## IMPROVED DOSE HOMOGENEITY IN OPPOSED BEAMS IRRADIATION USING AN ADDITIONAL STATIC FIELD

To deliver as high and as homogeneous a dose as possible to the target volume and to avoid unnecessary irradiation of healthy tissue is not always easy to achieve. In this work a simple method is proposed to obtain a suitable level of homogeneity based on the superposition of <u>few</u>-static fields in opposed beam techniques.

At our Department, all the patients undergo virtual simulation and 3D calculations. The dose distribution is optimized on the central axial plane and representative oblique planes passing trough the isocentre are also evaluated. The view orthogonal to the central axis determines if or not the additional beam is to be used, the decision-making is based on the extension of the area comprised by the 105% isodose curve. When necessary a slightly weighted port defined by the 105% isodose curve in this view is added. Customized blocks (once or twice a week) or MLC ports (every fraction) are used to deliver this boost depending on the treatment machine.

DVH for different treatments shows the benefits of the technique. The homogeneity over the PTV is highly improved, reducing high dose levels about 5%. The clinical implementation is very low time consuming: the weight of the beams is easily calculated and the increase of irradiation time is negligible. No sophisticated tools (inverse planning, IMB, etc) are necessary. This simple technique has allowed us to go up the first step of 3D conformal therapy in clinical routine.