

BODY IMAGING - Fluoroscopy GI and GU

Goals & Objectives

FLUOROSCOPY ROTATION I

Behavioral Objectives

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

1. Discuss the proper clinical and radiologic indications for the following studies:
Single & double contrast esophograms, UGI, SBFT, MBS
2. Discuss the pertinent properties, proper concentrations and proper indications for use of the following contrast media:
 - a) Barium
 - b) Water soluble contrast media; Ionic and Non-ionic intravenous contrast media
3. Identify risk factors for allergic reaction to contrast media. Appropriately manage contrast reactions and prophylaxis of.
4. Recognize the normal radiographic anatomy of structures of the abdomen, and GI/GU tracts.
5. Demonstrate a basic knowledge of radiographic abnormalities of the GI/GU tract, including assessment of tubes/devices and retained objects, and identify urgent findings.

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

1. Demonstrate knowledge of the equipment used during fluoroscopy, including:
 - a) radiation dose reduction features of the machines
 - b) proper radiation safety techniques
 - c) use of coning, automated exposure control, and magnification
2. Demonstrate correct fluoroscopy techniques for performing the following procedures (including patient positioning, coning, type and position for radiographs or fluoro store images):
 - a) Modified barium swallow +/- REST
 - b) Esophogram
 - c) Upper GI
 - d) SBFT
 - e) VCUG
3. Demonstrate initial development of interpretive skills by identifying the more common abnormalities *during the performance of the studies*.

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

1. Determine the appropriateness of the study requested and choose the appropriate technique to perform it.
2. Communicate with the referring physician about any recommended changes
3. Communicate with the technologist about any special or additional views that should be obtained to demonstrate the pathology identified.
4. Communicate to the referring physician any significant abnormalities seen on the examination.

FLUOROSCOPY ROTATION 2

Behavioral Objectives

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

1. Demonstrate retention of knowledge requirements set forth for the first rotation.
2. Discuss the proper clinical and radiologic indications for the following studies:
 - a. Single & double contrast enemas, VCUG, Cystograms, HSGs, Sniff test, RUG
3. Diagnose and/or discuss GI/GU tract pathology in specific detail.
4. Identify normal and abnormal finding on abdominal radiographs.
5. Teach rotating students and residents.

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

1. Demonstrate further development of the technical skills of performing the GI/GU studies listed in the first rotation, as well as:
 - VCUG and cystograms
 - HSG
 - RUG
 - Signograms/fistulograms
 - Port/catheter injections
 - Enteric tube placement
2. Demonstrate the ability to identify an abnormality at fluoroscopy and modify the technique or change the patient's position to take diagnostic images during the study
3. Increase efficiency & decrease fluoroscopic time needed to perform a study without compromising diagnostic acumen.

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

1. Demonstrate an enhanced ability to perform decision making and value judgment skills listed under rotation 1.
2. Evaluate and integrate data from other imaging studies of the GI/GU tract, with clinical information to make recommendations for more appropriate or additional diagnostic studies needed for evaluation of the patient's abnormality

FLUOROSCOPY ROTATION 3

Behavioral Objectives

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

1. Demonstrate GI/GU knowledge base through accurate exam performance and identification of pathology
2. Identify & describe GI/GU tract pathology in specific detail.
3. Assist with preparation and presentation of GI/GU conferences.
4. Teach and supervise the learning activities of rotating students and residents.

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

1. Demonstrate the technical skills of performing the GI/GU studies without assistance.
2. Demonstrate the ability to identify an abnormality at fluoroscopy and modify the technique or change the patient's position to take diagnostic fluoroscopic spot films.
3. Demonstrate the ability to perform efficiently through decreasing fluoroscopic time needed to perform a study without compromising diagnostic acumen.

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

1. Demonstrate an enhanced ability to perform decision making and value judgment skills.
2. Evaluate and integrate data from other studies imaging studies of the GI/GU tract, with clinical information to make decisions about how to best perform the appropriate study, and to make recommendations to the referring physician about appropriate or additional diagnostic studies needed for evaluation of the patient's abnormality

3. Show progression in the ability to interpret studies with supervision from the faculty radiologist.
4. Communicate findings and make appropriate recommendations through succinct dictations.

ALL FLUOROSCOPY ROTATIONS

General Competencies

Patient care

Residents must become capable of providing patient care that is empathetic, compassionate, and appropriate. Care must be suited to the establishment of diagnoses and provision of treatment. The resident shall gather background information and knowledge appropriate to initiating and performing the diagnostic study in question and interpreting results.

- Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families
- Tailor GI/GU fluoroscopic procedures to the needs of the patient
- Optimize the study for patient safety, and minimize radiation exposure for the patient, the technologist, the resident and any learners

Medical knowledge

Residents must become familiar with basic science, including anatomic and pathologic, and biomedical and clinical knowledge and be able to apply these to patient care and further understanding of investigation and treatment of illness. This shall include knowledge of normal GU/GI anatomy and embryology, interpretation of normal and abnormal imaging studies, basic manifestations of common illnesses, effective and concise presentation of diagnostic studies and findings.

Practice-based learning and improvement

Residents must be able to evaluate patient care outcomes and practices, collect and evaluate scientific evidence, and improve patient care practices. This shall include the use of information technology and the literature.

- Locate, appraise and assimilate evidence from scientific studies on the diagnostic effectiveness of plain films and fluoroscopic procedures and their role in the clinical care of the patient
- Facilitate the learning of students and others who rotate through fluoroscopy
- Maintain a procedure log & have awareness of case volumes & deficits
- Demonstrate knowledge and use of medical informatics in patient care and education

Interpersonal and communication skills

Residents must demonstrate effective and timely interpersonal and communication skills with all health care professionals. Residents must interact professionally and sensitively with patients and their families. Residents shall communicate study results to referring physicians and document these in a timely and concise fashion.

- work professionally and effectively with all other health care professionals
- interact effectively and sensitively with patients, and with family members of patients: *greet them appropriately, introduce yourself and your role, explain the procedure to be performed, allow them an opportunity to ask questions, obtain informed consent when indicated, and discuss results as indicated*
- document the communication of critical findings with the appropriate institutional protocol
- Create a concise and informative radiology report

Professionalism

Residents must demonstrate integrity and compassion, along with professional demeanor, toward patients and their families, as well as to peers and medical staff alike. The ability for ethical consideration and ongoing education development will be shown. Ongoing commitment to excellence and professional development shall be shown.

- maintain a professional demeanor and bearing
- display appropriate grooming and dress habits; wear professional attire
- demonstrate a commitment to excellence and on-going educational and professional development
- demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care & confidentiality of patient information
- demonstrate sensitivity and responsiveness to patients' culture, age, gender and disabilities
- Be a role model for fellow residents and medical students

Systems-based practice

Residents must understand how the care they provide relates to the larger context of health care and a patient's health care plan. They should collaborate with other specialty services in their quest to deliver optimum patient care. They should assist in providing cost-effective health care and practice health care cost initiatives with resource maintenance in mind without compromising patient care.

- assist referring clinicians in providing cost effective healthcare
- practice cost effective health care and resource allocation that does not compromise quality of care
- be prepared to evaluate the request for imaging as regards cost, effectiveness, and appropriateness, and to facilitate performance of an alternative study if indicated
- Be proficient with the ACR Appropriateness Criteria