



AMERICAN CHIROPRACTIC ASSOCIATION



AMERICAN CHIROPRACTIC COLLEGE OF RADIOLOGY

ACCR PRACTICE GUIDELINE – REFERENCE LEVELS

The ACCR guidelines address issues common to clinical practice. They are not rules, but guidelines that attempt to define the principles of practice that should generally produce high quality radiologic care. Adherence to the ACCR Guidelines will not assure a successful outcome in every clinical situation. The Guidelines are not intended to establish a legal standard of care or conduct, and deviation from one of these guidelines does not, in and of itself, indicate or imply that such practice is below acceptable level of care. The ultimate judgment regarding any specific procedure or course of conduct must be made by the chiropractic physician/doctor of chiropractic in light of all circumstances presented by the individual clinical setting. The ACCR guidelines are a consensus of procedures and conduct taught in CCE accredited chiropractic institutions and the practice of radiology by professional members of the ACCR.

Introduction

Diagnostic reference levels are established to guide appropriately trained and licensed physicians/Doctors of Chiropractic and medical physicists involved in diagnostic procedures utilizing ionizing radiation. There should be strong cooperation and communication between the physicians/Doctors of Chiropractic who are responsible for the clinical management of the patient and the medical physicist responsible monitoring image quality and dose. The goal in medical imaging is to obtain optimal image quality consistent with the medical imaging task.

Definition

Diagnostic reference level or reference value sets an investigation level to identify unusually high radiation dose or exposure levels for common diagnostic x-ray procedures.

Responsibility of Personnel

The physician/Doctor of Chiropractic and medical physicist should cooperatively work to obtain optimal imaging quality. The physician/Doctor of Chiropractic is the individual most responsible for establishing and implementing reference levels in diagnostic imaging.

Diagnostic Reference Levels for Plain Film Radiography

Reference levels are based on the entrance skin exposure measured directly or calculated from a free-in-air output (mR/mAs) measurement with appropriate inverse square correction to the actual phantom surface. Reference levels are provided for two common imaging tasks: PA chest radiograph (screen-film) and AP lumbar (screen-film). Phantoms used are developed by the Center for Devices and Radiological Health specifically for the PA chest exam and AP lumbar exam. Current reference levels are selected from the 2001 Nationwide Evaluation of X-ray Trends (NEXT) study of adult PA chest and 2002 NEXT AP lumbar study at the 75th percentile. The reference level for PA chest is 0.15 mGy and 4.2 mGy for the AP lumbar spine.

Follow-Up Procedure

Results that exceed the established reference levels, as well as those that are significantly lower, shall be reported and investigated to the satisfaction of the medical physicist and responsible physician/Doctor of Chiropractic. The investigation must verify that optimal image quality is being achieved while dose is minimized.

Submitted by Jan Martensen, DC, DACBR, PhD, Chair, ACCR Commission on Radiological Physics and Safety

References:

["Nationwide Evaluation of X-Ray Trends \(NEXT\) Tabulation and Graphical Summary of 2001 Adult Chest Survey"](#), Conference of Radiation Control Program Directors, Inc. Publication E-05-2. September 2005.

"Nationwide Evaluation of X-Ray Trends, Tabulation and Graphical Summary of 2002 Abdomen and Lumbosacral Spine Surveys". In final stage for publication.

Adopted at the ACCR Workshop in Irving, TX, 2004