

**University of California, San Francisco,  
Department of Radiation Oncology  
Residency Training Program  
Diagnostic Radiology Goals and Objectives  
For PGY-5 Residents**

The Department of Radiation Oncology has developed objectives to guide residents through clinical rotations and guidelines related to Diagnostic Radiology requirements. Abiding by the Diagnostic Radiology requirements enables the resident to accumulate knowledge, develop technical skills, and establish decision-making processes. During Diagnostic Radiology rotations, Radiation Oncology residents are expected to attend radiology rounds, read-out sessions, and resident didactic sessions, shadow Radiology attending physicians, fellows, and/or residents, and do background reading to accomplish the rotation goals.

**Patient Care**

1. Develop and carry out management plans as they relate to any diagnostic radiology procedures.
2. Understand the appropriate diagnostic radiology study that the patient will undergo.

Most radiology rotations are not expected to involve much direct patient care. If patient care is involved, the resident must comply by the guidelines listed by the ACGME, and specifically be able to provide compassionate, appropriate, and effective treatment for patients. For each patient, PGY-5 residents will be expected to:

3. Communicate effectively and demonstrate respectful behavior when interacting with the patient and his or her family/caregivers.
4. Gather essential and accurate information about the patient from the review of all pertinent medical records and diagnostic tests, both within the UCSF medical system as well as appropriate outside health care facilities (as necessary).

**Medical Knowledge**

PGY-5 residents will be expected to have a more in-depth knowledge of the following with an increased emphasis on evidence-based medicine and knowledge of the pertinent literature:

1. Understand standard positions for diagnostic imaging examinations.
2. Understand basic digital and conventional x-ray physics.
3. Learn about contrast administration for computed tomography and magnetic resonance imaging (indications, dose, timing).
4. Learn about risk factors for and management of contrast allergies.
5. Understand basic radiographic patterns. For example, be able to separate pulmonary from pleural or extra-pleural processes.
6. Learn to use PACS and other computer interfaces necessary for reading diagnostic radiology and radiation oncology treatment-planning studies.

7. Learn normal anatomy as seen on plain radiographs, magnetic resonance imaging (MRI), and X-ray computed tomography (CT).
8. Learn basic pathological findings and gain insight into which radiological study would best delineate the pathology based on the organ(s) involved and the differential diagnosis.
7. Learn the above details as part of the RRC required courses in radiation physics, radiation and cancer biology and clinical radiation oncology that all take place in our UCSF Radiation Oncology Department; or as part of a rotation in diagnostic radiology.
8. Expand his/her knowledge of anatomy in all organ systems and its appearance on various imaging modalities (CT, MRI, ultrasound, etc).

### **Practice-Based Learning and Improvement**

Residents must demonstrate the ability to use information technology and feedback to improve their fund of knowledge and skills. The expectation is that they learn how to search, review, and analyze medical information in PubMed as well as the UCSF Medical Library.

1. Resident should also learn to focus on the most important radiographic findings and their role in diagnosis and target and normal tissue delineation.
2. While textbook and review articles are important in gaining knowledge, the resident is strongly encouraged to also use scientific articles as a means of education.
3. The resident should gain self-insight into his/her own strengths and weaknesses in an attempt for self-improvement.

### **Interpersonal and Communication Skills**

All residents are expected to:

1. Communicate with patient and their family/caregivers in an easily understood and culturally sensitive manner.
2. Communicate effectively with medical and support staff, demonstrating respect and maintaining professional relationships with all members of the radiation oncology and diagnostic radiology team.
3. Communicate with other physicians and health care professionals.
4. Work effectively as a team member, progressively accepting more responsibility and participate in a leadership role as progressing through the residency.
5. Maintain comprehensive, accurate and timely medical records. All relevant medical records must be completed within 48 hours of the patient visit.
6. Develop a comprehensive vocabulary for describing imaging findings and their significance.

### **Professionalism**

All residents are expected to:

1. Demonstrate compassion, respect, and integrity and responsiveness to patient's needs.

2. Be accountable to their patients and their profession.
3. Demonstrate a commitment to excellence and on-going professional development.
4. Function well as a member of the team.
5. Practice in an ethical manner with regard to provision or withholding of care, confidentiality of PHI, and informed consent.

### **Systems-Based Practice**

PGY-5 residents will demonstrate an awareness of and responsiveness to the health care system and ability to call on resources to provide care. They are expected to:

1. Understand how their professional patient care practices affect other health care professionals, the healthcare organization and the community.
2. Practice cost-effective health care that does not compromise quality of care.
3. Advocate for quality patient care practices and help patients navigate through complexities in the healthcare system.
4. Understand the balance between cost-effectiveness and quality of care.

### **List of Specific Expectations**

The following is a list of specific expectations for resident physicians in training at UCSF while assigned to the Diagnostic Radiology Service. The goal of the list is to facilitate learning, improve patient management skills, and to improve knowledge of relevant literature and its application to the individual patient.

1. Attend relevant Diagnostic Radiology conferences including:
  - a. Daily “sign out” of all studies read out that day by the Diagnostic Radiology team;
  - b. Didactic lectures;
  - c. Weekly Morbidity and Mortality Conferences of the Radiology Department.
2. Gain experience in reading standard diagnostic radiology imaging studies including plain radiographs, magnetic resonance imaging (MRI), and computed tomography (CT).
3. Gain experience in reading standard diagnostic radiology imaging studies for both pediatric and adult patients.
4. Understand standard positions for diagnostic imaging examinations.
5. Understand basic digital and conventional x-ray physics.
6. Understand basic radiographic patterns. For example, be able to separate pulmonary from pleural or extra-pleural processes.
7. Learn to use PACS and other computer interfaces necessary for reading diagnostic radiology and radiation oncology treatment-planning studies.
8. Learn normal anatomy as seen plain radiographs, magnetic resonance imaging (MRI), and computed tomography (CT).
9. Learn about contrast administration for computed tomography and magnetic resonance imaging (indications, dose, timing).
10. Learn about risk factors for and management of contrast allergies.