Educational Principles in Chest Disease: A Mission Statement

Since the Society of Thoracic Radiology was organized twelve years ago we have witnessed remarkable advances in the ability to vividly image both normal anatomic and pathophysiologic aspects of the heart, lungs and other thoracic structures.

The ability to detect disease and accurately depict physiologic function will likely continue to improve at a rapid rate. The creation of accurate images of the heart and lungs, however, is not sufficient in itself. Advances in diagnostic imaging must be carefully investigated and clearly related to improvements in diagnosis and disease outcome leading ultimately to improvement in the patients' well-being.

We believe it is imperative that a sufficient cadre of well trained chest imagers be available to guide the appropriate use and study of these rapidly changing technological devices. To this end we support the following training concepts:

- Those involved directly in chest imaging and diagnosis must be well grounded in the anatomic, histochemical and physiologic basis of the diseases encountered. A knowledge of disease processes and normal function will promote a more efficient and effective assessment of emerging technologies. Study and awareness of radiological-pathological correlations is vitally important.

- The technological aspect of image creation and acquisition are the primary responsibility of the chest imager and must be thoroughly understood by that individual. This includes both the benefits and risks of the imaging procedures that are recommended.

- Finally, the concept of training in chest radiology that begins in residency and continues through fellowship must extend into everyday practice. Training must be considered a lifelong process. The STR intends to become a partner in this lifelong learning process by maintaining a prominent role in annual, traditional scientific sessions and refresher courses and by working to create, maintain, distribute and enhance an up-to-date database of pertinent information. This will be done, in part, by the creation of a chest imaging curriculum and teaching resource that will be available in multiple forms including electronic communication. It will be used by chest imagers in support of their initial educational efforts, daily work and continuing educational requirements.

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The education of a diagnostic radiologist takes four to seven years of intense training after medical school. Despite the demands and complexity of this residency and fellowship period, very few guidelines or standards exist for training programs. Other diagnostic radiology subspecialties and programs in medicine, surgery, pediatrics and family practice have developed or are developing model curricula.

The intent in developing this curriculum was not to be restrictive or to set limits that might stifle educational creativity. The goal was in part to stimulate discussion and reassessment of traditional approaches as well as to seek a modicum of uniformity between training programs. In addition, this proposed curriculum may help serve as a foundation for exploration and establishment of a Pulmonary or Cardiopulmonary Radiology Fellowship. Finally, this document may be submitted as the STR contribution to the Comprehensive Radiology Residency Curriculum that is being discussed by the Association of Program Directors in Radiology.

The curriculum itself is an outline of topics that a radiology resident should be conversant with by the completion of training. This listing is presented only as a guide for program directors and education committees to consider. It is not presumed to be entirely inclusive. Familiarity with this knowledge base should be gained in many ways including faculty lectures, faculty and resident case conferences, view box teaching, self-directed reading, teaching file review, on-call experience, etc. Topics that are **bold and italicized** should be stressed in the early years of the residency program.

This curriculum outline is based on disease entities and not imaging modality. It is expected that residents will become familiar with and understand the utility and limitations of all modalities for each particular disease and clinical situation.

There are many very important nonknowledge-based objectives that are not included in this cardiopulmonary curriculum. These include technical skills such as verbal communication with house staff and referring physicians regarding radiologic abnormalities, succinct, report dictations as well as decision making skills in emergency situations and quality control issues.

Evaluation and modification of the curriculum and mission statement must be an ongoing process and should be based on continuous feedback from residents, faculty, program directors and chairs.