AMERICAN CHIROPRACTIC ASSOCIATION

AMERICAN CHIROPRACTIC COLLEGE OF RADIOLOGY

ACCR GUIDELINE ON COMPUTER ASSISTED MENSURATION FOR POSTURAL ANALYSIS OF RADIOGRAPHS.

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.

Research in computer assisted mensuration on radiographs may fall under the headings "Image Processing, Computer-Assisted/methods" or "Radiographic Image Interpretation, Computer-Assisted/methods." Spinographic x-ray digitization is one technique used in computer assisted mensuration for postural analysis. Points are plotted on osseous landmarks in radiographic images and analyzed using a computer program.

Skeletal radiographic reports traditionally include an assessment of alignment where osseous geometric relationships are addressed. Historically, rulers, protractors and pencils have been utilized to assign numeric values to these geometric relationships. Sources of intrinsic error in manual marking techniques include variability and inaccuracy in protractors and rulers, as well as varying width of film marking devices. The process is faster using a computer and results in little or no defacement of the original film. Digital images are also more portable and may be accessed in multiple locations. Research comparing manual and computer assisted mensuration techniques found them to be statistically equivalent with similar degrees of variance or slightly less variance with the computer assisted technique.

Computer assisted image processing and computer assisted radiographic image interpretation may be useful in mensuration for postural analysis as reported in the scientific literature. This information would be ancillary to and not a replacement for a diagnostic radiology report generated within the accepted standards for documentation.

The methods of mensuration vary widely as do the intended uses of the data obtained. A discussion of accuracy, validity, relevance or inter / intraexaminer reliability is unique to each method and is beyond the scope of this paper.

Adopted at the ACCR Workshop in Irving, TC, 2004