

Patient protection basics

Control the patient identity and **pregnancy**.

Indicate the anatomical side of the patient with a **lead marker** before exposure.



Measure the anatomical part in order to select the correct exposure factors.

Select the optimum kilovoltage (KV) for each projection

Collimate the primary

beam at all times



Means to permanently transfer **patient identification**, prior to processing of the images, must be provided.

Where practicable, using **PA** projections in preference to AP.

Shielding

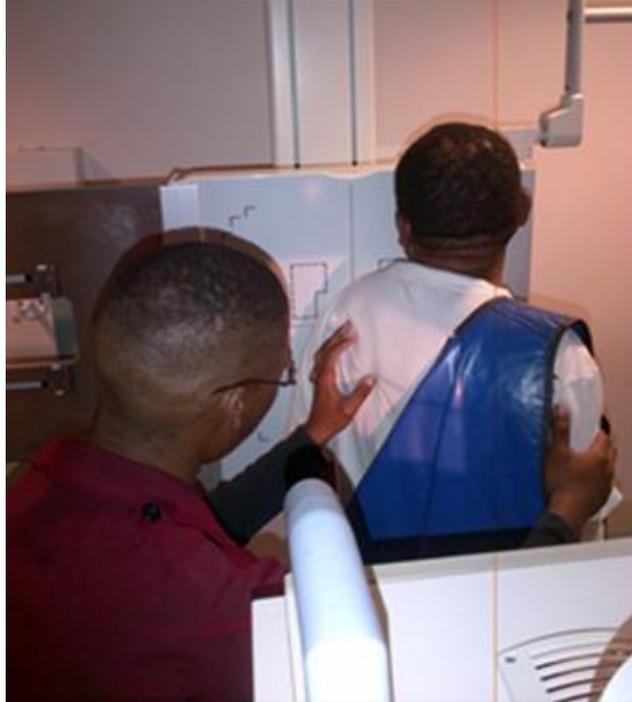
Utilise lead shielding for all patients during examinations- not only gonads- but wrap around or **full apron depending** on the projection. Shield the patient areas of non-interest with a lead apron – especially children.

Shielding idea for lumbar spine. Note the lead strip posterior.



Above: Shielding idea for a Lumbar lateral spine- note the lead strip to absorb scatter

Below: Full body shielding for a shoulder projection



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Controlled areas

Members of the public are not allowed to enter controlled areas unsupervised.

Non-radiation personnel or members of the public shall not remain in the x-ray room during any x-ray procedure unless they are required to be in attendance.

Holding of patients and cassettes

The occasional use of non-radiation personnel to give assistance, particularly in ward or theatre radiography, is acceptable but shall involve the full use of protective clothing, devices and techniques to minimise personnel dose. Care shall be taken to ensure that the **same** non-radiation personnel are not always involved.

Women who are pregnant shall not be used in this role.

No person shall hold a patient, x-ray film cassette, or other imaging equipment or face the x-ray tube head in position during exposures unless it is **otherwise impossible** to obtain a diagnostically useful image.

Gonadal Shielding

Use gonadal shielding in males to reduce dose to the gonads by 95% when the gonads are within the primary beam or within 5 cm of the beam. Note: neonate chest and abdomen on one projection.

Use gonadal shielding in females to reduce dose to the gonads by 50% when the gonads are within the primary beam or within 5 cm of the beam.

Shielding must not exclude important diagnostic information or interfere with the study.

Gonad shields: a lead equivalence of 0.50mm Pb is required.

