

**NAME OF ROTATION:**

**CT Radiology**

**DIRECTOR OF ROTATION:**

**Lawrence H. Goodman, M.D.**

**OVERVIEW:**

The CT rotations are designed to provide the resident with extensive training in the interpretation of CT scans of all varieties. In addition, with experience, the resident will be involved in interventional procedures performed under CT guidance. Many of the formal lectures in the various subspecialty areas are heavily weighted towards CT. The rotation will require textbook and CD review.

The resident is expected to be in the CT reading area from 7:30 a.m. until 5:00 p.m., except for conferences and other designated assignments. The resident will be responsible for the administration of intravenous contrast if necessary. All cases will be reviewed with an attending physician from the CT Service, who will also approve the dictated report.

Rotation 1 and 2 (PGY-2)

Core competency based objectives:

1.	<b>PATIENT CARE:</b> Provide patient care that is compassionate, appropriate and effective.
2.	<b>MEDICAL KNOWLEDGE:</b> Residents must demonstrate knowledge about established and evolving biomedical and clinical sciences and the application of this knowledge to patient care.
3.	<b>INTERPERSONAL AND COMMUNICATION SKILLS:</b> Residents must demonstrate interpersonal and communication skills that result in effective information exchange with patients, patient family members, medical students, other residents, supervising faculty, referring physicians, technologists, nurses and other members of the health care team.
4.	<b>PROFESSIONALISM:</b> Demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles and sensitivity to a diverse patient population.
5.	<b>PRACTICE BASED LEARNING AND IMPROVEMENT:</b> Residents must be able to investigate and evaluate their patient care practices, and appraise and assimilate scientific evidence in order to improve their radiologic practices.
6.	<b>SYSTEMS BASED PRACTICE:</b> Demonstrate an awareness and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide optimal care.

Knowledge Based Objectives: At the end of the rotation, the resident should be able to:

1.	Review the ACR standards and department policies and protocols pertaining to CT scanning and the administration of intravenous contrasts.
2.	Recognize and treat contrast reactions.
3.	Observe the performance of CT scans by the technologists.
4.	Identify normal anatomy of the various body areas scanned.
5.	Identify and/or describe common variants of normal.
6.	Recognize significant pathology.
7.	Demonstrate a basic knowledge of radiologic interpretation.

Technical Skills: At the end of the rotation, the resident should be able to:

1.	Distinguish normal from abnormal structures.
2.	Demonstrate a basic knowledge of radiologic interpretation.
3.	Communicate verbally with referring physicians and house staff about radiographic findings.

Decision-Making and Value Judgment Skills: At the end of the rotation, the resident should be able to:

1.	Make decisions about when to alert staff to the immediacy of a condition that is apparent on the radiograph.
2.	Determine when to request that a repeat examination is needed because of technical inadequacy.

## CT

### Rotation 3 (PGY-3)

Core competency based objectives:

1.	<b>PATIENT CARE:</b> Provide patient care that is compassionate, appropriate and effective.
2.	<b>MEDICAL KNOWLEDGE:</b> Residents must demonstrate knowledge about established and evolving biomedical and clinical sciences and the application of this knowledge to patient care.
3.	<b>INTERPERSONAL AND COMMUNICATION SKILLS:</b> Residents must demonstrate interpersonal and communication skills that result in effective information exchange with patients, patient family members, medical students, other residents, supervising faculty, referring physicians, technologists, nurses and other members of the health care team.
4.	<b>PROFESSIONALISM:</b> Demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles and sensitivity to a diverse patient population.

## CT

### Rotation 3 (PGY-3) (cont'd)

Core competency based objectives:

5.	<b>PRACTICE BASED LEARNING AND IMPROVEMENT:</b> Residents must be able to investigate and evaluate their patient care practices, and appraise and assimilate scientific evidence in order to improve their radiologic practices
6.	<b>SYSTEMS BASED PRACTICE:</b> Demonstrate an awareness and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide optimal care

Knowledge Based Objectives: At the end of the third CT rotation, the resident should be able to:

1.	Discuss various disease processes affecting the different organ systems being scanned.
2.	To provide a comprehensive differential diagnosis.
3.	Proficiency in protocoling CT studies so that they are performed correctly and addresses the clinical question.
4.	Consult with the technical staff regarding any questions in the performance of a CT exam.
5.	Teaching medical students rotating through radiology.

Technical Skills: At the end of the rotation, the resident should be able to:

1.	Providing a structured readable and easily interpretable CT report that addresses the clinical history and indications for the study
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Decision-Making and Value Judgment Skills: At the end of the rotation, the resident should be able to:

1.	Quickly recognize CT emergencies that require immediate communication.
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## CT

### Rotation 4 and 5 (PGY-4, 5)

Core competency based objectives:

1.	<b>PATIENT CARE:</b> Provide patient care that is compassionate, appropriate and effective.
2.	<b>MEDICAL KNOWLEDGE:</b> Residents must demonstrate knowledge about established and evolving biomedical and clinical sciences and the application of this knowledge to patient care.

## CT

### Rotation 4 and 5 (PGY-4, 5) (cont'd)

3.	<b>INTERPERSONAL AND COMMUNICATION SKILLS:</b> Residents must demonstrate interpersonal and communication skills that result in effective information exchange with patients, patient family members, medical students, other residents, supervising faculty, referring physicians, technologists, nurses and other members of the health care team.
4.	<b>PROFESSIONALISM:</b> Demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles and sensitivity to a diverse patient population.
5.	<b>PRACTICE BASED LEARNING AND IMPROVEMENT:</b> Residents must be able to investigate and evaluate their patient care practices, and appraise and assimilate scientific evidence in order to improve their radiologic practices.
6.	<b>SYSTEMS BASED PRACTICE:</b> Demonstrate an awareness and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide optimal care.

Knowledge Based Objectives: At the end of the fourth and fifth CT rotation, the resident should be able to:

1.	Refine their ability to discuss various disease processes affecting the different organ systems being scanned.
2.	To provide a comprehensive differential diagnosis.
3.	Act as consultant to other physicians regarding interpretation of CT images.
4.	Interpretation of studies which are highly technical such as CT Colonography and CT Enteroclysis.
5.	To become proficient in the interpretation of CT angiograms, including all vascular studies.

Technical Skills: At the end of the rotation, the resident should be able to:

1.	Perform CT guided biopsies and drainages with confidence.
2.	To become proficient in the use of the CT work station for 3D reconstruction.
3.	Providing a structured readable and easily interpretable CT report that addresses the clinical history and indications for the study.
4.	Manage all aspects of CT protocols.
5.	Maintain a log of interventional procedures using CT guidance.

Decision-Making and Value Judgment Skills: At the end of the rotation, the resident should be able to:

1.	Demonstrate a high degree of accuracy in interpreting and dictating cases and rapidly communicating any urgent results to the clinicians.
2.	Consulting with confidence with primary care physicians, surgeons and residents.

EVALUATION:

The Service Director will meet with the resident at the beginning of each rotation to discuss the goals and objectives of the rotation and at the end of the rotation to discuss the resident's performance relative to the stated goals and objectives. The Service Director will complete a standard written evaluation form for the resident at the end of each rotation. This written evaluation will be sent to the program director for use in compiling the resident's semi-annual overall evaluation. The evaluation will be discussed with the resident at the end of the rotation by the Service Director and an opportunity for resident feedback and rotation evaluation will be provided.

COMPREHENSIVE READING LIST:

1. Atlas of Axial, Sagittal and Coronal Anatomy with CT and MRI; Christoforidis.
2. Computed Body Tomography with MRI Correlation; Lee, Sagel and Stanley.
3. Cranial Computed Tomography; Lee and Rao.
4. CT of the Whole Body; Haaga and Alfidi.
5. Cranial CT in Infancy and Childhood; Hammock and Milhorat.
6. CT in Evaluation of Trauma; Federle and Brant-Zawadzki.
7. Normal Variants and Pitfalls in Imaging; Vogler, Helms and Callen.
8. CT & MRI of the Abdomen and Pelvis: A Teaching File; ROS & Lee
9. ACR Standards of CT Head, Chest, Body, etc.