Introduction
The annual incidence of uveal melanoma in the Netherlands is estimated to be between 120 and 150 cases, with an average age of 60 years. Radiotherapy is a commonly used treatment. At the Erasmus MC Cancer Institute, patients receive stereotactic radiosurgery on the Cyberknife. 50 Gy in 5 fractions is prescribed to the 80% isodose line.

Methods
To immobilize the affected eye during the planning CT scan and during irradiation, the double-shell-positioning-system (DSPS) is used with a camera (above the affected eye) and a blinking light (above the unaffected eye) attached to it. Multiplan (version 5.1.3) is used for contouring and planning. The PTV margin is 2mm. Table 1 shows the constraints that are used. Treatment delivery time is aimed at 15 to 20 minutes.

Table 1. Constraints PTV + OARs

| Constraints  | PTV coverage ± 98%, | N. opticus Dmax 20 Gy | Gl. lacrimalis Mean dose < 25 Gy | Corpus ciliare Max 25% > 12.5 Gy | Brain Dosis uitloop < 10 Gy |

During the treatment, the position of the eye is continuously monitored and is compared to the recorded eye and mask contours from the CT scan.

Orthogonal kV-images are used for online verification of intrafractional differences in patient head position. If necessary, a correction is applied by table shift and adjustments of the robot (6D skulltracking).

Results and conclusion
The first clinical treatments satisfy the requirements for the various workflow components. Stereotactic radiosurgery on the Cyberknife is a feasible treatment for patients with uveal melanoma.