

(c) Those which hinder the penetration of the light and therefore interfere with good reaction, as pigmentation, cheloid, excessive vascularity, or deep seated diseases.

The preparation of the patient is a thing that seldom receives sufficient attention. In the construction of the masks or shields we must use some material as nearly opaque as possible to the X-rays. Sheet-lead is commonly employed and has many advantages: it is pliable and readily adapts itself to the contour of the part to be treated, but it is a conductor of electrical current and unless the tube be some distance away from the patient the lead becomes charged with electrical current and a series of small shocks are felt in any place where the skin and the lead are in close contact. In order to prevent this, rubber tissue, blotting paper, or cloth may be interposed. A nice shield may be made by 4 or 5 thicknesses of tinfoil pasted together over blotting paper. For facial conditions very convenient protectors may be made from ordinary buffoon masks, painted at least twice over with thick white lead paint and inlaid with strips of blotting paper. The necessary incisions in them can be made with a sharp knife or scissors or punch and mallet; these must be of the shape of the part to be treated. It has been the habit of radiographers to recommend that the incisions be made from a half to one inch larger in diameter than the sore. The tissues will be influenced somewhat beyond the limits of irradiations so that in conditions of not too great morbidity, infiltrations not being likely to extend far into apparently healthy tissues, it will not be necessary to expose them. On the other hand there are other conditions where irradiations have to be given a wide berth, either by enlarging the aperture in the shield or mask or by dispensing with them altogether, as in diffused eczemata and psoriasis, in which case a certain amount of risk has to be run. Grounded aluminum shields have failed to protect always, and are being discarded.

The radiographer runs as much risk as the patient, and often more in that he is exposed much more frequently; therefore many get some degree of dermatitis, usually on the hand; cooling lotions and nearly all fatty bodies are useful in both its prevention and its cure. Radiographers should therefore avoid needless exposures, or protect their hands by rubber gloves as used by surgeons. Williams recommends enclosing the tube in a wooden box, with a