

## AbstractID: 5024 Title: A New Plan Technique for the Bilateral Orbit Lymphoma

**Purpose:** The radiotherapy for bilateral orbital lymphoma which involves retrobulbar area and lacrimal gland is challenging. We present a new 3D conformal radiotherapy technique using MLCs.

**Method and Materials:** The PTVs of right and left orbit were defined on axial CT images, which are cone shaped volume with concave base surrounding lenses. The PTVs were split into anterior and posterior compartment at the posterior part of eyeball. The posterior PTVs were irradiated using bilateral 6 MV photon half beams. The anterior PTVs were irradiated using five 6 MV photon beams arranged in coronal plane with couch rotation. The couch angles were 30°, 60°, 90°, 300° and 330° with gantry angle of 90° or 270°. Lenses were shielded appropriately with 5 mm width MLCs in each beam.

**Results:** The 90% of PTV received at least 3000 cGy, the prescribed dose. The maximum dose to lens was 650 cGy. This result is comparable to previously reported 4 field technique (anterior superior/inferior and anterior left/right oblique fields with rod shaped lens block for each orbit). The IMRT trial showed acceptable dose distribution and DHVs when optimized. After conversion into deliverable ODM, however, the lens dose increased unacceptably and the PTV coverage deteriorated.

**Conclusion:** Our technique using MLCs achieves adequate dose coverage for PTV and spares lenses acceptably. It is superior to 4 field technique in terms of treatment delivery as it needs no specialized lens block and superior to IMRT in terms of dose distribution.

**Conflict of Interest (only if applicable):**