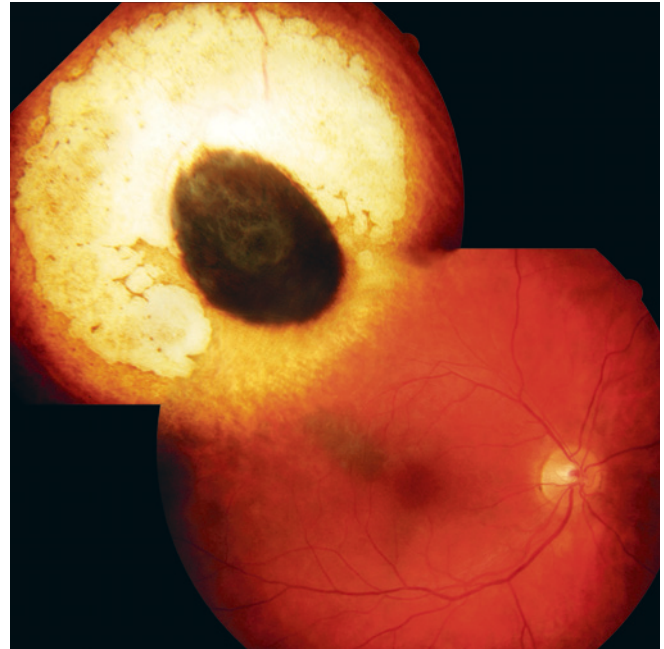
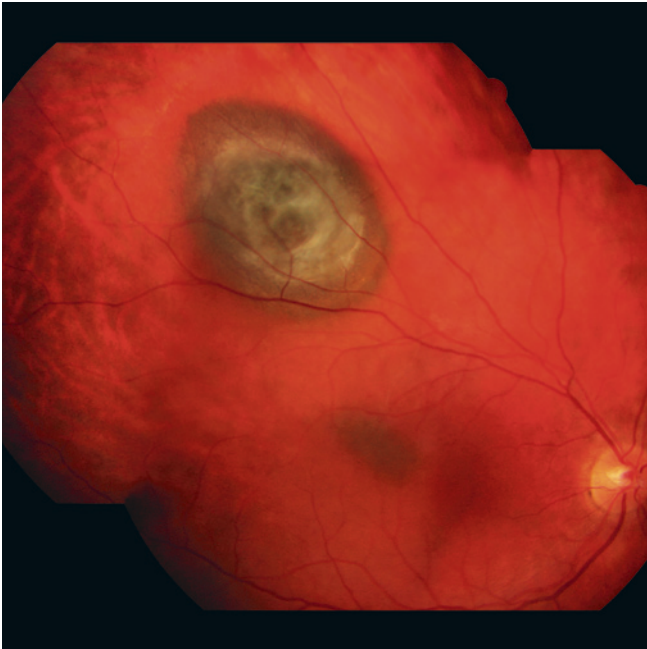


# Brachytherapy for malignant uveal melanoma



A previously healthy woman in her 20s noticed a gradual reduction in her vision and a shadow in the field of vision of her right eye. Ophthalmoscopy revealed a choroidal melanoma above and temporal to the macula (left-hand picture). MRI and ultrasound examination of the eye revealed a melanoma with an area of  $8 \times 10$  mm and a thickness of 3 mm. There was subretinal fluid around the tumour and in the macular region, and visual acuity was 0.4.

Further examination did not show any other malignancy, and the woman underwent episcleral brachytherapy. A circular silver plaque containing radioactive ruthenium (diameter 15 mm) was sutured onto the sclera in a position corresponding to the location of the tumour in the eye. The plaque was removed after three days. In the course of a few months, the sub-retinal fluid had been absorbed and the patient's vision improved to 0.8.

Two years after the treatment, her visual acuity remained at 0.8. Ophthalmoscopy showed that there had been radiation-induced atrophy of the tumour and surrounding tissue (right-hand picture). The circular atrophic zone around the tumour corresponded to the area where the ruthenium plaque had been located. The plaque was eccentrically located relative to the tumour in order to avoid radiation damage to the macula and optic nerve.

Uveal melanoma is the most prevalent primary malignant ocular tumour in adults,

with an incidence of 40–50 new cases each year in Norway. Most patients can be treated with episcleral brachytherapy. If the tumour regresses with atrophy of surrounding tissue, patients are regarded as cured of the ocular tumour itself. They must nonetheless have regular follow-up for several years to check that there is no development of radiation-related complications, recurrence, or metastasis. If the tumour is too large, or involves the optic nerve, enucleation may be necessary (1, 2).

*The patient has consented to the publication of the article.*

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The author has completed the ICMJE form and reports no conflicts of interest.

## References

1. Krohn J, Monge OR, Skorpen TN et al. Posterior uveal melanoma treated with I-125 brachytherapy or primary enucleation. *Eye (Lond)* 2008; 22: 1398–403.
2. *Kreft i auget og strålebehandling* – Helse Bergen. [www.helse-bergen.no/kreftiaugnet](http://www.helse-bergen.no/kreftiaugnet) (1.11.2013).

*Received 24 September 2013, first revision submitted 2 November 2013, accepted 7 November 2013. Editor: Matilde Risopatron Berg.*