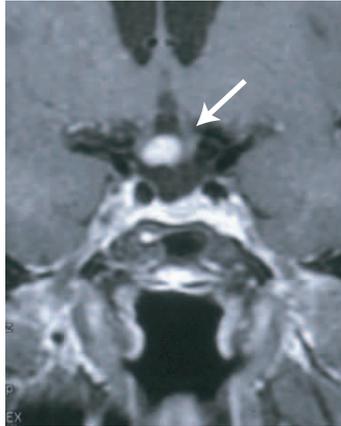


## CASE STUDY

### Meningioma

#### Treatment of a Meningioma Attached to the Optic Chiasm (Residual Tumor)



BEFORE TREATMENT



4-YEAR FOLLOW-UP

Courtesy of J. Adler MD, Stanford University, Stanford, CA USA

#### Patient History

A 66-year-old female with a history of multiple meningiomas presented with a suprasellar tumor and a significant constriction of her peripheral visual field. This tuberculum sellae meningioma was resected via a pterional craniotomy (Simpson B), which resulted in complete visual loss in her left eye. She was treated postoperatively with fractionated radiation therapy. The patient also developed a recurrent meningioma at the posterior margin of the resection site though most of this lesion was resected during a repeat craniotomy. However, a tumor nodule found to be quite adherent to the inferior surface of the optic chiasm was not removed.

#### CyberKnife Advantage

Because of both the prior history of radiation and the close proximity of this tumor to the optic chiasm in a woman who was already blind in the left eye, surgical resection was not an attractive option.

#### Treatment

The patient was treated on the frameless CyberKnife at Stanford University with a 12.5 collimator using 5 fractions to a total dose of 30 Gy.

#### Outcome & Follow-Up

At 6 and 15 month follow-ups, MRI imaging revealed complete regression of the optic chiasm tumor, although a right periventricular lesion was discovered and subsequently treated with the CyberKnife. The periventricular lesion was treated with a 12.5 collimator using 2 fractions to a total dose of 18 Gy. At the 4-year follow-up, the optic chiasm lesion remains clear and the patient retains all pre-radiosurgery visual capability. At 3-year follow-up, the periventricular lesion shows continued reduction of tumor size.

#### CyberKnife Team



Radiation Oncologist:	Steven Hancock, M.D.
Neurosurgeons:	John Adler, M.D. David P. Martin, M.D.
Medical Physicists:	Paul Geis, Ph.D. Jenny Hai, Ph.D.
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