LSUHSC
Radiation Oncology
Proc. 19.9.2

VERIFICATION OF COINCIDENCE OF LIGHT FIELD AND PHOTON BEAM

Policy: To provide a delineate process of verifying coincidence of the light field and the radiation field. This check will be performed on the linear accelerator and shall be checked and verified by the physicist. Verification of coincidence of light field and photon beam shall be performed monthly.

Procedure:

1. Items needed for procedure; Ready-pack film, tape, pin, lucite build-up sheets, level and densitometer, or Electron Portal Imaging Device (IPID).

2. Set the gantry at 0° and rotate the collimator 0°. Verify the gantry angle with a level.

3. Place a ready pack film on the treatment couch under the center of the treatment light field and taped with masking tapes. Adjust the couch height to 100 SSD at film.

4. set the field size to 10x10 and 20x20. at each field size, using a pin pierce the film at each edge of the light field and at the central ray cross hairs. Or use a ball point pen and a plastic ruler to draw part of the light field edges and part of the center cross lines.

5. Place the electron build-up sheet over the inscribed field on the film, using the appropriate thickness (1.5cm) for the machine energy (X6MeV).

6. Depends on the film, for Kodak X-Omat L film, irradiate the film with 10 MUs for each field size; for Kodak X-Omat V film, irradiate the film with 50 MUs for each field size. Process the film.

7. Physicist will review film, sign, date, and maintain for future reference.

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