# Survival outcomes after whole brain radiotherapy for metastatic melanoma

**Descriptor:**

Survival outcomes after whole brain radiotherapy for metastatic melanoma.

**Background:**

60% of melanoma patients develop brain metastases (BMs)1. Whole brain radiotherapy (WBRT) is a commonly used treatment option at our local centre, although it is unclear if patients gain significant improvements in quantity or quality of life. An analysis of overall survival (OS) following WBRT may help determine whether it is being used appropriately. Analysis of 30-day and 90-day mortality after radiotherapy is recommended in the Cancer Reform Strategy.2

## The Cycle

**The standard:**

Standard

Survival outcomes will be benchmarked against the expected survival for each melanoma disease-specific Graded Prognostic Assessment (DS-GPA) score as published by Sperduto et al.3

**Target:**

100%.

## Assess local practice

**Indicators:**

Percentage of DS-GPA subgroups within our cohort meeting or exceeding the standard.

**Data items to be collected:**

Data on diagnosis, treatment, and death will be collected from the electronic records of all patients with metastatic melanoma who received WBRT at Ipswich Hospital between Jan 2011-Dec 2016. DS-GPA scores will be calculated from Karnofsky performance status (KPS) and number of BMs. OS of the cohort will be estimated using the Kaplan-Meier method.

**Suggested number:**

All patients with metastatic melanoma who received WBRT at Ipswich Hospital between Jan 2011-Dec 2016.

**Suggestions for change if target not met:**

Improve assessment and documentation of performance status (PS) to facilitate calculation of DS-GPA, and allow targeting of more aggressive management of intracranial metastases to patients with fewer BMs and better PS, as they may derive greater benefit from alternative treatments such as stereotactic radiosurgery or neurosurgery.

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**References:**

1. Ajithkumar T, Parkinson C, Fife K et al. Evolving treatment options for melanoma brain metastases. Lancet Oncol 2015; 16: e486-97.
2. Department of Health. Improving Outcomes: A Strategy for Cancer, 2011. Available at: <https://www.gov.uk/government/publications/the-national-cancer-strategy> (last accessed 27/2/17).

1. Sperduto PW, Chao ST, Sneed PK et al. Diagnosis-specific prognostic factors, indexes, and treatment outcomes for patients with newly diagnosed brain metastases: a multi-institutional analysis of 4,259 patients. Int J Radiat Oncol Biol Phys 2010; 77: 655-61.

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