

Supplementary Text 1: Clinical Activity Score

The Clinical Activity Score (CAS)* is an assessment of disease activity. CAS is calculated by assessing the presence or absence of each of the following clinical features

1.Pain

- Pain on eye movement in the last 4 weeks
- Painful, oppressive feeling on or behind globe in the last 4 weeks

2.Redness

- Conjunctival redness
- Eyelid redness

3.Swelling

- Chemosis
- Swollen caruncle
- Eyelid oedema
- Increasing proptosis of $> 2\text{mm}$

4.Impaired Function

- Decreasing visual acuity of > 1 snellen line
- Decreasing eye movement of $\geq 8^\circ$

Each feature = 1 point. The maximum score is 10 at each follow-up visit and 7 at enrolment (because there will be no previous records to determine changing measurements of proptosis, visual acuity)

* Mourits MP, Prummel MF, Wiersinga WM, Koornneef L. Clinical activity score as a guide in the management of patients with Graves' ophthalmopathy. *Clin Endocrinol (Oxf)* 1997; **47**(1): 9-14.

Supplementary Text 2:Details of Radiotherapy

In London, Manchester, Cardiff and Glasgow patients were immobilised using a thermoplastic shell and underwent planning CT scan of orbit. All patients in the above centres were conformally planned using opposing fields to include both orbits excluding the globe (from lateral canthus to apex of orbit) using 6 MV photons. A dose of 2400cGy in 12 fractions was delivered over two and half weeks (5fractions/week). Patient at Bristol were immobilised using a tape across the forehead of the patient and aligned using lasers for daily set up. Patients were treated with opposing fields (field size of 4cm x 4cm) to encompass both orbits using asymmetric jaws to avoid contralateral lens. The radiation dose was delivered using 6MV photons prescribed to mid plane with the same total dose and fractionation as above.

