AbstractID: 6027 Title: ACR CT Accreditation

The American College of Radiology accreditation program for computed tomography, introduced in 2002, is quickly gaining in popularity. It has established minimum standards for dose and image quality. Since the inception of the program, the scanners themselves have continued to evolve in complexity and capability. Medical physicists are required by the program to perform an annual survey of each scanner and are increasingly called upon to provide assistance with dose/image quality analyses. Thus, the involvement of medical physicists in CT is necessarily increasing.

To provide optimal support for facilities in the accreditation program, it is necessary that physicists be fully aware of the requirements of the program. To that end, the essentials of the program will be briefly reviewed, including personnel requirements. The quality control component of the program will be discussed, with special attention given to the annual medical physics survey. Technologist testing requirements will also be discussed.

The medical physicist can have a positive impact on the phantom images submitted as part of the accreditation process, so the site scanning instructions will be reviewed in detail, with comments made regarding common pitfalls.

With the national awareness of radiation doses in CT, this area is perhaps where the physicist can have the largest impact clinically. In this lecture, the ACR accreditation program dosimetry requirements will be presented, including a discussion of common pitfalls and corrective measures.

The education objectives of this program are to become familiar with:

1) the general requirements for the ACR CT accreditation program
2) the role and responsibilities of the medical physicist
3) the image quality and dose measurements required by the program
4) how to calculate CTDIw, CTDIvol, Dose Length Product and Effective Dose