# **An audit of mortality following palliative radiotherapy**

**Descriptor:**

To assess mortality rates following palliative radiotherapy and the appropriate use of shortened fractionation schedules in treating poor performance status patients, to reduce time spent undergoing treatment.

**Background:**

Early mortality following palliative radiotherapy is not uncommon. However, in contrast to chemotherapy, this is not a result of the treatment. Moreover, the potential for early symptom relief makes treatment worthwhile even in patients with poor prognosis [1-3]. Palliative treatments can only be regarded as successful if the patient lives to enjoy a period of post treatment relief. To this end a balance needs to be achieved between the time spent undergoing palliative radiotherapy and the potential benefits obtained. Shorter fractionation schedules improve the patient’s quality of life by reducing inroads made into their remaining days. In addition, they have a positive impact on limited radiotherapy resources.

## The Cycle

**The standard:**

No published standard exists.

**Target:**

1. We suggest <10% patients should die within 30 days of completing palliative radiotherapy.

2. The average number of fractions delivered per patient should ideally be <3 for those of WHO Performance Status 3-4.

## Assess local practice

**Indicators:**

1. The percentage of patients dying within 30 days of palliative radiotherapy completion.

2. The average number of fractions delivered per patient.

**Data items to be collected:**

For each patient:

1. Dose and fractionation.

2. Date treatment completed.

3. WHO Performance Status.

4. At 30 days - Alive Y/N.

This audit can easily be adapted to collect more information, for example the effect of inpatient admission, waiting times from consent to delivery of radiotherapy, adequacy of symptom relief, and if applicable, cause of death:

5. Inpatient stay Y/N.

6. Date of referral for radiotherapy.

7. Start date of radiotherapy.

8. Treatment response.

9. Cause of death if applicable.

**Suggested number:**

Minimum 100 patients.

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

1. Discuss at Departmental Meeting:

• Review prescribing practice, and adherence to both local protocols and RCR fractionation guidance [4]

• Aim to identify areas where fractions could be reduced in poor performance status patients if clinically appropriate

• Review specific cases.

2. Re-audit at 6-12 months.

**Resources:**

This is dependent on local department structure and specifically the availability of electronic records.

Personnel/Time:

• If records are available electronically, one person (doctor, nurse, radiographer) could collate all data within 6-8 hours

• If paper records need to be accessed this will involve the Audit department in the collection of notes and will increase the time involved.

**References:**

1. Meeuse JJ, van der Linden YM, van Tienhoven G et al. Efficacy of radiotherapy for painful bone metastases during the last 12 weeks of life: results from the Dutch Bone Metastasis Study. Cancer 2010;116:2716-2725
2. Dennis K, Wong K, Zhang L, et al. Palliative Radiotherapy for Bone Metastases in the Last 3 Months of Life: Worthwhile or Futile? Clin Oncol 2011;23:709-715.
3. Bleehen NM, Girling DJ, Machin D, Stephens RJ, on behalf of the Medical Research Council Lung Cancer Working Party. A Medical Research Council (MRC) randomised trial of palliative radiotherapy with two fractions or a single fraction in patients with inoperable non-small-cell lung cancer (NSCLC) and poor performance status. Br J Cancer 1992;65:934-941.
4. RCR Radiotherapy Dose Fractionation Document, June 2006.

**Editor's comments:**

Information regarding early mortality, in combination with fractionation schedules and their relationship to WHO Performance Status, provide useful data for the critical assessment of palliative radiotherapy provision in a department.

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