

When a 6 MV beam is used for treatment of head and neck (H&N) tumors, a beam spoiler is often required to assure adequate treatment of superficial lymph node areas (depths of 2 to 5 mm) while maintaining some degree of skin sparing. The upper neck is usually treated with parallel opposed lateral beams. An abutting anterior field treats the supraclavicular region. We developed two convenient designs to expedite these treatments. In both cases, the spoiler is a 1 cm thick slab of lucite. The therapists are instructed to maintain a spoiler-skin distance of 10 to 15 cm at mid-field. For the anterior field, a horizontal piece of lucite is secured to a "coffee table" support which mounts to the couch rails. Its height is adjustable. For lateral fields, the spoiler pieces are mounted vertically in a frame which lies flat on the couch and secures to the rails. Each piece can slide to the desired distance from the skin. Percent depth dose and profile measurements were made in the buildup region for 6 MV x-rays. These agree with the published literature. The contribution of contaminating electrons to the surface dose was determined as a function of spoiler-skin distance and field size. The measured contaminating electron component was incorporated into the U-Penn dose calculation algorithm and integrated into the in-house treatment planning system. Dose distributions with and without the spoiler demonstrate the benefits provided by these devices for typical H&N treatments.