RESIDENCY HANDBOOK
2013-2014

The Department of Radiation Medicine
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Contents
INTRODUCTION .................................................................................................................. 3
CORE PROGRAM ................................................................................................................ 3
  Training Overview ....................................................................................................... 3
  Research Requirement ............................................................................................... 4
  Examinations ................................................................................................................ 4
RESIDENT REQUIREMENTS ............................................................................................... 5
  Minimum Resident Weekly Expectations: ................................................................. 5
  Clinic Coverage .......................................................................................................... 5
  Record Keeping ........................................................................................................... 6
  Chart Documentation .................................................................................................. 6
  On-call Responsibilities ............................................................................................... 6
  Professional Behavior ................................................................................................. 6
  Dress Code .................................................................................................................. 6
DISCIPLINARY ACTIONS ................................................................................................... 7
EVALUATIONS ................................................................................................................... 7
REQUIREMENT FOR PROMOTION ................................................................................. 8
ACGME-ABR REQUIREMENTS ....................................................................................... 9
  Time Allotment During Residency ............................................................................ 9
  Radiopharmaceutical Cases: Performed vs. Observed ............................................. 10
  QA/QI Requirement ................................................................................................... 10
TRAVEL TO CONFERENCES ............................................................................................ 11
TIME-OFF ....................................................................................................................... 12
CHIEF RESIDENT .......................................................................................................... 12
RESOURCES ................................................................................................................... 13
ACADEMIC SCHEDULE .................................................................................................. 14
COMMITTEES ................................................................................................................ 17
MOONLIGHTING ............................................................................................................. 17
GRADUATION .................................................................................................................. 17
TABLE 1. INTRADEPARTMENTAL CONFERENCE SCHEDULE ..................................... 18
TABLE 2. INTERDEPARTMENTAL CONFERENCE SCHEDULE ....................................... 19
OPERATIONAL ISSUES DURING CLINICAL ROTATIONS ............................................ 20
ROTATION SPECIFIC GOALS AND OBJECTIVES ....................................................... 20
  Head & Neck/Lymphoma ......................................................................................... 20
INTRODUCTION

Welcome to the University at Buffalo School of Medicine and Biomedical Sciences and Roswell Park Cancer Institute’s residency in Radiation Oncology. The resources of the University and Roswell Park, combined with the talents of the faculty and staff in Radiation Oncology, will provide you with a unique opportunity to prepare for a career in academic and/or clinical radiation oncology.

The transition into radiation oncology is not easy and involves acquiring a large body of new knowledge. This handbook outlines the design of the four-year residency program and provides information regarding policies, procedures and educational goals. The program is challenging, but should not be overwhelming. You should feel at ease to speak to any of the faculty, especially the program director or chairman of radiation oncology, if you have any concerns or questions regarding your training experience.

Anurag K. Singh, M.D.
Residency Program Director

CORE PROGRAM

The core program is a four-year residency that begins following successful completion of a PGY-1 year. The program utilizes the facilities of the Department of Radiation Medicine, Roswell Park Cancer Institute and the University at Buffalo School of Medicine and Biomedical Sciences. Residents will always be paired with a supervising physician and will assume increasing patient care responsibility as they progress through the residency. The residency program consists of an integrated series of rotations providing broad clinical experience and an intensive series of courses in physics, radiobiology and oncology. The clinical curriculum will provide the resident with an in-depth knowledge of clinical radiation oncology, including indications for irradiation, special therapeutic considerations unique to each disease site and stage of disease, and normal tissue tolerance and tumor dose response. The resident will be trained in standard radiation techniques, the use of treatment aids and treatment planning to optimize the distribution of radiation dose, as well as the use of combined modality therapy and unusual fractionation schemes. The program will stress sound clinical judgment and decision making based on a thorough cautious assessment of each individual patient’s situation.

Training Overview

All residents will receive training in the use of external beam modalities, including superficial irradiation, megavoltage irradiation, electron beam, simulations to localize anatomy, and computerized treatment planning. Residents will also receive specific training in High-Dose Rate, Low-Dose Rate, Stereotactic and Total Body Skin Electron Radiation.

Interstitial brachytherapy using high dose rate and low dose rate afterloading systems is concentrated heavily at Roswell Park Cancer Institute within gynecologic, thoracic, and soft tissue/sarcoma disease sites. Other brachytherapy using the manual afterloading system includes brain, prostate and head and neck implants.

As residents rotate among radiation oncologists or through medical oncology, pathology and electives, they will be required to attend interdepartmental conferences in medical, surgical, pediatric and gynecologic oncology and various surgical subspecialties. This will make the resident aware of the importance of continuing self-education in providing optimal patient management and encourage its perpetration long after completion of the residency program.
**Research Requirement**

Each resident is required to be involved with at least **one research project per year** during the program and are encouraged to select projects that is likely to result in both an abstract suitable for submission and presentation at a national meeting and a manuscript suitable for submission for publication in a peer reviewed journal. Per ACGME guidelines, one of these projects MUST be a formal quality improvement (QI) project. The reports are due to the Program Director and Educational Affairs Department one month prior to end of each academic year. This project (or one of your written projects if many are done) will be submitted for judging along with Medical and Surgical Fellows at the end of each year. Graduating residents will not receive their certificate until research reports are submitted. Attending physicians are generally eager to suggest topics and provide guidance in this domain. The research project may take the form of a retrospective chart review, case report and literature review or development of a clinical research protocol, bench research project, or other project as approved by the RPD. Resources are available through the department, the Institute, and the School of Medicine.

*Research listings for the department can be found in Googledocs under Research Opportunities.*

Residents have time available during their third year for a more in depth project(s) – usually 6 months or more depending on projects. The resident should begin preparing for this in their second year, with discussion with the RPD, and a submitted proposal by April of 2nd year. Protected time is for lab research, physics research, or prospective trial design, implementation, and data collection. Retrospective chart review projects alone, though valuable, will not be given protected time.

Failure to engage in research projects during the first and second years may jeopardize promotion to the next year and will limit or completely remove the time allowed for a research project in the 3rd year.

**Examinations**

- All residents must have passed USMLE parts 1 and 2 before beginning the residency program.

- It is a requirement of the program that all residents take their USMLE step 3 exams before the end of the 1st year or residency, and this exam must be passed before the end of the 2nd year in the radiation residency program. If this is not obtained, then that resident’s contract will not be renewed and he/she will be placed on academic probation until a passing score is obtained.

- Residents are required to take all exams per the Program Director, i.e., RAPHEX, RABEX, In-Service, radiobiology, physics, etc. None of these exams are optional. A grade of B or better is required for both Physics and Radbio courses. The program director will set the minimum required scores on other examinations.
RESIDENT REQUIREMENTS

Minimum Resident Weekly Expectations:

• 8 consultations per week
• 5 Follow-ups per week
• 5 simulations per week
• Evaluate and participate in management of 50% of all OTVs (performing primary documentation whenever possible, otherwise indicating in the record that resident was involved)
• Evaluate and participate in management of 50% of all follow-ups (performing primary documentation whenever possible, otherwise with PA indicating in the dictation that the patient was seen with the resident)
• All port films must be signed off within 24 hours
• All dictations must be signed off within 2 business days
• All contouring should be completed within 2 business days unless previously cleared with the attending
• All E-values for a given week must be completed by Tuesday at 8 am of the following week
• Chart Rounds cases (MR#, question asked) are to be available to Program Coordinator by the end of that day (via Google docs or e-mail)
• The questions from Chart Rounds will be gone over during Chief Rounds. This is a residents only, mandatory conference to be scheduled and run by the Chief Resident. Attendance will be taken.
• Didactic lectures should be prepared for review by the appropriate attending and program director at least 2 weeks prior to the date of the lecture.
• Punctuality at all required conferences/meetings unless engaged in direct patient care

When there are fewer than 8 consultations, 5 Follow-ups and 5 simulations on a service, the resident is expected to find uncovered patients on another service.

The requirement for minimum number of consults and simulations will be waived if there are fewer than the required numbers of consults in the department for a given week. If this is the case, then it is expected that ALL consults for the week will have been covered by a resident.

Residents who miss time in a given week will have their requirements prorated to the number of days they were here. (eg if here for 4 of 5 days, then would have to see 4 x 1.6= 6.4 or 6 consultations. Weekly OTV requirements apply fully only if the resident is present on the service OTV day)

Residents are to keep both the attending and Physician Assistant fully apprised of what is going on with the patients they see. They should ask the attending on service, ideally in writing, how this sign out process is to be done.

For patients seen on other services, every effort should be made to follow the patient through to the completion of treatment planning. The clinical treatment planning note should also be done prior to simulation.

Failure to consistently meet these minimum requirements may result in disciplinary action as described elsewhere in the handout, or on the UB Graduate Medical Education (GME) website.

Clinic Coverage

General clinic hours of operation for residents are 8:00 AM to 5:00 PM, excluding off-site patient review conferences. Clinic hours may be changed at any time. Resident must remain in clinic during clinic hours or
until all of their patients are finished with treatment. Each resident must follow the guidelines of the supervising attending they are on service with. During clinic hours each resident is responsible for his or her own patients. Additionally, new patients may be assigned to any resident by the attending staff based on schedules and availability during regular work hours.

**Record Keeping**
A record of all patients treated and procedures done must be kept by each resident throughout the residency.

- Cumulative logs (completed online, www.acgme.org) will be reviewed every 3-4 months.
  - The ACGME logs are expected to be updated at least weekly.
- All electronic conference evaluations and simulation/clinical logs/evaluations for a given week must be filled out by Tuesday at 8 am of the following week.
- Requests for A-plus time, vacation or book purchases will be denied until logs are reviewed and up to date. Continued failure to meet these deadlines will be dealt with sanctions as proscribed by the UB GME office (sequentially this includes: enhancement, probation, termination.)

**Chart Documentation**
In addition to an established charting system at Roswell Park Cancer Institute, the Department of Radiation Oncology has developed a unique system for our patients. At the time a patient is seen in consult, our charting process begins. All residents are required to quickly familiarize with all forms of charting and documentation. An in-depth documentation review process will be part of the initial orientation period.

**On-call Responsibilities**
Residents take call from home via beeper after regular clinic hours. Resident on call needs to be in the clinic when the first patient is treated until the last patient treatment has been completed. Call is taken in one-week blocks rotating among the residents. A faculty member and therapist will also be designated on the call schedule. The resident is expected to discuss all emergency consults with the faculty member on call. Emergency treatment will not be initiated unless the attending physician is present. The resident will be expected to be able to perform a hand calculation for determination of monitor units. Therefore he/she should familiarize him/herself with the forms and tables utilized. In addition to after-hours emergency cases, the on-call team is responsible for emergent inpatient hospital consults and other inpatient consultations that cannot be seen by the usual attending who concentrates in the relevant radiation oncology subspecialty area.

**Professional Behavior**
A critical aspect of review will be the evaluation of professional behavior. Certain standards of behavior are always expected of physicians. Our residents are expected to adhere to these same high standards. Integrity and responsibility, humane and ethical conduct, punctuality and attendance, and the professionally appropriate behavior are emphasized. Adherence to ethical standards of conduct which define professional integrity and/or competence is part of the residents’ evaluation performance.

**Dress Code**
Residents must wear appropriate professional attire at all times. This consists of a shirt, tie, and dress pants for men. Appropriate attire for women includes dress pants or skirts and a blouse/dress shirt. Appropriate dress shoes must also be worn; therefore sneakers or boots are not permitted. Also, lab coats must be worn at all times when in the clinic area and scrubs are only to be worn if resident is doing a procedure. Following the procedure, resident is to return to professional attire.
DISCIPLINARY ACTIONS
The Department of Radiation Medicine expects all residents to fulfill their responsibilities and conduct
themselves in a competent, professional manner, and to follow the rules, regulations and policies of the
University at Buffalo, Roswell Park Cancer Institute, the Department, affiliated hospitals, as well as federal and
state law. In the event a resident falls short of these expectations, and/or engages in misconduct, violates rules,
or fails to satisfactorily perform in the training program, the resident will be counseled and/or disciplined for
his/her actions or inactions.

Disciplinary or remediation will be conducted in accordance with the UB Graduate Medical Education (GME)
Academic Policy and Procedure proscribed pathway of: Academic / Professional Enhancement, Probation, Non-
promotion or ultimately (if not corrected) Non-renewal or Dismissal. This is further described on the UB GME
website: [http://wings.buffalo.edu/smbs/GME/documents/Academic_Action_3-10.pdf](http://wings.buffalo.edu/smbs/GME/documents/Academic_Action_3-10.pdf)

EVALUATIONS
Regular evaluation of resident performance and faculty/program quality is an important aspect of the
residency program. Electronic Instruments have been designed to capture resident competency-based
performance, and to examine mentoring/teaching throughout training, at as many places as possible. Electronic
competency-based evaluations will occur at multiple conferences (Case conference, Morning Seminar
Conference, Journal Club, Morbidity & Mortality), assessing resident performance and mentoring. Electronic
competency-based end of clinical rotation evaluations also occur, examining each clinical rotation (with
resident, attending, 360 and patient evaluations). All evaluations must be completed by residents by Tuesday
morning of the following week.

Recognition of any problems at the earliest possible time allows rapid remediation/correction. The
majority of difficulties with resident performance can be handled via informal means such as counseling or
additional instruction with attending. If significant problems persist however, a resident may be placed on
probation in accordance with institutional policy. A copy of the policy on probation and termination of
graduate medical education trainees is available in the program director’s office. A ‘Promotions Board’ will
meet annually in June to review resident performance and recommend promotion to the next post-graduate
training level.

The following evaluations will run continuously through the year:
- Case Conference (Friday, noon, weekly)-included peer evaluation
- Morning Seminar Series (Thursday, 8am, weekly)-included peer evaluation
- Journal Club (Thursday, 8am, monthly)-included peer evaluation
- Morbidity and Mortality conference (Friday, noon, monthly)-included peer-evaluation
- Chart Rounds Conference (Mondays, 12 noon)

The following evaluations will be completed following each clinical rotation (every 2 months):
- Resident Evaluation by supervising attending
- Resident Evaluation by staff (therapists, nurses, PA’s, dosimetrists, and physicists) and patients.
- Rotation/Program Evaluation by residents

Program Director will meet with resident after 2 rotations (every 4 months)
- Review of resident performance by program director
- Review of resident case logs by program director
Annual evaluations include:
- Annual performance review by program director
- Program Evaluations (yearly) – One by all residents, One by faculty, One by Program Committee (RPD, Coordinator, faculty member(s), resident(s)).

**REQUIREMENT FOR PROMOTION**

- Compliance with all of the requirements laid out in the residency manual and as per the next accreditation system (NAS).
- Maintenance of scores greater than the 20th percentile in the in-service exam.
- Passing an oral board exam at the end of each year that is based upon the resident's rank and number and types of rotation is completed.

Failure to meet these criteria will result in sanctions to be determined by the program director. These sanctions include but are not limited to: lack of promotion to the next academic rank, academic enhancement, and/or probation.
ACGME-ABR REQUIREMENTS

A final 4-year log of all cases treated with external beam and brachytherapy must be submitted at the completion of residency in order for the resident to document adequate case experience for board exam eligibility.

- Over the residency period, each resident must simulate and treat 450 patients
  - (150 per year minimum, 250 per year maximum),
- At least 5 interstitial implants and 15 intracavitary implants
- Six radiopharmaceutical cases (see explanation below)
  - 3 Iodine-like unsealed sources and 3 radioactive drug/other treatments.
- Twelve pediatric cases
  - at least 9 need to be solid tumors.
- The resident must participate in the treatment planning and administration of at least 10 cases of stereotactic radiosurgery of the brain and at least 5 cases of stereotactic body radiation therapy of the liver, lung, spine or other extracranial sites.
  - Stereotactic radiosurgery may be delivered by a variety of available technologies using image guided stereotactic localization procedures and may be either intracranial or extracranial. As defined, radiosurgery may be administered in a single fraction or extended to a maximum of five fractions. More protracted courses of stereotactic radiation should be classified as external beam.
    - It is recommended that residents maintain a separate file/list including the patient’s name, age, diagnosis, stage, intent of treatment (palliative vs. curative) and type of treatment (external beam vs. brachytherapy, photons vs. electrons, or photon energy).
- One research project MUST be a formal quality improvement (QI) project.

See ACGME website, as these guidelines may change at any time, www.acgme.org

Time Allotment During Residency

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Time Allotted</th>
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<tbody>
<tr>
<td>Radiation Medicine</td>
<td>At least 36 months</td>
</tr>
<tr>
<td>Medical Oncology</td>
<td>2 months (or 4 hours per month during the clinical rotations)</td>
</tr>
<tr>
<td>Pathology</td>
<td>1 month (or at least one hour per month during the clinical rotations)</td>
</tr>
<tr>
<td>Diagnostic Imaging</td>
<td>1 month (or at least one hour per month during the clinical rotations)</td>
</tr>
<tr>
<td>Physics</td>
<td>Per physics curriculum</td>
</tr>
<tr>
<td>Radiobiology</td>
<td>Per radiobiology curriculum</td>
</tr>
<tr>
<td>Elective</td>
<td>1 month in medical, surgical, pediatric, gynecological or various surgical subspecialties</td>
</tr>
</tbody>
</table>

You can also review ACGME program requirements by logging on to www.acgme.org (Review Committee, Radiation Oncology, Program requirements) and also ABR website, www.thearb.org for Board requirements.

Research time is also allotted and adjustments are made to the schedule depending on residents’ plans, expectations, and progress. A review process is performed prior to making any adjustments.
Radiopharmaceutical Cases: Performed vs. Observed
What constitutes "participation" in these six procedures? The RRC and ABR recognize that there will be considerable variability in the resident's degree of involvement, depending on the facility and the relationship between the authorized user and trainee. Since these procedures are generally performed outside of the radiation oncology facility, it is recognized that some residents may do formal rotations for fixed periods, and others may do cases as they come up, without formal fixed rotations. Therefore the extent of involvement in these procedures will vary. However one fulfills the six case requirements, it is expected that the trainee will understand the indications for the procedure, alternatives, the radiation safety issues, and the methods involved in the calculations and administration of the isotope. The trainee should be present when the isotope is delivered, and should understand the precautions and follow-up procedure. Ultimately, it is the authorized user who determines the satisfactory "participation" of the trainee and signs the form as satisfactorily completed.

QA/QI Requirement

*[Program Requirement: IV.A.5.c).(4)]*

systematically analyze practice using quality improvement methods, and implement changes with the goal of practice improvement; (Review Committees should define expectations regarding quality improvement within specialty specific program requirements.)

FROM a FAQ in the ACGME newsletter:

The program needs to document that residents (working alone or in a practice group) actively participate in an exercise in which they can examine some aspect of their practice to identify an area in need of improvement, and then implement a plan to bring about improvement. An exercise that examines some aspect of their educational activities can be used to meet this requirement if it is related to patient care. Residents will need to be provided instruction in quality improvement methods. This process is learned best when residents are able to work with those skilled in quality improvement.

Additionally, from another FAQ:

The QA/QI project findings should be presented at a specific departmental conference for this purpose with broad attendance.
TRAVEL TO CONFERENCES
Residents are encouraged to prepare research projects for presentation at scientific societies. Residents receive a CME fund each year in the amount of $1,800 that can be allocated for travel to meetings or other academic needs. Meetings should be prioritized, so enough clinical learning can occur on each rotation. Top priority is given to attending conferences where the resident is presenting research data (abstract, poster, talk) or has significant professional committee duties (e.g., AMA, ACRO, ASTRO, ARRO representative). Next priority is given to the academic learning benefit of the meetings (e.g., ASTRO, ACRO annual meetings, or ASTRO spring refresher, board review courses, Vail clinical trials development, etc). Other uses include of funds include use for books, PCs or other continuing medical education purpose.

Residents are granted academic time to attend these national meetings and must have the prior approval for travel from the Residency Program Director (RPD) and the faculty whose service(s) they are assigned. Special discussion and approval should occur with the RPD and service attending if more than 3 weeks (15 work days) of meeting time is to occur in a year, for prioritization. Residents must get this approval at least one (1) month in advance and make the necessary travel arrangements consistent with departmental guidelines.
TIME-OFF
The following guidelines should be followed when planning time-off:

<table>
<thead>
<tr>
<th>Vacation</th>
<th>Sick</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 days</td>
<td>20 days</td>
</tr>
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Any unused vacation time shall not be cumulative from year to year. Monetary reimbursement will not be given for unused sick or vacation time at the end of a resident’s program. However, sick time may be accumulated up to a maximum of one hundred twenty (120) days. See the Employee Benefits Policy.

a. The official position of the training program is that the maximum amount of time-off per rotation should not exceed five work-days. Longer periods of leave may be approved in special circumstances. Leave dates must be approved by the attending physician and the Program Director. Residents should give their supervising attending and the Program Director notice of intended time-off at least fourteen days in advance.

b. Residents requiring an extended (greater than two weeks) leave of absence due to illness, pregnancy or other circumstances must obtain approval from the Program Director to ensure compliance with institutional and ABR/ACGME requirements.

c. In general, residents may not take time-off during the last two weeks of June or the first two weeks of July (special dispensation can be made by both the service attending and RPD).

d. A resident cannot go over 120 days of time off during the 4 year residency and must complete all training requirements in order to finish training on time.

CHIEF RESIDENT
A resident on good academic standing will be selected as Chief Resident by the RPD in consultation with faculty. The selection process and criteria are determined by the Residency Program Director (RPD). The appointment should be for a minimum period of six months. No more than two residents should serve as chief residents in a given year.

The chief resident will be expected to:

a) Assist the RPD (and resident coordinator) in development and successful implementation of conference schedules and resident call schedules.

b) The chief resident will ensure all conference sign-in sheets are returned to the residency coordinator immediately after conference so the electronic evaluation system can occur.

c) Act as a resident liaison to the program director, with the main responsibility of notifying the RPD of any significant issues affecting the performance or development of a resident(s) in a timely manner.

d) Represent residents at faculty meetings and Department QA/QI meetings.

e) Ensure all, teaching conferences/classes (for example, didactic conferences/classes, clinical case conferences, mortality and morbidity conferences, and journal clubs and others) occur as per the directions of the RPD (detailed elsewhere in this handbook), and ensure all attendance sign-in forms are returned to the residency coordinator immediately at the end of each conference to ensure the electronic conference log and evaluation process can be done in a timely manner.

f) Assist with the professional behavior of residents and enforce the dress code.

g) Assume more responsibility for overall supervision and teaching of junior residents in consultation with, and as directed to, by the RPD (eg. helping with orientation days).
h) The chief resident will be expected to check with the physics and radiobiology course coordinators and inform the residents of class schedules.

i) The chief resident will arrange for resident pediatric coverage when there is no resident assigned to the pediatric service for a particular rotation.

RESOURCES
The Medical and Scientific Library is organized to serve the professional information needs of the clinical, research, and student community at Roswell Park Cancer Institute. Its resources and services are available to the entire Institute community, to other libraries, and to individuals in the area who have a legitimate need for its materials. The library collection includes over 95,000 volumes and receives approximately 3,300 current journals and serials subscriptions.

The professional staff of the library offers both computerized and manual reference service as well as guidance in the use of the card catalog, reference books, indexes, abstracting journal, and other bibliographic tools.

The RPCI Library provides HUBNET, an internet-based information system which is available 24 hours a day, 7 days a week from all networked institute computers. HUBNET contains MEDLINE, Pre-MEDLINE, CINAHL (Nursing and allied health), and 18 other interdisciplinary bibliographic databases, two evidence-based medicine databases, 89 full-text journals, 38 reference books and textbooks, three drug information databases, and Health Reference Center, a patient information source. Residents may access HUBNET from home after obtaining HUBNET passwords for off campus use. PubMed, the National Library of Medicine’s portal for MEDLINE and Pre-MEDLINE, is available from any computer with internet access.
ACADEMIC SCHEDULE
Below is a BRIEF summary of the academic schedule. See Appendix I and II for more details.

NOTES:
For the Case Conference, Morning Seminar Conference, Journal Club, and Morbidity & Mortality Conference:

- The conferences have **sign in sheets**, to be delivered by Chief resident (or designate for that day) to Residency Coordinator immediately after the conference is held, so the electronic evaluation process can initiate.
- **The presenting resident is to contact the attending they are to do a conference with AT LEAST two weeks prior to the conference** so the attending has time to work with and guide the resident.

Other conferences below will have their own sign in sheets (managed by other parts of RPCI), which will be sent electronically to the Residency Coordinator.

**Case Conference: Clinical Case Presentation and Literature Review (Friday, Noon, Weekly)**
All attendings (including Mentoring attending) and residents will be present (anyone is welcome). They consist of a formal case presentation with a faculty mentor. One resident presents a case (presenting resident) and another resident (responding resident) is chosen at random to answer questions about the case from the faculty mentor for the case. Other attendings also can ask questions as permitted by Mentor attending. Only residents in the clinic (i.e. with an attending mentor) will be presenting resident, but all can be responding residents. The attendings have developed case curriculum choices to guide the topics chosen, but the mentor can choose to do additional interesting cases (topics).

This is then followed by targeted (key) literature review by the presenting resident on a topic(s) brought up by the case. The resident is expected to prepare a single page double sided handout on a few key papers brought up by the particular case being presented. This handout must then focus on a very limited number of points of interest that the presented case illustrates (usually in the form of presentations of 2-3 “classic” or important papers. The presenting resident must prepare the handout, and the chief resident has the responsibility of ensuring an electronic copy of each conference’s single page handout is sent to the residency coordinator for incorporation into the library.

Electronic Evaluations:
- Electronic Evaluation of Presenting Resident (by all present, ACGME Competency-based)
- Electronic Evaluation of Responding Resident (by all present, ACGME Competency-based)
- Electronic Evaluation of Attending Mentor (by presenting resident)

**Morning Seminar Conference: (Thursday mornings, 8-9am, Weekly). Didactic**
A Mentoring Attending, and all residents are present (anyone else is welcome). Residents will present a review of major clinical topics (usually powerpoint presentation) in that attending’s area of expertise, with attending mentorship to prepare talk and choose topic from faculty developed topics/curriculum. For the last 10 minutes of the conference, the mentoring attending will ask the presenting resident questions on the topic to ensure they learned the material being presented, and to clarify points brought up during the presentation (others present can ask questions as permitted by the mentoring attending).

Electronic Evaluations:
- Electronic Evaluation of Presenting Resident (by all present ACGME competency-based)
- Electronic Evaluation of Attending Mentor (by presenting resident)
Journal Club (Thursday morning, 8-9am, Monthly, same week as Morbidity & Mortality), Analysis of Literature

The Journal Club (Clinical, Biology, and Physics) occurs monthly, usually the 3rd or 4th Monday of every month. Mentors can include: Attendings, Physics faculty, Biology faculty. They are present with all residents. (all others welcome). Physics students can present physics papers (in addition to residents). Emphasis is on background in the area, dissection and analysis of the paper. Three residents are paired with faculty mentors who help them choose papers in each topic (clinical, biology, physics). The resident will present the paper, paying particular attention to background/context, data and analysis, and whether the results support the conclusions. Strengths and weaknesses of each paper are to be presented. The presenting residents have to get the papers to the chief resident, who has the responsibility of providing the attending and residents with copies of the papers to be presented at least a day prior to the meeting (usually all are collected into a packet). The journal articles should also be sent electronically to attendings and residents, but a hard-copy packet is required for everyone prior to presentation (as detailed above).

Periodically, residents will also receive electronic journal articles through e-mails, reviewed by the program director or attending from selected radiation oncology journals. In addition, residents are strongly encouraged to attend other Interdepartmental Journal Clubs, including Medical Oncology and Surgical Oncology.

Electronic Evaluations:
- Electronic Evaluation of Presenting Resident by Mentor (ACGME Competency-based)
- Electronic Evaluation of their specific Mentor by their Presenting Resident

Mortality and Morbidity (Friday, Noon, Monthly, same week as Journal Club)

All attendings present and all residents are present. 1-2 cases are presented by a resident, mentored by the attending that had that morbidity/mortality issue. A review of all treatment complications will be discussed. A detailed presentation by a resident physician on a rotational basis will be done. A discussion concerning the complications, the cause, the results, and possible avoidance will be discussed by the residents and staff. This will also include cases which have failed treatment, with an attempt to elucidate the cause of failure.

Electronic Evaluations:
- Electronic Evaluation of Presenting Resident by all attendings AND all residents, present, ACGME Competency-based, capturing peer-evaluation)
- Electronic Evaluation of their specific Mentor by presenting resident

Chart Rounds - Patient Treatment and Planning Conference (Monday, noon, weekly)

Residents should know their patients extremely well, and are expected to prepare the following:
- Summary of the pertinent history, staging, physical findings and laboratory work-up of the patient. The residents may be asked clinical questions during the rounds, and may be given assignments (papers or points to look up depending on their answers). It is important for the resident to identify the central areas of interest in the patient’s management and to use the medical literature to address them when needed.
- Electronic Evaluation of Presenting Resident by all present. ACGME competency-based, capturing peer-evaluation).
- Electronic Evaluation of the MD Clinical Treatment Planning Note by all residents.

Combined Fellows Lecture Series (Tues Afternoons – 5-6pm, weekly)

This is a combined radiation, medical, surgical oncology lecture series. It will examine ethics, epidemiology, statistics, clinical trial design, cancer biology and clinical care, oncologic research, and other topics. Attendance is required for all residents. Sign in sheets are kept and >80% attendance is expected.
Faculty Forum (Wed 8-9am)
This is a special Institute-wide forum, with leading outside speakers from around the country (indeed the world) in cancer research and clinics. Required attendance for all residents.

Medical Oncology Grand Rounds (Friday, weekly, 8:00 a.m.)
Grand rounds feature special presentations by visiting Consortium, department faculty, and chief residents. The objective is a comprehensive review of the diagnosis, management, and pathophysiology of problems in oncology and the sub-specialties of the field, with emphasis on both the clinical and basic science. The Chief Resident and Program Director will determine relevant grand rounds to attend. Required attendance for all residents.
COMMITTEES

Residents are appointed to or can select to sit on the following committees:

1. Program Evaluation Committee – reviews program goals and objectives and the effectiveness of the program in achieving them. The review includes the utilization of the resources available to the program, the contribution of each institution participating in the program, the financial and administrative support of the program, the volume and variety of patients available to the program for educational purposes, the performance of members of the teaching staff, and the quality of supervision of residents. The group meets at least annually for this purpose and consists of the Program Director, Program Coordinator, faculty representative, and senior resident.

2. Incoming Resident Selection Committee – interviews and evaluates applicants selected to interview for the upcoming opening. Usually the Chief Resident is appointed to this committee.

3. Consortium Residents’ Committee - The mission of the Consortium Residents Committee (CRC), which is comprised of an elected resident from each program, is to represent the residents in matters related to all aspects of residency education and serve as a liaison to the Graduate Medical Education Committee (GMEC).

4. Other committees will form as Department initiatives develop. The Program Director will inform/select resident(s) to sit on these as deemed appropriate. Please contact the Program Coordinator or Program Director for more information.

MOONLIGHTING

During your four-year residency program training it is our policy that you are not allowed to engage in employment outside of the training program (moonlighting).

GRADUATION

Diplomas will be given out only after all checkout procedures have been completed. This means all dictation at all the facilities must be complete, paperwork must be turned in (including your four year cumulative case log) along with pagers, ID cards, parking passes, dictaphones, etc.
# TABLE 1. INTRADEPARTMENTAL CONFERENCE SCHEDULE

<table>
<thead>
<tr>
<th>Conference</th>
<th>Frequency</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Treatment &amp; Planning Conference / Chart Review (QA/QI)</td>
<td>Weekly-Monday - Noon</td>
<td>Department Chair</td>
</tr>
<tr>
<td>Physics Class</td>
<td>As per scheduled</td>
<td>Physics Division</td>
</tr>
<tr>
<td>Radiation Biology Class</td>
<td>Every other year</td>
<td>Radiation Biology Division</td>
</tr>
<tr>
<td>Resident Morning Conference</td>
<td>Weekly</td>
<td>Program Director</td>
</tr>
<tr>
<td>Resident Case Conference</td>
<td>Weekly</td>
<td>Program Director</td>
</tr>
<tr>
<td>Resident Journal Club</td>
<td>Monthly</td>
<td>Program Director</td>
</tr>
<tr>
<td>Mortality and Morbidity Conference</td>
<td>Monthly</td>
<td>Department Chair</td>
</tr>
<tr>
<td>Conference</td>
<td>Frequency</td>
<td>Responsible Party</td>
</tr>
<tr>
<td>--------------------------------</td>
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<td>------------------------------------</td>
</tr>
<tr>
<td>BREST-RPCI</td>
<td>Weekly</td>
<td>Breast Service</td>
</tr>
<tr>
<td>GYN – RPCI</td>
<td>2 times / month</td>
<td>GYN Service</td>
</tr>
<tr>
<td>PEDS</td>
<td>Weekly</td>
<td>Peds – Children’s &amp; RPCI</td>
</tr>
<tr>
<td>Sarcoma/Melanoma</td>
<td>Weekly</td>
<td>Surgery Service</td>
</tr>
<tr>
<td>Medical Grand Rounds</td>
<td>Weekly (Required)</td>
<td>RPCI</td>
</tr>
<tr>
<td>Faculty Forum</td>
<td>Weekly (Required)</td>
<td>RPCI</td>
</tr>
<tr>
<td>Surgical Grand Rounds</td>
<td>Weekly</td>
<td>RPCI</td>
</tr>
<tr>
<td>Esophagus GI RPCI</td>
<td>Weekly</td>
<td>GI Service</td>
</tr>
<tr>
<td>Hepatobiliary GI RPCI</td>
<td>Weekly</td>
<td>GI Service</td>
</tr>
<tr>
<td>Colorectal GI RPCI</td>
<td>Weekly</td>
<td>GI Service</td>
</tr>
<tr>
<td>Medical Oncology – RPCI</td>
<td>Weekly</td>
<td>Medical Oncology</td>
</tr>
<tr>
<td>M &amp; M Surgical – RPCI</td>
<td>Weekly</td>
<td>Surgical Oncology</td>
</tr>
<tr>
<td>Thoracic – RPCI</td>
<td>Weekly</td>
<td>Pulmonary</td>
</tr>
<tr>
<td>Head &amp; Neck RPCI</td>
<td>Weekly</td>
<td>Head &amp; Neck Service</td>
</tr>
<tr>
<td>Gamma Knife (Citywide)</td>
<td>2 times/mo.</td>
<td>RPCI</td>
</tr>
<tr>
<td>Oncology Core Curriculum</td>
<td>Weekly</td>
<td>RPCI</td>
</tr>
<tr>
<td>RPCI/Oncology Debates</td>
<td>8-10 times/ yr</td>
<td>RPCI</td>
</tr>
</tbody>
</table>
OPERATIONAL ISSUES DURING CLINICAL ROTATIONS

The Goals and Objectives: These will arrive electronically at the start of each rotation, and are to be read carefully and signed off by the resident at the beginning of each rotation, with any issue clarified with the rotation’s attending.

Start of Rotation Discussion: At the start of each rotation the resident is to discuss with their attending (and PA if one exists) how the service will run, examine the overall expectations, and clarify operational issues, including how OTVs and Follow-ups will be seen by the resident on that particular service.

Volume drawing: It is expected in general that all volumes are to be completed at the latest by 2 business days after simulation. Attendings can modify this on a case by case basis depending on special circumstances.

ROTATION SPECIFIC GOALS AND OBJECTIVES

At the request of the residents during the UB program evaluation of 2013, the following list rotation specific goals and objectives were produced.

Head & Neck/Lymphoma

1. Basic Functions
   a. Check port films daily (mostly on tuesday on our service)
   b. Prepare OTV wt check sheet
   c. Send out email to med onc of new starts following week

2. Patient Preparation
   d. Have all MDCTPN and simulations scheduled for consults likely to need sim same day
   e. See consults first, OTV next (attending will see OTV first), and F/U as many as possible either as primary or with attending after PA

   a. Contours should be complete by friday afternoon for sims that week unless needed sooner.
   b. Keep ppt of 3d fields for each pt you treat with IMRT

4. Learn H&N anatomy and exam
   a. Attending will show you one perfect exam. Expect you to follow afterward.
   b. Set up scoping sessions with Jim Smaldino

5. Learn literature (this is a progression during residency)
   a. Basics as per dictation template
   b. Overview as per ppt summary
   c. Level of oral boards exam
   d. Be able to quote the literature freely and apply it to patients on the fly at time of consult
Physics/Radiobiology Schedules (See Appendix I and II for details)

A separate Physics and Radiobiology lecture series will be given over the four-year residency program. Each resident must attend the scheduled lectures per year in each area. Each lecture series will become progressively enhanced as the resident progresses through the three year rotation. Attendance is mandatory and successful completions of examination are required to continue to the next series and complete the rotation. If absent from more than 20% of any series, the resident must repeat the series the following year.

Residents are expected to attend every required class and obtain at least a grade of B on the class exam. Unexpected absences and persistent tardiness will be noted on the resident’s performance evaluation form. In cases where an individual anticipates being late to or absent from class, he or she is to notify the faculty lecturing that day or the Program Coordinator. Because the course meeting time for these classes has been coordinated by the Department so as not to conflict with the residents’ clinical activities, engagement in such activities cannot be used as a justifiable excuse for missing class. If, after taking these courses the second time through, a resident does not obtain a grade of B or above on the course, that resident’s contract will not be renewed and he/she will be placed on academic probation until the material is learned and the requisite grade is obtained on the course exam. Residents will also not be permitted to begin their academic research time (usually done in year 3 of the residency) until the required courses and grades are obtained from the first two years of classes.
Appendix I - Resident Didactic Course Outline

Clinical:
- **Case Conference** (Friday, Noon, weekly) – Formal case presentation with faculty mentor. One resident presents case and another resident is asked questions about it by faculty, followed by key literature review.
- **Morning Seminar Conference** (Thursday, 8am, weekly) - presentation of curriculum topic by resident, mentored by attending specializing in that site/topic.
- **Journal Club** (Thursday, 8am, monthly) – Literature analysis of a Clinical, a Biology, and a Physics paper. One resident is assigned to each type of paper with a faculty mentor for each.
- **Morbidity and Mortality Conference** (Friday, noon, monthly), resident presentation on specific patient and area with attending mentor.
- **Chart Rounds** (Monday, noon, weekly)
- **Combined Fellows Lecture Series** (Tuesday, 5-6pm, weekly) - Radiation/Surg/Med Onc Fellows Lecture Series (Ethics, Stats, CA Biol, other), during academic year.
- **Medical Oncology Grand Rounds** (Friday, weekly, 8:00 a.m.)
- **Faculty Forum** (Wed 8-9am) - Institute-wide forum, national/international speakers.

Physics:
- Three quarterly courses per year (Dr. Matthew Podgorsak’s, Mr. Steve deBoer’s, Dr. Harish Malhotra’s, as well as dosimetry courses) – to be taken Yrs 1-4. More detailed outline of the current courses with suggested order or taking them are below. Residents are expected to pass the class exams.
- Component within Biophysics Course (see below) offered every other year
- **Journal Club** (Monthly analysis of physics paper, see above)

RadioBiology:
- Biophysics Course (offered every other year) – to be taken at least one time during residency (and two times if sequencing works out prior to radiobiology boards). Residents are expected to pass the exam.
- **Journal Cub** (Monthly analysis of biology paper, see above).

Other Research:
- All Residents will be required to submit a yearly paper or review article/report for the Roswell contest (along with Medical Oncology and Surgical Oncology fellow). This could be something written specifically for the Roswell report, but hopefully will be something which has been recently submitted or is being worked on for publication.
- Several of the conferences above will capture didactics of research design, methods, areas, ethics.
- **Dedicated research time** (usually done in their 3rd years of radiation medicine residency)
  Residents are to continue to have detailed discussions of their research during the 2nd year with the RPD and potential mentors, and are expected to have a formal research outline submitted to the RPD by April of 2nd year detailing the specific research project(s) that they will be conducting, mentors, and expected results (abstract, paper, training in research, etc.). They do the research during their 3rd year and this is followed by written summary of research done with deliverables (<5 pages, by project with most important project first, mentor(s), short summary of project, and abstracts/posters/talks/papers that come from work. The summary is then updated at end of 4th year.
Appendix II: Resident Physics Course Schedule

-REQUIRED-

1st Year Radiation Medicine Resident

Semester 1  RPD 110  *Dr. Matt Podgorsak  Sept – Dec
Semester 2  RPD 200  *Steve deBoer  Jan. – April
Semester 3  RPD 310  *Dr. Harish Malhotra  May – Aug.

OPTIONAL:
Semester 1  RPD 100  Lee Hales  Sept. – Dec.
Semester 2  RPD 023  Lee Hales (Lab class)  Jan. – April
Semester 3  No physics

2nd Year and 3rd Year Radiation Medicine Resident

-Residents can take optional courses in these years from others offered in the department. For optional courses taken the resident will again be expected to get a grade of B or above on the course exam.
-An example of the above may be RPD 110, 200, 310 over the year
-Others include (for example): RPD 401 (IMRT lab), RPD 043 (Brachy lab)

NOTE:
* For the course taught by Dr. Podgorsak, Mr. deBoer, and Dr. Malhotra: the teachers will give an exam to the residents with questions drawn from (or heavily based on) questions in the raphex exams. Residents must pass the exam for each class taken.

**There is also a Physics component to the Biophysics Course (Offered every other year) – See the Radiobiology section of Appendix I for more details.

***Also note the specific teacher may change at anytime.
Appendix 3: ACGME Next Accreditation System (NAS) guidelines

http://www.acgme-nas.org/assets/pdf/Milestones/RadiationOncologyMilestones.pdf