident on call will also dictate a history and physical on the emergency consult.

2. This information should be given to the appropriate attending physician on the first day following weekend or holiday who will ultimately be managing the patient. Residents can take call from home nightly provided that they live no more that 45 minutes to 1 hour from the hospital. A long-range beeper is provided and residents must be in range of beeper contact while on call.

3. The on-call schedule is given to each resident and staff physician for each quarter, as well as every month. Changes in the on call schedule should be given to the secretary in M26 as soon as possible. Changes made within a week of the upcoming on call should be relayed directly to the secretary in M26, the hospital page operator, departmental receptionist and on call attending. When on-call you must be available by phone and beeper for any patient calls, consults or emergencies. Let the operator know how to get in touch with you at all times. Arrange with treating tech the time to come in on weekends.

4. In general, the on call period is one week at a time.
ON-CALL ROOMS
Residents do not have in house call.

SUPPORT SERVICES
Patient support services available in a manner appropriate to and consistent with education objectives and patient care. Support Services must be provided at all sites.

LABORATORY/PATHOLOGY/RADIOLOGY SERVICES
Laboratory, Pathology and Radiology services are available in an appropriate timely, quality manner for patient care.

MEDICAL RECORDS
A medical record is available at all times to support quality patient care, the education of residents, quality assurance activities, and provide a resource for scholarly activity.

SECURITY/SAFETY
Security and personal safety measures are provided to residents at all locations including but not limited to parking facilities, on-call quarters, hospital and institutional grounds, and related clinical facilities (e.g., medical office buildings).

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MOONLIGHTING: (For additional requirements, please refer to Institution Policy Manual at http://www.med.umn.edu/gme/InstitutionPolicyManual2013/index.htm)

The departmental policy for resident moonlighting will be as follows:

- Moonlighting requires a prospective, written statement of permission form the program director that will be made part of the resident’s file.
- Moonlighting cannot be done in the first year of residency.
- Residents are not required to engage in Moonlighting.
- Moonlighting activities will not be allowed to conflict with scheduled and unscheduled time demands of the educational program and its faculty.
- The Resident performance will be monitored for the effect of these activities upon performance and adverse effects may lead to withdrawal of permission.
- All Moonlighting must be counted toward the 80-hour weekly limit on duty hours.

- Moonlighting cannot be done Monday through Friday so not to interfere with clinical duties.
- Moonlighting is only allowed after 5:00 PM on weekdays, weekends, and during vacation time, and with approval of the Department Chairman and Residency Program Director.
Residents may not moonlight while they are on call.

If the moonlighting appears to be interfering with the resident’s performance, a meeting will be held with the residency program director and the department chairman to discuss the problem. If, after a period of reevaluation, the resident’s performance is still not considered adequate, by virtue of University policy, further moonlighting will not be allowed. This policy is meant to ensure the ability to pass the written boards, oral boards and perform as exemplary radiation oncologists at the completion of their training.

SUPERVISION: (For additional requirements, please refer to Institution Policy Manual at http://www.med.umn.edu/gme/InstitutionPolicyManual2013/index.htm)

All patient care is supervised by qualified faculty. The program director will ensure, direct, and document adequate supervision of residents at all times.

- Residents will be provided with rapid, reliable systems for communication with supervising faculty.
- Residents are supervised by teaching staff in such a way that the residents assume progressively increasing responsibility according to their level of education, ability, and experience.
- On-Call schedules for teaching staff are structured to ensure that supervision is readily available to residents on duty.
- Faculty and Residents are educated to recognize the signs of fatigue and will adopt and apply policies to prevent and counteract the potential negative effects.

FATIGUE
Faculty and Residents/Fellows are educated to recognize the signs of fatigue and will adopt and apply policies to prevent and counteract the potential negative effects. Additional information may be found at http://www.lifecurriculum.info/programtour/default.aspx?id=1

GRADED RESPONSIBILITY
The Program Director and Faculty provide residents with direct experience in progressive responsibility for patient management.

MONITORING OF RESIDENT WELL-BEING
The Program Director and Faculty work closing with residents to responsibility monitor the resident stress level, including mental or emotional conditions inhibiting performance or learning, and drug-related dysfunction. All faculty are sensitive to timely provision of confidential counseling and support services. Residents may also contact (RAP) Residency Assistance Program at 651-430-3383 at no cost, confidential counseling.

GRIEVANCE PROCEDURE AND DUE PROCESS
PATH OF RESOLUTION/CONFLICT
If a resident has a conflict or have concerns regarding confidentially they are to report it to the Chief Resident or Program Director for resolution. If the problem has not been resolved, then the resident will go to the Department Head. If no resolution after the Department Head, the resident will go to the GME office, Dr. Ling. Additionally, the University of Minnesota has an excellent Resident Assistance Program (RAP) for these and other problems residents may experience during their training. To contact (RAP) Residency Assistance Program call 651-430-3383 at no cost, confidential counseling.

ACLS/BLS/PALS Certification Requirements
- BLS – ALL RESIDENTS MUST REMAIN CURRENT ON THEIR BASIC LIFE SUPPORT TRAINING.
- ACLS – It is recommended that residents maintain Advanced Life Support Training

VISA SPONSORSHIP
The J-1 visa is the preferred visa status for foreign national trainees in all UMN graduate medical education programs; therefore, the Department of Radiation Oncology sponsors on J-1 alien physician visas through ECGMG. We do not sponsor H-1B visas. More information on the J-1 Visa can be found on the UMN-GME webpage.

INSTITUTIONAL POLICY/USMLE Step 3 Policy
All residents must provide their program with documentation of a passing score on the United States Medical Licensing Examination (USMLE) Step 3 or an equivalent examination that qualifies for medical licensure (i.e. Comprehensive Osteopathic Medical Licensing Examination - COMLEX) by January 1 of their PGY-2 year. Residents who do not notify their program of a passing score by January 1 of their PGY-2 year forfeit their continuing position in the training program and are subject to contract non-renewal. Upon application to the program, residents who transfer into a University program (PGY-3 and beyond) are required to provide documentation of a passing score on their examination.
SECTION 6. - ADMINISTRATION

A. FACULTY LIST

UNIVERSITY OF MINNESOTA MEDICAL CENTER FAIRVIEW (UMMC-F)
Kathryn E. Dusenbery, M.D., Professor, Department Head
Margaret Reynolds, M.D., Assistant Professor, Residency Program Director
James B. Orner, M.D., Associate Professor
Seymour Levitt, M.D., Professor Emeritus
Lawrence Cho, M.D., Professor
Jianling Yuan, M.D., PHD, Assistant Professor

Physicists
Bruce Gerbi, Ph.D. Professor
Parham Alaei, Ph.D., Associate Professor
Patrick Higgins, Ph.D., Professor, Director
Susanta Hui, Ph.D., Associate Professor
Yoichi Watanabe, Ph.D., Professor
Eric Ehler, Assistant Professor

VETERANS AFFAIRS MEDICAL CENTER
Joaquin Silva, M.D., Professor
Lihong Qin, Ph.D., Physicist
David Ellerbusch, Ph.D., Physicist.

UNIVERSITY OF MINNESOTA PHYSICIANS RADIATION THERAPY CENTER – (LAKES WYOMING)
Xin Wang, M.D., Associate Professor
Jane Johnson, M.S., Instructor, Physicist
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<tr>
<th>Name</th>
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I understand what is expected of me during my Residency in the department of Radiation Oncology. I have been given the Program/Institutional Manual for my reference and understand if I have any questions regarding goals and objectives during the rotation, I should contact the Residency Director, Dr. Reynolds.

By signing this document you are confirming that you have received and reviewed your Program Policy Manual for this academic year. This policy manual includes policies and procedures pertinent to your training program. This receipt will be kept in your personnel file.

Resident Name (Please Print)

________________________________________

Resident/Fellow Signature

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Date:

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Coordinators Initials:

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Date:

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