Material and Methods: From our database of 35 patients treated with radiotherapy for the active inflammatory phase of GO in our hospital from January 2005 to December 2013, 5 patients were excluded from the analysis because they had a short follow-up, were not treated with pulsed corticosteroids because of liver failure, or had no eye muscle impairment at diagnosis. In the remaining 30 patients in the active inflammatory phase of moderate-to-severe GO treated with combined pulsed corticosteroids plus irradiation, we assessed eye muscle impairment using the SPECs system before and 6 months after the start of treatment. A total dose of 20 Gy in 10 fractions was delivered to the bilateral retrobulbar volume. Intravenous 1 g of corticosteroids daily for 3 successive days was repeated weekly up to 3 weeks. The thickness ratio (TR) of the enlarged eye muscle to the optic nerve and the signal intensity ratio (SIR) of the eye muscle to the cerebral white matter were evaluated as the mean of three cross sections of coronal short-time inversion recovery (STIR) sequence MRI to investigate whether these factors could predict the reversibility of eye muscle impairment.

Results: This study included 10 men and 20 women with median age of 55.5 (range, 37-71) years. The thyroid function at the time of irradiation was euthyroid in 26 patients, hyperthyroid in 2, and hypothyroid in 2. Median duration of eye symptoms from onset to the initiation of radiotherapy was 4 months (range, 1.4-22.1 months). Six months after radiotherapy, there was a significant improvement in eye muscle impairment (p < 0.001); complete regression was observed in 10 patients (33%), partial regression in 5 (17%), no change in 14 (47%), and progressive disease in 1 (3%). The median TR was 4.1 (range, 0.4-16.4), and the median SIR was 2.45 (range, 1.7-4.1). There was a trend toward greater, but not significant, improvement in patients with a low TR (<4.2) or high SIR (>2.5) before treatment.

Conclusion: Orbital irradiation combined with pulsed corticosteroids was an effective treatment for the active inflammatory phase of moderate-to-severe GO, especially in patients with a low TR or high SIR on MRI before treatment. A low TR or high SIR may predict the treatment outcome.

Purpose or Objective: To review our outcomes for patients in the active inflammatory phase of moderate-to-severe Graves' ophthalmopathy (GO) treated with combined systemic pulsed corticosteroids plus irradiation and demonstrate the role of magnetic resonance imaging (MRI) as a prognostic factor.

Material and Methods: We analyse the new second cancers after a radiotherapy treatment for a primary cancer in a population-based study in a province of Spain from 2000 to 2011.

Results: The number of patients (pts) with cancer treated with radiotherapy during this period was 14131, 2989 were breast cancer, 2197 were prostate cancer and 1220 pts were rectal cancer. Three hundred and thirteen (2.2%) patients developed a second cancer after a primary cancer treated with radiotherapy. In relation to the primary cancer, the most frequent were prostate cancer (70 pts, 22.4%), the second breast cancer (43 pts, 13.7%), the third colorectal cancer (40 pts, 12.8%), the fourth skin cancer (36 pts, 11.5%) and the fifth larynx (24 pts). The others were bladder (20 pts), oropharynx (7), endometrial cancer (6), etc. The most frequent of second cancer location was lung cancer (63 cases, 20.1%), the second colorectal cancer (43 cases, 13.7%), the third larynx and oral cavity and pharynx (40 cases, 12.8%), breast (34, 10.9%), prostate (28, 8.9%), bladder (19.6%). The location more frequent after a prostate cancer irradiation is lung (20 pts) and colorectal (17 pts, 9 rectal and 8 colon) and bladder (8). The location more frequent in after a breast cancer irradiation is another breast cancer (21 pts). Colorectal 40 pts: 9 second colorectal, 8 l ung cancer. Non-melanoma skin cancer 36 pts: 8 second non-melanoma skin cancer, 6 rectal cancer and 4 lung cancer. Larynx 24 pts: 7 lung cancer, 4 prostate cancers.

Conclusion: The percentage of pts treated with radiotherapy who developed a second cancer after 11 years is 2.2% in our series. It’s difficult to know the real probability for developing a second cancer associated with radiotherapy. The higher percentage of primary tumour with second cancer was rectal cancer (40/1220, 3.27%), the second was prostate cancer (70/2197, 3.18%), the third was breast cancer 43/2989, 1.43%). We’ll present the results about the location of second cancers of the primary and the second cancer, and some characteristics about the radiotherapy treatment (total dose and other dosimetric characteristics).

Purpose or Objective: For many years Edinburgh Cancer Centre's radiotherapy skin care policy recommended aqueous cream and, if required, 1% hydrocortisone. However, it was increasingly appreciated that better alternatives existed so in 2015, a review of the literature was performed, and a new skin care policy developed based on:

1. Low Risk (treatment only if symptoms),
2. Medium Risk (Diprobase moisturising cream),
3. High Risk of developing radiation dermatitis (Diprobase & betamethasone valerate 0.1% applied once daily from 1st fraction till 14 days after treatment).

As concerns were raised about the increased cost and potential extent of the clinical benefit, a prospective audit was conducted.

Material and Methods: For one month prior to the change of policy (cohort 1, C1), all patients in High Risk group completed a questionnaire at the end of their course of radiotherapy, scoring (categorical 0-10) their skin reaction for redness, itch, discomfort and pain, and asking what creams and analgesia they were using, and if the reaction disturbed their sleep. The audit was repeated for cohort 2 (C2) four months after the policy changed and the two groups compared using Chi-squared and ANOVA.