# Audit of Radiotherapy (RT) fractionation for bone metastases

**Descriptor:**

Audit looking at the dose and fractionation of radiotherapy offered for treatment of metastatic spinal cord compression and symptomatic bone metastases in the month of November 2013.

**Background:**

Bone metastases are common in patients with breast, prostate, lung, renal and thyroid cancer. They cause significant morbidity and have a negative impact on quality of life. However, bone pain secondary to metastases responds well to external beam radiotherapy. The use of appropriate fractionation regimes is important to deliver cost effective treatment.

## The Cycle

**The standard:**

All treatments for metastatic spinal cord compression and palliative bone radiotherapy should be in line with the Royal College of Radiologists (RCR) recommendations [1].

**Target:**

All treatments (100%) should be in line with the Royal College of Radiologists recommendations for metastatic cord compression (MSCC) and palliative treatment of bone pain with radiotherapy. In the majority of cases 8Gy/1# or 20Gy/5# are the recommended fractionations; with the exception of 30Gy/10# for ambulant patients post surgery for MSCC.

## Assess local practice

**Indicators:**

The dose and number of fractions of radiotherapy used in the treatment of metastatic spinal cord compression and symptomatic bone metastases. These indicators were studied taking into account other factors including treatment site, treatment indication and field size.

**Data items to be collected:**

Data were collected retrospectively from patient’s notes. These included:

- Primary site

- Treatment site

- Documented inductions for treatment

- Dose prescribed

- Fractionation used

- Field size

**Suggested number:**

All patients treated at a single centre in 1-3 months depending on department size and workload.

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

• We calculated the extra cost and number of fractions that could have been saved had the targets been adhered to. Present results to department.

• Re-audit in 12 months to re-assess adherence to recommendations

**References:**

1. Royal College of Radiologists guidance on [Radiotherapy Dose-Fractionation](http://www.rcr.ac.uk/sites/default/files/publication/Dose-Fractionation_Final.pdf), Second Edition 2016, Chapter 18 Bone Metastases and Chapter 21 Metastatic Spinal Cord Compression.

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