**SCREENS: GEOMETRICAL INTEGRITY**

**Group Laboratory Experiment #10-B**

**Procedure:**

BE SURE TO USE THE *SMALL* FOCAL SPOT ON ALL EXPOSURES. Place a small dry bone, a coin, and a resolution test template on 8 to 10 inches of flat sponges and expose using 40 inches SID, tabletop, with the techniques listed below:

Film #1: Extremity Cassette 16 mastoid air cells

(Slow screen): (100 mA, 0.16 sec) @ 40 kVp

Film #2: Regular Rare Earth 3.3 mAs (100 mA, 0.033 sec)

Cassette: @ 40 kVp

**Analysis:**

1. Determine from each of the resolution template images the line pairs per millimeter (LP/mm) resolved and record below:

Film #1: Extremity Cassette

(Slow speed screen): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_LP/mm

Film #2: Regular Rare Earth

Cassette: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_LP/mm

2. In #1, what screen resolved the highest number of lines? As screen speed increases, what happens to the sharpness of recorded detail?

3. What is the best type of receptor system to get high sharpness of detail?

4. Can you see a visible difference in the sharpness of the edges of the dry bone image when comparing the two screens?

5. Compare the size and shape of the coin images. (You may overlap the images to see if one is larger than the other, or you may measure them.) Do changes in screen speed affect the *magnification* of the gross image? Do screen affect *shape distortion*?