

ACGME Program Requirements for Graduate Medical Education In Abdominal Radiology

Effective: June 23, 1998

In addition to complying with The Program Requirements for Residency Education in the Subspecialties of Diagnostic Radiology, programs must comply with the following requirements, which in some cases may exceed the common requirements.

I. Scope and Duration of Training

I.A. Definition and Scope of the Specialty

Abdominal radiology constitutes the application and interpretation of conventional radiology, computed tomography, ultrasonography, magnetic resonance (MR) imaging, nuclear medicine, fluoroscopy, and interventional methods customarily included within the specialty of diagnostic radiology as they apply to diseases involving the gastrointestinal tract, genitourinary tract, and the intraperitoneal and extra peritoneal abdominal organs.

The program must be organized to enhance substantially the residents' knowledge of the application of all forms of diagnostic imaging and interventional techniques to the unique clinical pathophysiologic problems encountered in diseases affecting the gastrointestinal and genitourinary systems. The program should include education in normal and pathologic anatomy and physiology of gastrointestinal and genitourinary disease and be structured to develop expertise in the appropriate application of all forms of diagnostic imaging and interventions to problems of the abdomen and pelvis.

I.B. Duration of Training

Prerequisite training for entry into a diagnostic radiology subspecialty program should include the satisfactory completion of a diagnostic radiology residency accredited by the Accreditation Council for Graduate Medical Education (ACGME) or the Royal College of Physicians and Surgeons of Canada (RCPSC), or other training judged suitable by the program director.

II. Faculty Qualifications and Responsibilities

The director of the program in abdominal radiology must be an experienced educator and supervisor of residents in abdominal radiology. The program director must be certified by the American Board of Radiology in radiology or diagnostic radiology, or possess equivalent qualifications, and shall have had postresidency experience in abdominal radiology, preferably fellowship training.

The faculty should include, in addition to the program director, at least one other full-time radiologist specializing in abdominal radiology. At a minimum, the program faculty must have two full-time equivalent faculty members dedicated to the program. Although it is desirable that abdominal radiologists supervise special imaging such as computed tomography, ultrasonography, and magnetic resonance imaging, in instances where they are not expert in a special imaging technique, other radiologists who are specialists

in those areas must be part-time members of the abdominal radiology faculty. The faculty must provide didactic teaching and supervision of the residents' performance and interpretation of all abdominal imaging procedures.

(See Program Requirements for the Subspecialties of Diagnostic Radiology for additional program director and faculty requirements.)

The total number of residents in the program must be commensurate with the capacity of the program to offer an adequate educational experience in abdominal radiology. The minimum number of residents need not be greater than one, but at least two residents is desirable. To ensure adequate supervision and evaluation of the residents' academic progress, the faculty/resident ratio should not be less than one faculty member to each resident.

III. Facilities and Resources

III.A. Space and Equipment

Modern imaging equipment and adequate space must be available to accomplish the overall educational program in abdominal radiology. There must be state-of-the-art equipment for conventional radiography, digital fluoroscopy, computed tomography, ultrasonography, nuclear medicine, and magnetic resonance imaging. Laboratory and pathology services must be adequate to support the educational experience in abdominal radiology. Adequate areas for display of images, interpretation of images, and consultation with clinicians must be available.

III.B. Library

Ancillary teaching resources must include access to a medical library. A variety of textbooks, journals, and other teaching materials in abdominal radiology and related medical and surgical fields must be available. A subspecialty teaching file and in-house file must be actively developed and available for use by residents. The ACR teaching files in gastrointestinal and genitourinary radiology only partially meet this requirement.

IV. Educational Program

IV.A. Clinical Components

The program must provide both clinical and didactic experiences that encompass the full breadth of diseases and their pathophysiology, including coverage of uncommon problems involving the gastrointestinal tract, genitourinary tract, and abdomen, including but not limited to the liver and biliary system, pancreas, stomach, esophagus, small bowel, colon, spleen, kidneys, adrenal glands, bladder, male and female reproductive systems, and lymphatic system.

The program must provide an adequate volume and variety of imaging studies and interventional procedures and must provide instruction in their indications, appropriate utilization, risks, and alternatives. The resident must have the opportunity to perform the abdominal imaging studies, including: urethrography;

urography; cystography; hysterosalpingography; computed tomography; ultrasonography; MR imaging; and plain radiographic and fluoroscopic studies of the hollow gastrointestinal tract.

The resident also must gain experience in performing guided biopsies of intraperitoneal and retroperitoneal structures, aspiration and drainage of abscesses. The resident must be familiar with the indications and complications of percutaneous nephrostomy, and transhepatic cholangiography and obtain experience in providing fluoroscopic guidance for the dilation of gastrointestinal, biliary, pancreatic, and ureteric duct strictures. Interpretation of endoscopic retrograde cholangiopancreatography (ERCP) and operative cholangiography must be taught. The program also should provide opportunity, through conferences and individual consultation, for the residents to integrate invasive procedures, where indicated, into optimal care plans for patients, even though formal responsibility for performing the procedures may not be part of the program.

The program must provide instruction in the indications for, as well as the complications of, certain procedures, such as visceral angiography, tumor embolization, radionuclide scintigraphy, lithotripsy, gastrostomy, nephrostomy, and cholecystostomy.

Graded responsibility or independence given to residents should depend on their knowledge, technical skill, and experience. Attending faculty must be available to perform and/or supervise procedures as required.

IV.B. Didactic Components

A major goal of the didactic portion of the training program should be to provide the resident with understanding of the pathophysiology of diseases that affect the gastrointestinal and genitourinary tracts. Diagnostic skill and understanding of uncommon problems in abdominal disease, as well as of the indications, risks, limitations, alternatives, and appropriate utilization of imaging and interventional procedures, should be part of the body of knowledge imparted.

Education must be available in the basic radiologic sciences, e.g., diagnostic radiologic physics, radiation biology, and the pharmacology of radiographic contrast materials. There must be intradepartmental conferences, as well as conferences with related clinical departments, in which residents in abdominal radiology participate on a regular basis. These should include one or more weekly departmental conferences in abdominal radiology, and at least one monthly interdepartmental clinical conference.

Residents must be given the opportunity to present the radiologic aspects of cases in combined clinical conferences related to allied disciplines. They also should prepare clinically and/or pathologically proven cases for inclusion in an ongoing teaching file. There must be daily image interpretation sessions that require that residents reach their own diagnostic conclusions, which then are reviewed and critiqued by faculty. Diagnostic reports generated by residents should be closely reviewed for content, level of confidence, grammar, and style.

Residents should be encouraged to attend and participate in regional conferences. They should attend at least one national meeting or postgraduate course in abdominal radiology during the year of fellowship training.

IV.C. Additional Required Components

There should be an ACGME-accredited residency or subspecialty training program available in general surgery, gastroenterology, oncology, urology, gynecology, and pathology; at a minimum there must be Board-certified (or equivalent) specialists in these areas to provide appropriate patient populations and educational resources in the institution. These specialists may serve as additional faculty.

IV.D. Scholarly Activities

The training program should have a research component that offers an opportunity for residents to learn the fundamentals of design, performance, and interpretation of research studies, as well as how to evaluate investigative methods. Particular attention should be given to developing competence in critical assessment of new imaging modalities and of the radiologic literature, and residents will be expected to participate actively in research projects. The program must provide sufficient office space, supplies, and secretarial support to enable residents to conduct research projects as well as perform literature searches, manuscript preparation, statistical analysis, and photography.

V. Duty Hours and Conditions of Work

(See Program Requirements for the Subspecialties of Diagnostic Radiology for details concerning duty hour requirements.)

VI. Evaluation

(See Program Requirements for the Subspecialties of Diagnostic Radiology for evaluation requirements.)

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