

Principles of Radiation Protection

Radiologic Technology Program



Life. Changing.

The responsibility of a radiologic technologist and a student radiographer is to maximize the benefit from each x-ray exposure and to minimize the radiation dose received by the patient.

1. Techniques
 - a. Takes time to position the patient properly.
 - b. Sets techniques correctly utilizing manual, anatomic programming and digital equipment.
 - c. Use the highest kVp and the lowest mAs that is consistent with acceptable image quality.
2. Collimation
 - a. Limits the size of the beam to include only the area of interest.
 - b. There is never justification of a beam larger than the IR.
 - c. Collimation improves image quality.
 - d. Collimation is one of the most vital things the technologist can do to protect the patient.
3. Gonadal Shielding
 - a. Use gonadal shielding whenever this will not interfere with the diagnosis.
 - b. Gonadal shielding should be used on every patient, along with shielding eyes, breasts, and thyroid, as appropriate.
4. Radiographic Image Processing
 - a. Process radiographic images based on departmental criteria.
5. Protecting Yourself
 - a. You can be protected by the same techniques used to protect the patient.
 - b. Always wear lead aprons when applicable.
 - c. Always wear dosimeter to monitor exposure. Wear this at collar level, outside of the lead apron.
 - d. NEVER HOLD A PATIENT OR AN IR (IMAGE RECEPTOR) DURING ANY RADIOGRAPHIC PROCEDURE.
 - e. Remember the Cardinal Rules: TIME, DISTANCE, SHIELDING.

Name: _____

Signature: _____ Date: _____