## Enhanced dynamic wedges are characterized by a strong dependence of wedge factors (EDWF) on field size. Our measurements show, for example, that the variation in 6MV, $60^{\circ}$ EDWF is more than 50% for fields ranging from 4x4 to 20x20 cm<sup>2</sup>. However, for field sizes from 20x20 to 40x30 cm<sup>2</sup>, EDWF remain virtually constant for all wedge angles. A method that practically eliminates the field size dependence of EDWF was developed and verified. In this method, MLC defines fields $\leq 20$ cm in the wedged direction and the Y jaws are set to a 20cm opening. The X jaws enclose the MLC field. If possible, the abutting line of MLC leaves is moved off central axis such that the collimator absorbs radiation leakage through leaf-ends. Using this setup, the wedge factors were measured for field sizes $4x4 \text{ cm}^2$ and larger. No dependence on field size and shape was observed for both symmetric and asymmetric fields. Measurements also demonstrated that the degree of isodose tilt did not change, but the magnitude of hot spot under the toe region was reduced by 4 to 8%, depending on the wedge angle. For fields larger than 20x20cm<sup>2</sup>, no modification in EDW use is recommended because the overall variation of wedge factors remains $\leq 1\%$ . The elimination of large variation of wedge factors should reduce the likelihood of potential errors in dose delivery and may lead to a wider acceptance of the EDW technology.

## Elimination of Field Size Dependence of Enhanced Dynamic Wedge Factors