

**The Application of Simple Techniques makes the Elekta 40x40cm Multileaf Collimator as accurate but more versatile than a Mini Multileaf Collimator.**

The Multileaf Collimator has been available for many years but its versatility and flexibility has only become universally accepted over the last 10. Mainly due to new types planning systems and the need minimise the cost of conformal therapy. The main disadvantages to these devices is the individual leaf width typically 1.0cm, and the leakage between leaves being applied to the patient. As the leaf tips of any one bank are seldom aligned in exactly the same position it is difficult to accept field joins as hot spots are difficult to avoid. Also the use of this technique increases the treatment time as each field requires the total daily applied dose. A method to artificially reduce the leaf width is required, with a technique to fit the MLC to a contour that is not equivalent to a number of whole leaves. The leaf width may be varied from 1–10mm using a technique called .Phased Fields.. This involves a minimum of two fields. Field 1 is created using the original field centre. Field 2 moves the centre 0.5cm perpendicular to the direction of leaf movement. There is no increase in treatment time as each field is half the total daily dose. A technique called .Time Share. resolves the problem of contour fitting to whole leaves. The .Phased Field. technique has been used to create clinical shapes smaller than 3.0cm.