APPENDIX D

GXMO SPINE CLINICAL TRAINING MODULE

For the Spine, given a radiograph or a diagram, the student will correctly label key radiographic anatomic landmarks.

On a simulated patient, the student will demonstrate their working knowledge of standard terminology for patient positioning and projection.

A. ANATOMIC TRAINING

1. Cervical spine
    a. AP axial cephalad
    b. PA axial caudad
    c. AP open mouth
    d. lateral
    e. 45° oblique
    f. lateral swimmers
    g. lateral flexion and extension
    h. cross-table lateral
2. Thoracic Spine
    a. AP
    b. lateral
3. Lumbar Spine
    a. AP
    b. lateral
    c. L5-S1 lateral spot

d. oblique 45°

e. AP L5-S1 spot, 30-35° cephalad

4. Sacrum and Coccyx

a. AP sacrum, 15-25° cephalad

b. AP coccyx, 10-20° caudad

c. lateral sacrum

d. lateral coccyx

5. Sacroiliac Joints

a. AP

b. 25-30° posterior oblique

c. 25-30° anterior oblique

6. Scoliosis Series

a. AP/PA scoliosis series

Except for bone densitometry, if multiple clinical modules are taken together or as a sequence, the film and digital image receptor training only has to be provided and assessed once by the instructor.

B. FILM IMAGE RECEPTORS

The student will become familiar with automatic film processing, film handling & storage, and luminescent screen inspection & care.

1. Film Image Receptor - Demonstration

a. Steps in Film Processing:

b. Automatic Processors - Review of Components

c. Film Handling & Storage

d. Intensifying screens

2. Film Image Receptor Psychomotor Skills - Quality Control

C. DIGITAL IMAGE RECEPTORS

1. Didactic Fundamentals: The student will be familiar with basic digital terms & concepts, basic differences in digital image acquisition methods, the effects of "windowing" on image contrast and density, and functional considerations between film & digital image receptors.

a. Digital Basics:

b. Digital Image Acquisition Technologies: 2 basic types – Computed Radiography (CR) & Digital Radiography (DR)

c. Display Qualities

d. Practical Considerations – Differences between CR & Film

e. Practical Considerations – Differences between CR & DR

2. Clinical Essentials Lab – CR & Digital Image Receptor (IR)

a. Introductory concepts to digital IRs

b. CR Essentials

c. Auto-recognition systems and histograms

d. Optimal Technique Considerations

e. CR Plate Fogging - CR plates especially sensitive to fogging

f. Common errors resulting in a poor quality image

3. Digital Image Receptor Psychomotor Skills

a. Processing the CR Plate

b. Erasure control

c. Electronic image management

d. Basic Artifact analysis

e. Edge enhancement algorithms