We report here the applicability of a conventional MLC designed circular fields for stereotactics radiotherapy (SRT) treatment of lesions 3 - 5 cm diameter. We presently deliver SRT to lesions 3 - 4 cm diameter using a commercial system of tertiary collimator and circular cones. In this study we created small circular fields in the MLC. Beam characteristics' measurements, TMR, beam profiles and beam eye-view isodoses, were obtained using radiographic films and ion chambers. Data was compared to that of the tertiary collimator. Additionally, we compared the cumulative dose volume histogram of a 3-D dose distribution produced by the MLC and the tertiary collimator.
Results show that tertiary collimator does have a definite advantage over the conventional MLC, primarily better conformity. However, we cannot entirely rule out the applicability of a conventional MLC designed small fields for cranial lesions SRT. Measured data and Dvh analysis along with discussion will be presented.