

# Electrochemotherapy for disseminated superficial metastases from malignant melanoma<sup>‡</sup>

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## Background:

The aim of the study was to determine predictive factors for effectiveness, toxicity and local disease control in patients with malignant melanoma treated with bleomycin-based electrochemotherapy (ECT).

## Methods:

Electrochemotherapy was offered to patients with superficially disseminated melanoma metastases unsuitable for resection and unresponsive to chemotherapy.

## Results:

Eighty-five patients were treated with up to six ECT cycles with minimal, mainly dermatological, toxicity. One month after the first ECT, an objective response was observed in 80 patients (94 per cent). After retreatment because of a partial response in 39 patients, a complete response was achieved in 19 patients. Among the 41 (48 per cent) complete responders at first ECT, 19 patients received a second cycle because of new lesions after a median of 6 (range 2–14) months. After a median follow-up of 26 months, six patients experienced local recurrence with a 2-year local progression-free survival rate of 87 per cent. In multivariable analysis, significant predictive factors for response were tumour size (odds ratio (OR) 0.23, 95 per cent confidence interval (c.i.) 0.19 to 0.86;  $P = 0.003$ ) and number of lesions (OR 0.38, 0.28 to 0.88;  $P = 0.002$ ). An increasing number of electrode applications (hazard ratio (HR) 2.18, 95 per cent c.i. 1.22 to 3.44;  $P = 0.041$ ) and ECT cycles (HR 0.46, 0.22 to 0.95;  $P = 0.005$ ) were predictors of local control. There were no predictors of toxicity. Melanoma thickness and lower limb location of metastases were prognostic for survival.

## Conclusion:

The most suitable candidates for ECT were patients with few and small metastases on the lower limb treated with multiple electrode applications and ECT cycles.