Radiobiology & Radiation Safety — LMRT Assignment

Which type of radiation is ionizing?

The unit Sievert (Sv) measures:

Which of the following reduces patient dose most effectively for radiographic procedures?

The ALARA principle stands for:

Which interaction predominates between x-rays and tissue at diagnostic energies (30–150 keV) for soft tissue imaging?

Which staff monitoring device provides a record of cumulative occupational exposure?

The primary purpose of a gonadal shield is to:

What is the recommended occupational annual dose limit (effective dose) for radiation workers, according to common regulatory guidance?

Which factor will increase scatter radiation produced during an x-ray exposure?

Time, distance, and shielding are the three cardinal principles of radiation protection. Increasing which of these reduces occupational dose most quickly?

Which tissue/organ has one of the highest radiation sensitivity (higher weighting factor) per ICRP guidelines?

What is the most likely result of acute whole-body radiation exposure at very high doses (>8 Sv)?

The primary cause of deterministic (non-stochastic) radiation effects is:

Lead aprons are commonly specified to have equivalent thickness:

Which practice is best when imaging a pregnant patient (known pregnancy)?

Define photoelectric effect and explain its significance in diagnostic radiology.

What is effective dose, and why is it used?

Give two ways to reduce patient dose during portable (bedside) chest x-rays.

What is a dosimeter and who should wear one?

Explain why pediatric patients require special consideration for radiation protection.

A technologist is asked to perform a lumbar spine radiograph on a young female of childbearing age who says there is a chance she might be pregnant but is unsure. What steps should the technologist take?

A patient complains that the lead apron provided is torn and has cracks. What should you do?